



Newsletter – 1 / 2010

Welcome to the 4th issue of the GCOS newsletter!

Scientific Highlights

OceanObs'09

Almost a decade since the first OceanObs Conference played a major role in consolidating the plans for a comprehensive ocean observing system OceanObs'09 was held 21–25 September in Venice, Italy. GCOS was represented by Dr Carolin Richter, Director of the GCOS Secretariat and Dr John Zillman, Chairman of the GCOS Steering Committee. The OceanObs'09 conference celebrated a decade of progress in implementing the ocean observing system and made a major contribution to chart the way forward for the coming decade. Six hundred participants from 36 nations called on all governments to fully implement by 2015 the initial physical global ocean observing system and the carbon global ocean observing system, originally envisioned at OceanObs'99, and refined at OceanObs'09. They called for significantly enhancing the internationally-coordinated provision of sustained observation and information of the world ocean, as part of the larger earth system observing effort, for public good and stewardship. Participants reiterated that the oceans remain seriously under-sampled and that the development of an increasing range of ocean assessments and climate services for planning, early warning, adaptation, and mitigation depend upon availability of accurate observations and models of the world ocean. In turn, the ocean observing community was urged to increase efforts to achieve the needed level of timely data access, sensor readiness and standards, best practices, data management, uncertainty estimates, and integrated data set availability. Dr Carolin Richter will serve on the follow-up Working Group, along with Dr Eric Lindstrom (Chairman GCOS Ocean Observations Panel for Climate, OOPC), Dr Ed Harrison (former Chairman of the OOPC) and others. Detailed information, including the community white papers and the conference statement is available at: <http://www.oceanobs09.net/>.

Observing Domains, Networks and Measuring Systems

The GOSIC portal - A Comprehensive Data Portal for Global Climate Information

The Global Observing Systems Information Center ([GOSIC](#)) provides an online data portal established in response to the global climate observing community's need for better access to observational climate data and information. The goal of GOSIC is to provide basic user services, including a description of the systems and their data as well as tailored search capability that facilitates access to a world-wide set of observations and derived products. Its unique value lies in its ability to quickly link users via a consistent and user-friendly interface to a wide range of data sets residing at multiple data centres. The GOSIC portal provides users with links to data, metadata, other search tools, and related climate observing information.

For more information on the GOSIC, see the following article: Diamond, H. J., and C. J. Lief (2009), A Comprehensive Data Portal for Global Climate Information, *Eos Trans. AGU*, 90(39), doi:10.1029/2009EO390001 at <http://www.agu.org/pubs/crossref/2009/2009EO390001.shtml>.

JCOMM-3

The 3rd Session of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology ([JCOMM-3](#)) was held in Marrakech, Morocco, 4–11 November, 2009. John Zillman, Chairman of the GCOS Steering Committee, together with Keith Alverson, Director of the GOOS Secretariat, gave an overview presentation on GCOS and its ocean component GOOS. John Zillman further delivered a scientific lecture on the "Socio-Economic Benefits of Met-Ocean Information and Services." Major outcomes of the session were that JCOMM, following its new Terms of Reference, will in the future have a more project-oriented approach. Concerns were raised about the slow progress in implementing the Global Ocean Observing System and about the sustainability of existing observing networks. As previously proposed, JCOMM will undergo a full review by an independent group of experts representing WMO and IOC Member States, in line with the foreseen review of WMO's structure of Technical Commissions. This review shall be concluded by the end of 2010 to allow its results being considered at the 16th WMO Congress and the 26th IOC Assembly taking place in 2011. JCOMM participants further decided to consider non-physical variables and coastal requirements for observations as important matters and to work with the WMO Commission for Hydrology (CHy) on coastal inundation issues.

The link with users and international organizations representing users' interests will be enhanced, and Members were encouraged to implement Quality Management Systems. The Commission also recommended collaborating with the International Hydrographic Organization ([IHO](#)) in defining standards to deliver graphical products to mariners at sea through the International Maritime Organization ([IMO](#)) Global Maritime Distress and Safety System (GMDSS). A plan has been defined to implement the GMDSS in the Arctic region by 2010/2011.

Global Terrestrial Network - Hydrology

At the 4th Global Terrestrial Network – Hydrology ([GTN-H](#)) Panel Session (7–10 July 2009), participants agreed to develop a set of project outlines on hydrological themes to demonstrate the value of hydrological observations in support of adaptation and decision-making. These outlines should help make the case for strengthening networks and services. Demonstration projects were grouped along science issues, operational management issues, and policy issues.

