



05.09.2019

Submission by Finland and the European Commission on behalf of the European Union and its Member States

Subject: Views on the Earth Information Day, to be organised by the secretariat at sessions of the SBSTA at which systematic observation is considered, starting at SBSTA 51

Summary of the key points

The EU welcomes the establishment of annual Earth Information Day (EID) events under the SBSTA starting at COP25 offering updates on the state of the global climate system. The EU also welcomes the opportunity to submit its views on possible themes for the next such event.

The EID at COP22 was an important development, which highlighted the information on the state of the climate that is increasingly available from a suite of Earth observations.

The data show how the atmosphere, oceans and terrestrial systems are changing and how this is central to informing adaptation and mitigation decision making.

The EU considers that the events should include updated information on key drivers of climate change and their impacts on the global energy balance, and key climate indicators on ocean, atmosphere and terrestrial domains including the cryosphere. We also look forward to information on observed ocean acidification and its impacts. The EU offers to contribute relevant information from its activities such as the Copernicus Programme¹, ESA CCI² initiative, and its contributions to the GEOSS of GEO³.

The EU wishes to emphasize that information on observed trends and impacts is important for pursuing full implementation of the Paris Agreement.

¹ <https://www.copernicus.eu/en>

² ESA CCI – European Space Agency Climate Change Initiative <http://cci.esa.int/>

³ GEOSS of GEO – Global Earth Observation System of Systems of the Group on Earth Observation <https://www.earthobservations.org/geoss.php>

Introduction

While the IPCC provides scientific assessments of climate change at 5-7 years intervals, the Earth's climate is changing continuously. The EU welcomes the work of the IPCC and its Special Report on Climate change and Land⁴ and looks forward to IPCC's Special Report on *the Ocean and Cryosphere in a Changing Climate*.

With the Paris Agreement being implemented it becomes more and more important to track the impacts of mitigation measures on the climate system closely. The EID offers an opportunity to regularly inform the negotiations about the changes in the climate system. Regular information on the most recent evolution of Essential Climate Variables (ECVs)⁵ is essential for assessing the collective effects of these measures, particularly in the context of the global stocktake of the Paris Agreement.

Monitoring key elements of the climate system is coordinated by the GCOS⁶ along with its sponsors WMO⁷, IOC of UNESCO⁸, UN Environment, ISC⁹, and its partners such as WCRP¹⁰, the GEO, the CEOS¹¹, and the CGMS¹². Long-term time series of ECVs provided by the GCOS are central to our understanding of the drivers, rate and extent of climate variability and ongoing change across atmospheric and terrestrial domains, ocean and the cryosphere.

The EU wishes to highlight the joint European investments in the Copernicus Programme and the ESA CCI. The Copernicus Programme is a major European contribution to GEO and provides crucial information on the climate system through delivery of its Climate Change Service and its services on atmosphere, land, and ocean monitoring.

⁴ Climate Change and Land: An IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems (<https://www.ipcc.ch/report/srcccl/>)

⁵ An Essential Climate Variable is a physical, chemical or biological variable that is critical to characterizing Earth's climate, and for which global observation is currently feasible and that satisfies the requirements of the UNFCCC and broader user communities. ECVs are listed in the GCOS 2016 Implementation Plan ([GCOS-200](#)).

⁶ GCOS – Global Climate Observing System

⁷ WMO – World Meteorological Organization

⁸ IOC of UNESCO – Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization

⁹ ISC – International Science Council

¹⁰ WCRP – World Climate Research Programme

¹¹ CEOS – Committee on Earth Observation Satellite

¹² CGMS – Coordination Group for Meteorological Satellites

Views of the EU on elements of EIDs

The EU welcomes the establishment of a regular EID to be organized by the SBSTA as in-session mandated events during the sessions when systematic observation is addressed by the SBSTA agenda item on Research and Systematic Observation (RSO). In this way, the EID complements the Research Dialogue¹³ held at the first SBSTA session of the year, allowing for consideration of both aspects of the RSO agenda item during in-session events.

Overall, the EU looks forward to being informed and updated about ongoing, forthcoming and planned climate system observation efforts (in-situ, air-borne, remote sensing including from space) at global, regional and local scales as well as their integration into existing data records, and presentations on their added value for climate monitoring and analyses, modelling, and understanding at successive EIDs.

The EU proposes to address the following elements at this and future Earth Information Days:

- Information on the state of the global climate¹⁴;
- The most recent data on the key drivers of climate change, in particular long-lived greenhouse gases as well as aerosols and their precursors, land use, and estimates of their impacts on the global energy balance;
- Information on how the energy imbalance is observed in oceans, terrestrial (including cryosphere) and atmospheric systems through indicators such as the average global temperature, sea-level rise, ocean heat storage and cryospheric mass balance, and other key indicators across the three key domains¹⁵;
- Data and information on climate change driven ecosystem changes as well as changes to the carbon and nitrogen cycles and ocean acidification;
- Updates on the status of the GCOS along the actions included in the GCOS Implementation Plan 2016 ([GCOS-200](#)) addressing observational gaps across atmosphere, ocean, terrestrial and cryosphere domains at global, and regional scales;

¹³ So far eleven such Research Dialogues have been conducted:

<https://unfccc.int/topics/science/workstreams/research/research-dialogue>

¹⁴ Including WMO's state of the climate report and the WMO Greenhouse Gas Bulletin

¹⁵ For motivation and background see [GCOS-206](#) or at <https://gcos.wmo.int/en/global-climate-indicators>.

- Q&A between representatives of the climate observation community and Parties.

The EU notes that a poster session and possibly also having discussions in breakout groups may add value for an in-depth exchange between Parties and experts during the EID.
