Impacts of GCOS

a discussion

GCOS Steering Committee 28

Item 6

GLOBAL CLIMATE OBSERVING SYSTEM

KEEPING WATCH OVER OUR CLIMATE

WMO IOC International Science Council UN environment

Supported by the European Union

opernicus Europe's eyes on Earth

This topic

- Discuss how well the GCOS outputs, including the Status Report, the Implementation Plan and the ECV requirements, have contributed to the development of the global climate observing system.
- This will allow the identification of
  - changes needed for GCOS to meet new needs and expectations,
  - areas for improvement in the upcoming Status Report and Implementation Plan
  - as well as potentially identifying new or expanded areas of work.

Secretariat View

- To kick off the discussion here are some observations form the GCOS Secretariat covering:
  - Major Successes
  - Other Areas
  - Implementation Plan
  - New Areas
  - Climate Cycles

Major Successes

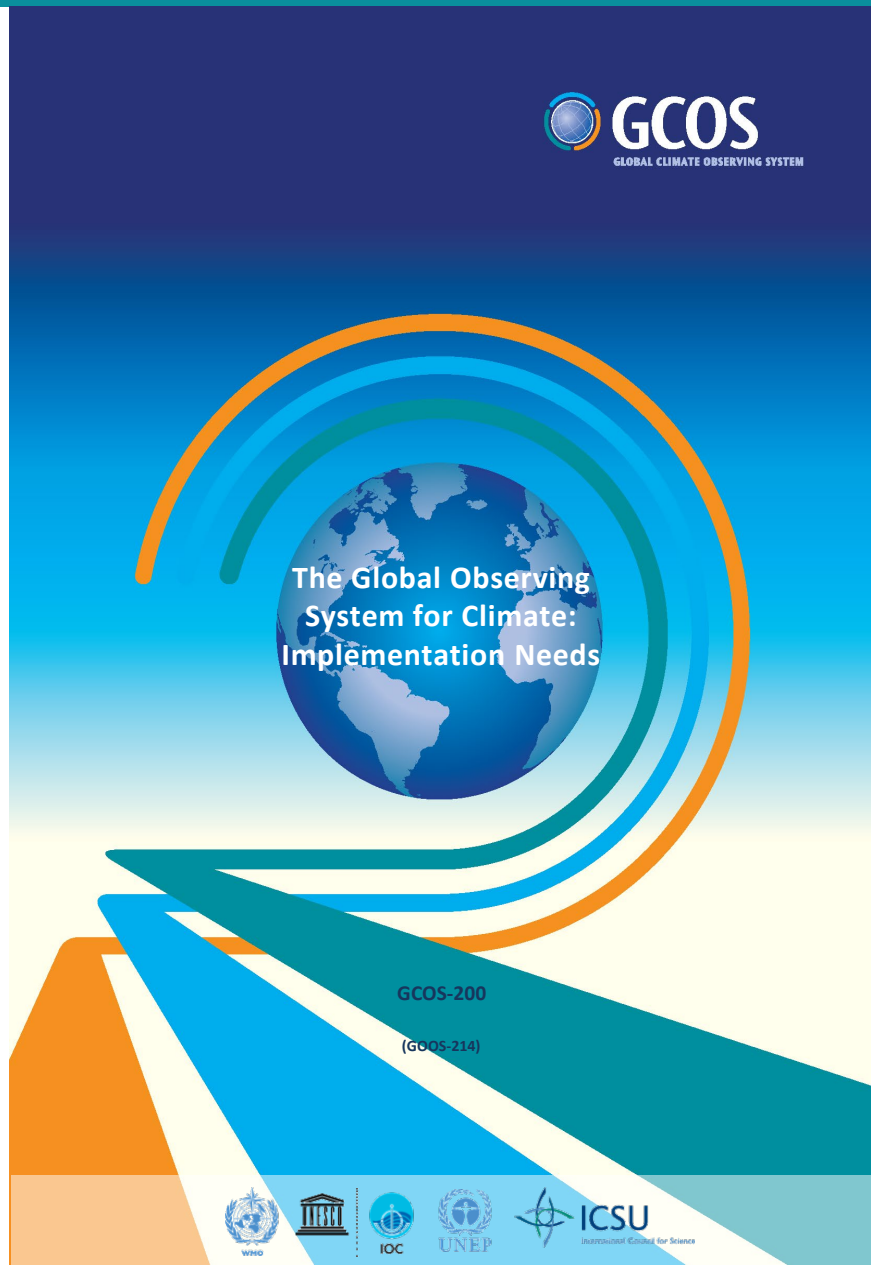
- There have been some significant areas where GCOS has had a major impact.
- Satellite observations coordinated by the Joint CEOS/CGMS Working Group on Climate have expanded their observations of ECV based on GCOS requirements.
  - This is highlighted by the data records in the ECV Inventory of climate data records with currently 766 entries with a further 371 planned.
- There has also been considerable effort into distribution of this information through the EU's Copernicus and NOAA in the US.

Other Areas

- There has been less success in getting the GCOS Implementation Plan recognised by WMO.
  - Currently the Secretariat has been expending considerable effort in integrating the GCOS ECV into WMO's WIGOS: recently the list of ECV was included in the WIGOS manual.
  - In the future, the GCOS Secretariat will continue to build on this work so that this issue is now being addressed.
- In the other domains (ocean and terrestrial) there is no similar regulatory approach to WMO and meteorology. In these areas GCOS can, and does, influence monitoring planning.
- Ocean observations, coordinated through GOOS aim to cover a number of disparate applications.

Implementation Plan

- The GCOS Implementation Plan has been criticised as being too detailed with many actions for each ECV.
- Many of the actions are not actionable: they are too vague, and there are no clear messages for the monitoring organisations and networks.
- A revised approach for the next Implementation Plan will be presented later in this meeting.
- In addition the Status Report (2015) is very comprehensive and complete – however, it is a large document which is unlikely to be read by those making decisions on future monitoring.



New Areas

- In the past GCOS has concentrated more on the climate science. Now that climate change is unequivocal, GCOS needs to address other areas of its mandate. Some of these areas will be discussed later in this meeting.
  - support for UNFCCC: GCOS reports to the UNFCCC and these reports are well received. There will be a discussion on the UNFCCC Global Stocktake later in this meeting.
  - The GCOS Implementation Plan highlights potential synergies with monitoring for other Multilateral Environmental Agreements (e.g. CBD, Ramsar, UNCCD). Many of the observations may also support some of the Sustainable Development Goals. However, none of these areas have been explored.
  - A major area for GCOS should be supporting adaptation and mitigation. The task force looking at this should continue.

Climate Cycles

- The 2016 Implementation Plan set long-term targets for the climate cycles and there has been recent work looking at how well the ECV can be used to close the cycles.
- This has resulted in a paper for each cycle: the Energy paper has been published (ref) with the water and carbon papers not far behind.
- What further work on the use of ECVS to close the cycles is required

thank you

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