The meeting report is available here: [GCOS-135](#).

Implementation Projects

Several projects aimed at expanding and improving the GCOS Upper-air and Surface Networks (GUAN and GSN) have been undertaken in recent months:

- Four GSN Stations in Uruguay have been renovated with funding from Spain.
- Requests for tender have been issued for equipment for eight GSN Stations in Angola. The project is funded by the Royal Netherlands Meteorological Institute ([KNMI](#)).
- The project to establish an ongoing Technical Support Project (TSP) in Southern Africa has been advertised for the second time. Additional candidate companies have been identified, and the meteorological services in the region have been invited to bid to host the TSP. Hopefully a contract will be in place early in 2010.

In November 2009, all GUAN Stations in Africa reported for the first time in several years. The success was short lived however, as equipment failure in early December has silenced Harare, Zimbabwe. The GCOS system improvement programme is working with the equipment supplier to repair the unit.

More information on recent and ongoing renovation and technical support projects can be found at: <http://www.ncdc.noaa.gov/oa/usgcos/renovationprojects.htm>.

CBS Lead Centres for GCOS

A [Coordination Meeting of the Commission for Basic Systems \(CBS\) Lead Centres for GCOS](#) was held 10–12 November 2009 at WMO Headquarters in Geneva with participation of representatives from all eight Lead Centres, as well as experts from the WMO World Weather Watch Programme (WWW) and the WMO Information System (WIS) branch. Participants discussed technical issues concerning coding formats, silent stations and transmission problems, metadata as an important element for quality measures, and ways to include the Regional Basic Synoptic Network (RBSN) into the performance monitoring effort.

Find here the list of CBS Lead Centres for GCOS:

<http://www.wmo.int/pages/prog/gcos/index.php?name=CBSLeadCentres>.

GCOS Cooperation Mechanism

The GCOS Cooperation Mechanism ([GCM](#)) was established in 2002/2003 as a multi-governmental funding mechanism to identify and make the most effective use of resources available for improving global observing systems for climate in developing countries, particularly in order “to enable them to collect, exchange, and utilize data on a continuing basis in pursuance of the UNFCCC.”

The 5th meeting of the GCM Board was held in Bonn, Germany, in June 2009 on the occasion of SBSTA 30. It was chaired by Dr Gabriela Seiz from Switzerland with Secretariat support from Dr Bill Westermeyer. The 17 meeting participants from 7 donor countries, GCOS sponsoring organizations and the GCOS Secretariat, recommended that the GCOS Steering Committee consider an appropriate process for developing a list of priority projects for all three domains for each region, i.e., not just for atmospheric domain projects. Participants also recommended that GCOS regional coordinators be appointed to facilitate consideration of regional level needs. The GCOS Secretariat was requested to explore the invitation of other organizations, e.g. donor organizations, to the next GCM Board meeting, while participants should get into contact with their national focal points of the four GCOS Sponsoring Organizations (WMO, IOC of UNESCO, UNEP, ICSU) to brief them on the need to increase basic support for the GCOS Secretariat.

It was agreed that the GCM meeting should continue to be held once a year in parallel with UNFCCC SBSTA meetings and that the next such meeting would be during SBSTA 33 in December 2010 in Mexico City. At that time, observations would again be on the agenda.

ESA Climate Change Initiative: Invitation to Tender

In response to the GCOS requirements for long-term satellite-based observations for climate addressed to space agencies via the Committee on Earth Observation Satellites ([CEOS](#)), the European space Agency ([ESA](#)) initiated a new programme for Global Monitoring of Essential Climate Variables. This programme is known as the ESA Climate Change Initiative (CCI). The CCI seeks to capitalize on previous European investment in space, in particular, on the existing long-term archive of earth observation data, and aims to systematically generate, preserve, and give access to long-term data sets of the ECVs required to meet the needs of the Parties to the UNFCCC.

ESA issued an invitation to tender for projects related to the CCI on their 'electronic mailing system for handling invitation to tenders' ([EMITS](#)) on 11 November 2009 (closing date: 22 February 2010, at 13:00 hr CET). The statement of work and supporting technical documentation can be found here:

http://earth.esa.int/workshops/esa_cci/.

