Implementation Activities
- 2012-

Carolin Richter
Director, GCOS Secretariat

CGMS-40, 7-8 November 2012, Lugano, Switzerland
Concept of the Global Climate Observing System

1992 - 2012 20 Years in Service for Climate Observations
4. EARTH OBSERVATION SATELLITE PROGRAMMES (Agenda item 4)

4.1 The Committee was briefed on the observation satellite programmes in Asia and the Far East, North America and Europe. Background materials were also provided by the JSTC members representing satellite agencies.

4.2 Following the presentations, the Committee raised a number of issues concerning satellite data and the needs of GCOS with regard to future missions. It noted also an upcoming meeting of the Committee on Earth Observations Satellites (CEOS) in the United Kingdom. The JSTC agreed that GCOS should seek affiliate membership in CEOS, since there were many issues of mutual interest facing the two committees. The Chairman agreed to approach CEOS in this regard.

4.3 The Chairman of OOSDP also provided the Committee with an informal document describing recent satellite issues before the OOSDP.
20 years engagement in space-based observations for climate
The following diagrams (from Dr Ratier, CNES) illustrate some examples of the problems in obtaining complete long-term (decadal) coverage for climate parameters. Often, excellent short-term observations are not adequately exploited due to lack of long-term commitment. As mentioned earlier in the body of the text, the term "approved" can have widely different meanings, and should be treated with discretion. Also, changes in agency plans can mean that such diagrams can rapidly become out-of-date, and hence treated as guidelines.
GCOS requirements for satellite-based data products for climate

SYSTEMATIC OBSERVATION REQUIREMENTS FOR SATELLITE-BASED PRODUCTS FOR CLIMATE

Supplemental details to the satellite-based component of the “Implementation Plan for the Global Observing System for Climate in Support of the UNFCCC”

September 2006
GCOS – 107
(WMO/TD No. 1338)

December 2011
GCOS – 154
(WMO/TD No. 154)
Responses to GCOS

SCOPE-CM aims to establish a coordinated international network to produce Climate Data Records (CDRs) operationally from multi-agency mission data, in response to Global Climate Observing System (GCOS) requirements.
UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE
Subsidiary Body for Scientific and Technological Advice
Thirty-seventh session
Doha, 26 November to 1 December 2012
Item 7 of the provisional agenda
Research and systematic observation

Update on progress made by space agencies involved in global observations in their coordinated response to relevant needs of the Global Climate Observing System and the Convention

Submission from the Committee on Earth Observation Satellites

1. The Conference of the Parties, by decision 9/CP.15, encouraged the Committee on Earth Observation Satellites (CEOS) to continue coordinating and supporting the implementation of the satellite component of the Global Climate Observing System (GCOS).

2. At its thirty-third session,\(^1\) the Subsidiary Body for Scientific and Technological Advice (SBSTA) welcomed the coordinated response by the CEOS to the relevant needs of the GCOS implementation plan and those of the Convention, and the progress and commitment by space agencies involved in climate observations to address the space-based component of the GCOS and improve climate monitoring capabilities from space on a sustained basis. The SBSTA encouraged Parties that support the space agencies involved in global observations to continue, through CEOS, cooperation with and support to the GCOS, and to respond to the relevant needs identified in the 2010 updated GCOS implementation plan.\(^2\) The SBSTA invited the CEOS to provide, by SBSTA 37, an updated report on progress made on major achievements in relevant areas.

3. In response to this invitation, India has submitted the above-mentioned progress report on behalf of the CEOS. An abridged version of this report is reproduced in this document. The full report will be made available at <www.ceos.org> and at <http://unfccc.int/3462>.

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\(^1\) FCCC/SBSTA/2010/13, paragraphs 52 and 53.
\(^2\) The full title of the 2010 updated GCOS implementation plan reads “Update of the Implementation Plan for the Global Observing System for Climate in Support of the UNFCCC”.
Multi-lateral cooperation….and non-logo effort

Strategy Towards an Architecture for Climate Monitoring from Space

CEOS, CGMS and WMO

Prepublication copy, subject to further editorial corrections
October 2012
Assessment Cycle

Future plans:
Assessment Report (Adequacy&Progress), 2015

2009, reviewing the years 2004 – 2008

Future plans:
New Implementation Plan, 2016

New evolving initiatives:
Global Framework for Climate Services
Architecture for Climate Monitoring from Space
ESA Climate Change
GEOSS
Framework for Ocean Observing
“Framework for terrestrial observations”

What needs to be measured?

Essential Climate Monitoring Variables (ECVs)

Implementation Plan

How to do it?

Climate Monitoring Principles
Guidelines for Datasets and Products
Regional Action Plans

By whom/by which means?

Space Agencies
Network Owners
Meteorological Service, Hydrological Service,
Research Organizations, and other institutions
Data and Analysis Centres

Future plans:
New Implementation Plan, 2016
Supplement on Satellite Data Products, 2006 and 2011

GCOS Implementation Plan, 2004 and 2010

GCOS Implementation Plan, 2004 and 2010
Supplement on Satellite Data Products, 2006 and 2011
Future requirements

• **Review of data needs for adaptation and service provision (2013-2014)**
  – Workshop on observations for adaptation, 25-27 February 2013
  – linking with GFCS activities

• **Assessment of progress and adequacy (2014-2015)**
  – building on identification of needs for adaptation and other services
  – informed by identification of uncertainties by the IPCC Fifth Assessment process

• **New Implementation Plan (2015-2016)**
Recommendations

- ECV Inventory, supported through the Architecture for Climate Monitoring from Space
- Access to climate data records produced by CGMS members
- Long-term preservation of data

Recommendation: CGMS response to GCOS

or

“Single voice” response of the Earth Observing Satellite Community to GCOS