Earth Information Day 2023 – World Café
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**Topic:** The role of national delegates to support building the global observing system for climate

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**Scenario**

Observations are the basis for monitoring and prediction of weather and climate. For forecasts beyond a few days for any location, observations from the whole globe are required to effectively predict future conditions. Both ground and satellite data contribute to global observations, but it is essential that the two complement each other. Satellite data alone are difficult to use over land, snow and ice surfaces, and the use of satellite data relies on a good distribution of surface-based measurements for calibration and validation. Therefore, sufficient global surface-based measurements are an essential input for the effective deployment of the downstream or “last mile” components of the chain – local data processing, weather forecasting and delivery of weather and climate services, including timely early warnings.

**Questions for Scene-Setting**

1. What are the main challenges your country/national meteorological service faces, that hinders you from fully contributing to the global observing system?

2. What international support is needed to address these challenges? What has (not) worked for you in the past?

3. What outcome of COP28 would be needed, to substantially strengthen the global observing system sustainably?
Annex – Global Basic Observing Network

In October 2021, the 193 Member countries and territories of the World Meteorological Congress took a landmark decision by agreeing on a new global standard and requirements for mandatory real time international data exchange of basic weather and climate observation to improve forecast products. GBON defines in clear and quantitative terms the commitments of the WMO Members to acquire and internationally exchange basic surface-based observations. It offers a new approach in which the basic surface-based observing network is designed, defined and monitored at the global level.

Closing the observations data gap is essential for the world to understand and prepare for the impacts of a rapidly changing climate. The Systematic Observation Financing Facility (SOFF) aims to close this gap.

According to the WMO GBON Global Gap Analysis of June 2023, over 100 countries classified as SIDS, LDCs and LMICs deliver only 7 percent of the required GBON surface land data and 24 percent of the GBON upper air data. Together, these countries represent 43 percent of the total GBON surface land data gap and 59 percent of the GBON upper air data gap. Closing the data gaps in these countries is essential for better forecasts – for the countries themselves as well as for the global community.

There are ten GBON variables that must be exchanged in real time, and those ten variables are an important subset of the 55 GCOS Essential Climate Variables across the atmospheric, oceanic and terrestrial domains. GCOS is recognized by the UNFCCC as an authoritative voice on climate observation needs and reports to Conference of the Parties meetings.

GBON upper air compliance SIDS, LDCs and LMICs

GBON target compliance of surface and upper-air stations are evaluated according to the WMO standard density compliance criteria, for SIDS, LDCs and LMICs. Countries with report availability more than 80% on at least 80% of days in June 2023 are shown as compliance.