

Global Climate Observations - a Roadmap to the Future

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ABSTRACT:

Climate Observations, from space and from ground, are coordinated on a global scale by the Global Climate Observing System, which is a programme ratified by the United Nations and sponsored by the World Meteorological Organisation (WMO), the Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Environment Programme (UNEP) and the non-governmental International Council for Science (ICSU). GCOS has been active in coordinating climate observations for more than 20 years and has been giving guidance and advice to national governments and space agencies.

GCOS started again a cycle for the assessment of the adequacy of the global observing systems for climate. A Status Report will be prepared for submission to GCOS' sponsoring organizations and Parties to the United Nations Framework Convention on Climate Change (UNFCCC), in 2015. It will review the overall status of each Essential Climate Variable (ECV), assess progress against the 2010 GCOS Implementation Plan and identify gaps.

The evolving initiatives around climate services and the establishment of a Global Framework (GFCS) requires that GCOS will consider new developments, systems and frameworks, such as the Global Earth Observation System of Systems (GEOSS), the WMO Integrated Global Observing System (WIGOS), the findings of the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report, Future Earth, Blue Planet, and the Programme of Research on Climate Change Vulnerability, Impacts and Adaptation (PROVIA).

This GCOS assessment process will influence the planning of future missions for climate observations. The talk will give a first outlook to the status of the global observations for climate; discuss the need for data on the Essential Climate Variables in the context of scientific challenges and their relevance across a wider range of activities.