

GCOS Global Climate Observing System (GCOS)

Oral Statement to COP28/SBSTA59 2023

Distinguished Chair and excellences, I'm giving this statement on behalf of GCOS, the Global Climate Observing System

Please allow me to recall decision 22 from the last COP that encouraged Parties and relevant organizations to work towards the implementation of the 2022 GCOS Implementation Plan. Since then, GCOS has started to work closely with the relevant stakeholders to implement the actions described in the Implementation Plan, and thanks to the collaboration with the joint CEOS/CGMS Working Group on Climate, responsible for coordinating an effective response from the space agencies, significant progress was made for the satellite-based actions.

Despite progress in some areas, there are still many issues that need to be urgently considered and that require working collaboratively towards a global observing system for climate. This requires data that fulfils the stringent requirements for climate monitoring, and where the system is properly sustained through time, as emphasized in the 2022 GCOS Implementation Plan. Allow me to highlight three situations that exemplify some concerns:

- **It is fundamental that Essential Climate Variables have continuous global observations.** This can be demonstrated by recalling the 2022 eruption of the Hunga-Tonga-Hunba-Haápai volcano that injected a large amount of water vapour to the stratosphere, which may result in a temporary warming. However, the measurements of stratospheric water vapour are declining due to the end of the lifetime of the relevant satellites and the decrease of the number of in-situ sondes. The discontinuity of observations can hinder the effective monitoring of the evolution and impact of this major water vapour anomaly.
- **It is also critical to ensure the availability of additional observations to understand key climate system aspects.** It is clear that more reliable observations, based on novel technologies, are needed to support, for instance, methane reduction pledges, monitor their implementation, and understand their impacts.
- Finally, **persistent gaps must be filled.** For instance, there is a lack of ocean profile observations, particularly for continental shelf seas, necessary to monitor marine heatwaves and understand their impact that extends far beyond the ocean surface.

GCOS acknowledges that the global observing system for climate relies on national contributions made by Parties to the UNFCCC and looks forward to working with you on further developing a sustained system providing open access to an increased number of high-quality climate observations in support to the aims of the Convention.