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## Subsidiary Body for Scientific and Technological Advice

### Fifty-seventh session

Sharm el-Sheikh, 6–12 November 2022

Agenda item 10(a)

### Matters related to science and review

### Research and systematic observation

## Research and systematic observation

### Draft conclusions proposed by the Chair

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA) recognized the vital importance of robust Earth observation systems and related long-term data records for enhanced understanding of the global climate system and its changes and for adaptation and mitigation action.
2. The SBSTA noted with appreciation the information reported in the statements delivered at the opening meeting of this session by representatives of the Global Climate Observing System (GCOS), Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, Intergovernmental Panel on Climate Change, the Joint Committee on Earth Observation Satellites/Coordination Group of Meteorological Satellites Working Group on Climate, World Climate Research Programme and World Meteorological Organization (WMO).<sup>1</sup>
3. The SBSTA took note of the *WMO Provisional State of the Global Climate 2022* report<sup>2</sup> and the 2021 *WMO Greenhouse Gas Bulletin*<sup>3</sup> and welcomed the United Nations Global Early Warning Initiative for the Implementation of Climate Adaptation.<sup>4</sup>
4. The SBSTA noted with utmost concern the state of the global climate system as conveyed at Earth Information Day 2022.
5. The SBSTA took note of the informal summary report on Earth Information Day 2021.<sup>5</sup> It expressed its appreciation to its Chair and the secretariat for organizing Earth Information Day 2022,<sup>6</sup> held at this session, thanked representatives of participating organizations and programmes for their valuable contributions and invited its Chair, with the assistance of the secretariat, to prepare an informal summary report on Earth Information Day 2022.

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<sup>1</sup> Available at <https://www4.unfccc.int/sites/submissionsstaging/Pages/Home.aspx> (selected tag: 2022; search: statement).

<sup>2</sup> WMO. 2022. *WMO Provisional State of the Global Climate 2022*. Geneva: WMO. Available at [https://library.wmo.int/doc\\_num.php?explnum\\_id=11359](https://library.wmo.int/doc_num.php?explnum_id=11359).

<sup>3</sup> WMO. 2022. *WMO Greenhouse Gas Bulletin (GHG Bulletin) - No.18: The State of Greenhouse Gases in the Atmosphere Based on Global Observations through 2021*. Geneva: WMO. Available at [https://library.wmo.int/index.php?lvl=notice\\_display&id=22149#.Y216U3ZBw2w](https://library.wmo.int/index.php?lvl=notice_display&id=22149#.Y216U3ZBw2w).

<sup>4</sup> See <https://public.wmo.int/en/earlywarningsforall>.

<sup>5</sup> Available at <https://unfccc.int/sites/default/files/resource/EarthInformationDay.2021.SummaryReport.pdf>.

<sup>6</sup> See <https://unfccc.int/event/earth-information-day-2022>.

6. The SBSTA recognized the ongoing efforts of the systematic observation community, as presented at Earth Information Day 2022, to provide updates on the state of the global climate, information for mitigation, including estimates of greenhouse gas fluxes, climate services for adaptation and early warning systems; to improve cooperation among observing networks; and to better integrate observations from multiple sources.

7. The SBSTA welcomed the 2022 GCOS Implementation Plan<sup>7</sup> and the 2022 GCOS essential climate variables requirements.<sup>8</sup> It encouraged Parties and relevant organizations, as appropriate, to work towards the implementation of the 2022 GCOS Implementation Plan, in accordance with Article 5 of the Convention.

8. The SBSTA noted with appreciation the progress in supporting systematic observation, such as through the development of the Systematic Observation Financing Facility. It encouraged the Facility to continue to prioritize the least developed countries and small island developing States in its provision of support and to evaluate opportunities to support developing countries. It also encouraged efforts to further strengthen support for sustained systematic observations of the ocean, cryosphere, land, biosphere and atmosphere.

9. 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.

10. The SBSTA emphasized the need to address systematic observation gaps, particularly in developing countries and for ocean, mountain, desert and polar regions and the cryosphere in order to improve understanding of climate change, climate-related risks and tipping points, and adaptation limits and to ensure enhanced delivery of climate services and early warning systems.

11. The SBSTA noted with concern the existing gaps in the global climate observing system. It recognized the need to enhance the coordination of activities by the systematic observation community and improve its ability to provide useful and actionable climate information for mitigation, adaptation and early warning systems, as well as information to enable understanding of adaptation limits and of attribution of extreme events.

12. The SBSTA invited Parties and relevant organizations to submit, via the submission portal<sup>9</sup> by 31 August 2023, views on possible themes for and ways to organize Earth Information Day 2023, to be held in conjunction with SBSTA 59 (November 2023).

13. The SBSTA recommended a draft decision on this matter for consideration and adoption by the Conference of the Parties at its twenty-seventh session (for the text of the draft decision, see document FCCC/SBSTA/2022/L.20/Add.1).

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<sup>7</sup> See WMO. 2022. *The 2022 GCOS Implementation Plan*. Geneva: WMO. Available at [https://library.wmo.int/doc\\_num.php?explnum\\_id=11317](https://library.wmo.int/doc_num.php?explnum_id=11317).

<sup>8</sup> See WMO. 2022. *The 2022 GCOS ECVs Requirements*. Geneva: WMO. Available at [https://library.wmo.int/doc\\_num.php?explnum\\_id=11318](https://library.wmo.int/doc_num.php?explnum_id=11318).

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