

WMO statement on GCOS on behalf of the co-sponsors to SBSTA 50

17 – 21 June 2019, Bonn

The Global Climate Observing System (GCOS)¹, would like to update the SBSTA on progress since the last report to SBSTA 49 in Katowice, December 2018.

GCOS task teams have been discussing a list of activities to further develop the observing system improving scientific understanding, for monitoring the state of environment and impacts of climate change and thus providing observations to support adaptation. A GCOS task team on terrestrial observations of the impacts of climate variability and change has met and is finalising a report. Observations can both support prediction and planning of future impacts and also monitor implementation of these plans. Initial discussions considered a range of topics including:

- ⇒ One response to urban heatwaves causing mortality and morbidity is through increasing green space and so cooling neighbourhoods: this can be remotely sensed;
- ⇒ Some changes in irrigation are observable from space but attribution to drivers such as limited water resources, droughts and changing rainfall is difficult;
- ⇒ Changes in distribution and phenology of the terrestrial biosphere are being observed. Monitoring land cover not only shows loss of particular habitats (e.g. forests) but also can show the drivers behind these changes. This may also support a climate indicator for the biosphere.

The GCOS Steering Committee will consider the results of this Task Team and propose a way forward.

The series of GCOS regional workshops is continuing. This year a 3rd workshop is planned in Belize with a focus on implementing the WMO Global Basic Observing Network (GBON). GBON will provide the minimum data needed, not just for numerical weather prediction, but also global climate models and

¹ See homepage: <https://gcos.wmo.int/en/home>

reanalysis. The report from the 2nd regional workshop held last year in Uganda, which focuses on the challenges in planning sustainable networks, has been finalised.

A meeting of GCOS experts across atmosphere, ocean and land domains, met in March to consider observations of the carbon and water cycles and the earth's energy balance as input into the revision of the GCOS implementation plan due in 2022. The meeting identified three key themes of sustainability, traceability and data access for the update.

Lastly, we consider the Earth Information Day initiative as an important opportunity to improve communication between the science communities and the Parties to the UNFCCC and provide information and requirements between the observation and.

Again, thank you for this opportunity to report on progress and GCOS remains committed to supporting the parties to the UNFCCC and their observational needs.

Thank you.