Sponsoring Organisations & Partners

World Climate Conference-3

The World Climate Conference-3 ([WCC-3](#)), held 31 August to 4 September 2009 in Geneva, Switzerland, agreed to initiate a Global Framework for Climate Services (GFCS). The GFCS will be developed by a high-level task force that will convene in 2010. Currently under consultation by stakeholders at the international and national levels, the Framework is intended to bridge the gap between climate information providers and users. It seeks to integrate climate observations, research, assessments, and predictions in order to generate information and services required for factoring climate variability and change into socio-economic decision-making. The Global Framework would consist of five essential components: a renewed commitment to climate observations and the free and unrestricted exchange of basic data; strengthened focus on climate modelling and prediction research; a new Climate Services Information System; a new Climate Users Programme; and a strengthened capacity building programme. WCC-3 offered a significant opportunity to underscore the need for improved climate observations as the fundamental basis on which a new global framework for climate services will be built.

The Conference included a parallel session on climate observations, called "Climate Observations: Observation Needs for Climate Prediction and Applications," organized by Steering Committee Member Stefan Rösner and chaired by Dr Carolin Richter with Dr Adrian Simmons as Theme Leader. Two white papers were presented that treated, respectively, needs for and capabilities of climate observing systems.

ClimDev Africa

The African Development Bank ([AfDB](#)) Governing Board has approved, at its 17 November 2009 meeting, a grant of US\$ 30 million to the African Centre of Meteorological Applications for Development ([ACMAD](#)), the Inter-Governmental Authority on Development ([IGAD](#)) Climate Prediction and Applications Center ([ICPAC](#)), the Southern African Development Community ([SADC](#)) Drought Monitoring Centre ([DMC](#)), and the Agrometeorological and Hydrometeorological Programme ([AGRHYMET](#)) Regional Centre, for "Institutional support to the African Climate Institutions Projects" within the Climate for Development in Africa Programme (ClimDev Africa) initiative. ACMAD will administer the funds on behalf of the other involved institutions. On the occasion of the 15th Session of the Conference of the Parties (COP 15) to the United Nations Framework Convention on Climate Change ([UNFCCC](#)) in Copenhagen, a formal agreement was signed between the AfDB and ACMAD.

GEO-VI Plenary

The 6th plenary session of the Group on Earth Observations ([GEO-VI](#)) took place 17–18 Nov 2009 in Washington DC, USA. GCOS, as a GEO 'Participating Organization,' was represented by Steering Committee Chairman John Zillman. Significant progress was made with the approval of revised ten-year targets for the Global Earth Observation System of Systems ([GEOSS](#)) and an updated 2009-2011 Work Plan. An agreement on strategy for the upcoming GEO-VII Plenary and Ministerial Summit in Beijing in November 2010 was also reached.

Delegates approved a Strategic Target for climate observations that will ensure full alignment of the implementation actions underway under GCOS with the Work Plan for the climate component of GEOSS.

Group on Earth Observations (GEO) 2009-2011 Work Plan

The GEO 2009-2011 Work Plan calls for “Accelerating the Implementation of the Global Climate Observing System” (GEO task CL-09-02) through enhanced support for the GCOS observing system components: the WMO Global Observing System (GOS) and Global Atmosphere Watch (GAW), the IOC Global Ocean Observing System (GOOS), the FAO Global Terrestrial observing System (GTOS), and the global hydrological networks. It calls for making use of synergies with the GEO Task “Advocating for Sustained Observing Systems” (AR-09-03). The draft Work Plan can be accessed here:

<http://www.earthobservations.org/documents.shtml> or http://www.earthobservations.org/geoss_imp.shtml.

GCOS Governance

GCOS Steering Committee

The GCOS Steering Committee held its 17th Session ([SC-XVII](#)) at the UNESCO Headquarters in Paris on 26-30 October 2009 with the participation of 16 Committee members (including all three Panel Chairs), representatives of the four sponsors, eight partner and participating organizations, three invited experts, and five members of the GCOS Secretariat. Following reports from the Director of the GCOS Secretariat, the Chairman of the GCOS SC, and the Chairs of the three Scientific Panels, and after receiving feedback and guidance from the Sponsors, the session addressed the following major policy issues:

- The role of the main observing systems contributing to GCOS;
- The way forward after the World Climate Conference-3 (WCC-3);
- User views on how GCOS can serve their needs in the light of the outcome of WCC-3;
- The GCOS contribution to the Global Earth Observation System of Systems (GEOSS); and
- GCOS Governance.

The Steering Committee agreed on a list of 47 ‘Actions and Recommendations’ from the Session and on a work programme leading to SC-XVIII in October 2010. The report of the 17th Session of the SC, including the list of actions and recommendations, is available on the GCOS website: [GCOS-137](#).

