

**World Meteorological Organization submission to the UNFCCC Secretariat  
on  
Views on possible themes for the fourteenth meeting of the research  
dialogue, to be held in conjunction with SBSTA 56 (June 2022)**

The World Meteorological Organization (WMO) welcomes the opportunity to share its views on possible themes for the fourteenth meeting of the research dialogue, to be held in conjunction with SBSTA 56 (June 2022).

WMO considers that the next meeting of the Research Dialogue should build on the recognition expressed in the Glasgow Climate Pact at COP26 of the “Science and Urgency”, including the Working Group 1 contribution to the 6th Assessment Report of the IPCC and the WMO global and regional reports on the state of the climate.

This milestone provides a unique opportunity for SBSTA, and for the Research and Systematic Observation community to step up its contribution to the UNFCCC and Paris Agreement. Now that the UNFCCC constituency has recognized a common scientific framework as a basis for action, it is essential that measures be taken to increase developing countries’ access to scientific information at the same time it is also essential to recognize the limitations and gaps in the current state of climate science and systematic observation and the implications of these gaps, in particular for the most vulnerable countries. WMO would thus like to propose that the fourteenth meeting of the research dialogue addresses these issues, which are particularly relevant for adaptation in developing countries.

Below, we outline the potential topics and organizations that could be included within this thematic session.

**1. Theme #1: “Gaps and limitations of the systematic observation of the earth’s climate system and implications”**

*Rationale*

According to the Paris Agreement (art. 7), adaptation action should be guided by the best available science. The Working Group 1 contribution to the 6th IPCC Assessment Report clearly illustrates that the quantitative scientific basis for adaptation action continues to be inadequate in many parts of the world due to a lack of observational data upon which the scientific basis would be built. These observational data gaps and the resulting inadequacy of the scientific basis have implications also for Mitigation, Loss and Damage, and - due to the limited ability of developing country parties to address these gaps on their own - for Finance.

Ongoing monitoring by WMO of the observational data exchange reveals that in many areas of the world, the current data coverage falls far short of the minimum that is required to support

robust weather and climate monitoring and prediction, especially in SIDS and LDCs. The lack of observations severely limits the ability of countries and their development partners to effectively plan and adapt to climate change, and to design and implement meaningful and effective adaptation projects. In the areas from which observations are missing, this leads to the quality of weather forecast products being poorer than necessary, and it also limits both the knowledge about the current climate and the ability to predict and project future climate scenarios.

### *Structure of the session*

#### Topic 1. The current gaps in systematic observations:

##### Presentations

- **IPCC** - Highlights from the WGI Contribution to AR6.
- **WMO** – the state of observations and global efforts towards strengthening systematic observations (WMO Unified Data Policy, Global Basic Observing Network; towards a global greenhouse gas monitoring infrastructure)
- **ECMWF (or other WMC/GPC)** – Impact of lack of observations on global modeling efforts for weather prediction and climate reanalysis;
- **GCOS** - Impact of gaps in current and historical observations on climate reanalysis, on understanding of past conditions and on decision-making on adaptation and mitigation;
- **National example (e.g. Gabon or Tanzania)** – Impact of local data gaps/lack of observations on national level decision-making

##### Discussion and Q&A

#### Topic 2. Systematic Observation gaps implications for UNFCCC action tracks:

##### Presentations

- **IPCC** – Highlights from the WGI Contribution to AR6. The systematic observation knowledge gap and its implications for adaptation action.
- **UNEP** – Adaptation Gap Report authors and WASP Implications of lack of observations on the global Adaptation Gap
- **Systematic Observations Financing Facility (SOFF)**: A new approach to finance systematic observations in developing countries and implications for the New collective goal on Climate Finance

##### Discussion and Q&A

## **2. Theme #2 – “Tools and methods for improving access to climate science information for climate action”**

