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## **GCOS STEERING COMMITTEE**

### **THIRTIETH SESSION**

GCOS SC-30, 7–8 December 2022

Virtual Session

## **Adaptation**

### **Adaptation**

The Steering Committee is asked to consider the report produced by the GCOS Adaptation Task Team(GATT) and decide upon the next steps.

### **DRAFT DECISION (1)**

The GCOS Steering committee thanks the members of the GATT for their work and report and asks that they contribute to further GCOS work in this area as needed.

The Steering Committee decides that:

1. The GATT is asked to complete its work on the case studies for presentation at the Joint Panel Meeting in June 2023.
2. GCOS should hold an Adaptation workshop in 2023/4 (or a set of workshops around key adaptation concerns) with major implementers and supporters of adaptation as well as thematic experts. The aim of this workshop will be to identify, from their point of view, what are the most important datasets and climate information they need, what are the major gaps, and whether the existing GCOS ECVs/products including their spatial and temporal specifications are adequate for adaptation.

The Steering committee will consider the final report of the Case Studies of the GCOS Adaptation Task Team and the outcomes of the Workshop and then decide on a way forward.

**Additional recommendations to the Decision (1):**

The Steering Committee recommends that:

1. The GCOS Secretariat should hold the consultations for this workshop as described in INF. 1.10.
2. The GCOS Expert Panels should aim to ensure that at least two members of each panel can support work on adaptation.
3. GCOS should put more emphasis on supporting improvements to reanalysis and global climate modelling. The panels are asked to consider how their work can improve reanalysis and climate modelling and how existing ECV that are not currently used in reanalysis or climate modelling can contribute.

**Background**

- 1) Adaptation is a major user of climate data. The need for GCOS to support this, within the context of a global system, has been identified by the Steering Committee and the 2016 and 2022 GCOS Implementation Plans.
- 2) The UNFCCC COP27 at Sharm El Sheikh in November 2022, has also recognizes *the need to enhance the coordination of activities by the systematic observation community and improve its ability to provide useful and actionable climate information for mitigation, adaptation and early warning systems, as well as information to enable understanding of adaptation limits and of attribution of extreme events.* (Decision on the Implementation of the Global Climate Observing System) and *Emphasizes the need to address existing gaps in the global climate observing system, particularly in developing countries, ...as well as the need to enhance coordination of activities by the systematic observation community and the ability to provide useful and actionable climate information for mitigation, adaptation and early warning systems, as well as information to enable understanding of adaptation limits and of attribution of extreme events* (in the Sharm El Sheikh Implementation Plan);
- 3) The GCOS Adaptation Task Team (GATT), established by the Steering Committee, has produced a final report (INF. 1.10) written from the point of view of the observing community. It contains a three case studies. This report indicates a way forward starting with working more closely with the adaptation community.
- 4) The report highlights that many existing GCOS ECVs and products are relevant for adaptation.
- 5) The three case studies identify that information for adaptation:
  - a. Is often local in nature.
  - b. Often needs high resolution in time and space and local data, to observe climate extremes.
  - c. Must be put in a larger context, requiring consistency at least at the regional scale.
  - d. Should be spatially and temporally homogenous, with long term time consistency.
  - e. Should be available in near-real time.

- f. Have quality aspects such as completeness of documentation, accessibility, long-term maintenance, information on independent evaluation, overall assessment of their fitness for purpose and examples of use.
  - g. Needs to be compatible with non-climatic (e.g. socio-economic, demographic, technological and environmental) data sources.
- 6) Reanalysis can provide complete datasets, spatially and temporally, that supports most of these needs. GCOS has already made several recommendations to improve reanalysis in the 2022 Implementation Plan. However, reanalysis does not, yet, make use of all the available datasets and ECVs and the panels should be encouraged to determine if this can be improved.
- 7) Global and regional climate models are vital for providing essential information and for supporting local models for future climate.
- 8) The report also highlights the links between adaptation data and many of the SDG.
- 9) Finally, the report recommendations are as follows:

**Recommendation 1:**

to request the GATT members to continue their analysis for the wildfire use case and to finalise the assessment of the GCOS ECVs. The aim should be to present the results for the joint-GCOS Panel meeting in June 2023. Following this a thematic paper should be prepared for submission to BAMS journal.

**Recommendation 2:**

to request the GATT to perform likewise steps for the Ocean Heatwave and Pluvial Flooding use cases. One or more thematic papers could be considered for submission to BAMS journal. The GATT should engage, if needed, other people from the key stakeholders in this activity.

**Recommendation 3:**

GCOS should ensure that there is enough expertise in adaptation in each of the panels and that a coherent and consistent approach for adaptation is followed by the three panels. It is suggested that at least two panel members in AOPC, OOPC and TOPC should have some expertise in adaptation and engagement in adaptation work. The panels should continue to report on the adequacy of reanalysis systems and their gaps for adaptation applications.

**Recommendation 4:**

- a) GCOS should hold an Adaptation workshop (or a set of workshops around key adaptation concerns) in 2023/4 with major implementers and supporters of adaptation (see point c of this Recommendation) as well as thematic experts. The aim of this workshop will be to identify, from their point of view, what are the most important datasets and climate information they need, what are the major gaps, and whether the existing GCOS ECVs/products including their spatial and temporal specifications are adequate for adaptation.
- b) In preparation for this workshop the GCOS Secretariat should hold consultations with those key organisations that will participate in the workshop.
- c) The key organisations involved in the consultations and in the workshop could include:
  - i. Bodies with links to GCOS (e.g. Copernicus, UNESCO, UNEP, NOAA)
  - ii. UN bodies implementing adaptation (e.g. UNDP and FAO)
  - iii. UNFCCC
  - iv. National bodies funding adaptation.
  - v. Relevant Independent organisations (e.g. PIK Potsdam Institute for Climate Impact Research)

- vi. EEA (Climate-ADAPT)
  - vii. WMO SERCOM/GFCS
  - d) A group of experts will be mobilised to produce a report with the conclusions of the workshop. This group will include (but not be limited to) members of the GCOS panels and will be supported by GCOS Secretariat.
  - e) Following the workshop, the GCOS Steering Committee should consider the workshop conclusions and decide on the next steps.
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