2010 Update of the GCOS Implementation Plan

The draft [2010 Update of the Implementation Plan for the Global Observing System for Climate in Support of the UNFCCC](#) has been prepared in response to a call by the UNFCCC Subsidiary Body on Scientific and Technological Advice (30th session, Bonn, June 2009). This 2010 edition of the Implementation Plan takes account of recent progress in science and technology, the increasing focus on adaptation, the demand to optimize mitigation measures, and other evolving requirements on systematic observation of the climate system. The purpose of the Plan is to provide an updated set of actions required, mainly in the 2010-2015 timeframe, to implement and maintain a comprehensive global observing system for climate with all its components that will address the commitments and support the needs of Parties to the UNFCCC under Articles 4 and 5. Provisional estimates of the costs for undertaking the recommended actions in this Plan have been made, including rough estimates of needed expenditure by developed countries and expenditure needed in developing countries.

The GCOS Steering Committee at its 17th session (October 2009) endorsed the release of this draft for submission to the UNFCCC secretariat and for open review. Subsequently, the draft was sent to the UNFCCC secretariat on 28 October, for consideration by Parties at COP 15 in Copenhagen.

Copenhagen Summit

Prof John Zillman, Chairman of the GCOS Steering Committee, Dr Carolin Richter, Director of the GCOS Secretariat, and Dr William Westermeyer, Senior Scientific Officer in the GCOS Secretariat represented GCOS at the 15th Session of the Conference of the Parties (COP 15) to the United Nations Framework Convention on Climate Change (UNFCCC) in Copenhagen, Denmark in December 2009. The session included several GCOS-related activities, such as side events organized by the Intergovernmental Panel on Climate Change (IPCC), the European Space agency (ESA), the UK Met Office Hadley Centre, and, together, the European Commission and the Group on Earth Observations. WMO and UNESCO held a joint side event called ‘Observation, Monitoring and Prediction,’ where Prof. Zillman delivered a presentation on ‘The Importance of Systematic Observations and Data in Supporting Climate Services for Adaptation’. Dr Richter spoke at the UNFCCC Climate Change Kiosk on GCOS’s efforts in ‘Improving Climate Observations in Support of the UNFCCC’ and delivered a

presentation on ‘Essential Climate Variables and Systematic Observations’ at the ESA Side event on ‘Satellite Observations Contributing to Global Earth System Monitoring.’

On the last day, a draft decision on ‘Systematic Climate Observations’ was adopted:

http://unfccc.int/files/meetings/cop_15/application/pdf/cop15_sco_auv.pdf (preliminary version).

COP 15 also adopted a draft decision on ‘Methodological guidance for activities relating to reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries’, mentioning the need of national forest monitoring systems by a combination of ground-based and remote sensing measurements:

http://unfccc.int/files/na/application/pdf/cop15_ddc_auv.pdf (preliminary version).

Calendar Highlights in early 2010

- GCOS/GTOS/WCRP Ocean Observation Panel for Climate, OOPC-XIV, Miami, Florida, 19-22 Jan
- 31st Session of the WCRP Joint Steering Committee, JSC-31, Antalya, Turkey, 15-19 Feb
- [15th Session of the WMO Commission for Climatology, CCI-XV, Antalya, Turkey](#), 19-24 Feb
- [2nd GRUAN Implementation-Coordination Meeting, ICM-2, Payerne, Switzerland, 2-4 March](#)
- [4th Session of the WCRP Observation and Assimilation Panel, WOAP-IV, Hamburg, Germany](#), 29-31 March
- GCOS/GTOS/WCRP Terrestrial Observation Panel for Climate, TOPC-XII, Rome, Italy, 10-11 March
- 25th Session of the CEOS-Strategic Implementation Team, SIT-25, Tokyo, Japan, 12-14 April
- GCOS/WCRP Atmospheric Observation Panel for Climate, AOPC-XV, Geneva, Switzerland, 26-30 April

People

Chairman of the GCOS Steering Committee

Effective from January 2010, Dr Adrian Simmons from the European Centre for Medium-Range Weather Forecast ([ECMWF](#)) became the new Chairman of the GCOS Steering Committee. Dr Simmons has been Chairman of the GCOS/WCRP Atmospheric Observations Panel for Climate (AOPC) since 2006, and takes over the Chairmanship of the Steering Committee from Prof. John Zillman, who served as Chairman from 2006-2009. Dr Zillman’s vision, energy, and commitment to the mission of GCOS is unsurpassed, and he will be greatly missed by all. However, the Secretariat looks forward to his continued involvement in other roles in support of GCOS, as does the incoming Chairman.

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