

# **GCOS and the co-sponsored panels**

## **AOPC, OOPC and TOPC**

**Adrian Simmons**

**European Centre for Medium-Range Weather Forecasts**  
**Chair, Steering Committee for GCOS**

**GCOS encompasses the climate-relevant components of:**

- the WMO observing systems and programmes (WIGOS: GOS, GAW, WHYCOS, ...)
- the IOC-led co-sponsored Global Ocean Observing System (GOOS)
- the FAO-led co-sponsored Global Terrestrial Observing System (GTOS)
- observational elements of research programmes (WCRP, IGBP, ...)
- other systems contributing climate observations, data management or products

**which together form our overall global observing system for climate, and the climate-observing component of the GEO System of Systems**

**The GCOS programme:**

- assesses and communicates overall requirements
- advises on implementation and reporting
- reviews and promotes progress

**covering the observations, data transmission and management, formation of fundamental climate data records and derivation of products from them**

## National met services, other national institutions and regional agencies

- to the observing systems, including to baseline and reference atmospheric networks (GSN, GUAN, GRUAN, ...), following GCOS principles and guidelines where possible
- operating monitoring centres, lead centres, data centres, ...
- supporting a Cooperation Mechanism and regional activities for developing capacity
- coordinating their specific national GCOS activities

## GCOS bodies:

- the Programme Director and staff at WMO
- the Steering Committee (SC)
- co-sponsored Panels for Atmosphere, Ocean and Land, and their working groups
- also working via representation of these Panels on WOAP and now the WDAC

Secretariats of contributing observing systems and programmes, related technical commissions, space-agency coordinating bodies, expert groups, ...

## Atmospheric Observation Panel for Climate (AOPC)

- Sponsored by GCOS and WCRP, with WCRP participation through SPARC and JPS representation at panel sessions
- Chair is Adrian Simmons

## Ocean Observations Panel for Climate (OOPC)

- Sponsored by GCOS and WCRP, with WCRP participation through ex-officio CLIVAR membership
- GOOS is a former sponsor, and should return following recent re-organisation
- Eric Lindstrom has become Co-chair of new GOOS SC and will vacate OOPC chair

## Terrestrial Observation Panel for Climate (TOPC)

- Sponsored by GCOS, WCRP and GTOS, with WCRP participation through panel membership of K. Steffen, together with JPS representation at panel sessions
- Chair is Han Dolman
- GTOS is currently disengaged (with more than TOPC) and prospect is unclear

**Designates (with SC approval) baseline and reference *in situ* networks**

- covers meteorological variables and atmospheric composition
- monitors performance (including transmission, archiving and rescue of historical data)
- provides recommendations in liaison with WMO programmes and commissions
- advises on regional improvement via Cooperation Mechanism

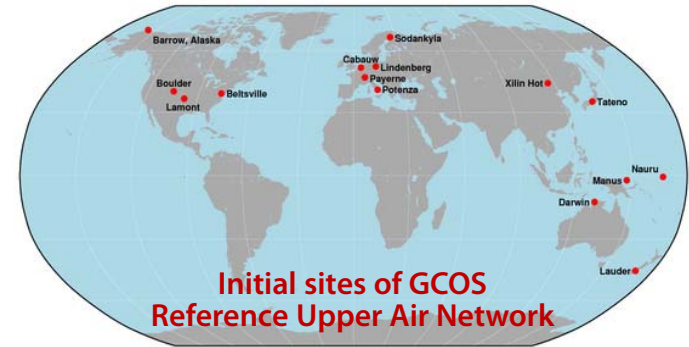
**Oversees in particular the development of the GCOS Reference Upper Air Network**

**Discusses issues relating to satellite missions and their data processing and reprocessing**

**Reviews status of some *in situ* data products (CRUTEM, GPCC, ...) and reanalysis**

**Liaises with OOPC and TOPC on topics of mutual interest**

**Contributes to the atmospheric component of overall GCOS assessments of adequacy and statements of requirements for global climate observation**



## New GOOS Steering Committee foresees

- three panels, each covering both open ocean and coastal waters
- OOPC as the panel for physical oceanography (supported from within GCOS Secretariat)
- with the other panels covering biogeochemistry and ecosystems

## Working within the recently developed Framework for Ocean Observing

### OOPC will continue its focus on

- improving and expanding ocean climate indices published on its web site
- documenting societal relevance of ocean observations and climate indices
- providing briefings on current climatic events
- presenting current status of *in situ* and satellite components of ocean observing system
- liaising to review needs and advocate for sustained and enhanced ocean observation
- continuing to develop a Deep Ocean Observing Strategy

and thereby contribute to the oceanic component of overall GCOS assessments of adequacy and statements of requirements for global climate observation

**Meets annually, considering general issues and variable-by-variable status**

**Matters raised at its March 2012 session include:**

- lack of GTOS support (including for maintenance of web site)
- usefulness and appropriateness of the ISO framework proposed by GTOS
- need for liaison with ICSU on Future Earth; WGMS provides GCOS link to ICSU WDS
- burden of multiple reporting that falls on data centres
- poor provision of lake and river measurements to data centres
- support needed for river measurements; some from GCOS Cooperation Mechanism
- need for more uniformity and improvement of *in situ* soil-moisture measurement
- proposal for ex-officio membership from Land Product Validation subgroup of the CEOS Working Group on Calibration and Validation
- establishment of a reference network of ecosystem sites

**Contributes to the terrestrial component of overall GCOS assessments of adequacy and statements of requirements for global climate observation**

**Steering Committee meets annually in Sept/Oct, about six months after panels**

**Activities of Secretariat and SC over past year include:**

- publishing Satellite Supplement to 2010 Update of Implementation Plan
  - placing emphasis on requirements for products
  - with CEOS coordinating space-agency response to UNFCCC later this year
- contributing to the observation and monitoring component of the plan for the GFCS
- convening with partners an Implementation Strategy Meeting for South America
- mapping out proposal for next assessment cycle, in liaison with UNFCCC
  - reviewing data needs for adaptation and service provision (2012-2013)
  - assessing general progress and adequacy, taking account of IPCC AR5 (2013-2015)
  - formulating new Implementation Plan (2015-2016)

**Future activities will be subject to the outcome of a Sponsors' review of the programme to be held over the coming 12 months**