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**GCOS STEERING COMMITTEE**

**TWENTY-EIGHTH SESSION**

GCOS SC-28, 24–26 November 2020

Virtual Session

**Future work on cycle**

The Steering Committee is asked to provide guidance to the panels (and the larger science community) how to deal with the three cycles, energy, carbon and water. The Steering committee is asked to establish a taskforce that evaluate the cycles and provide input into the new IP

**DRAFT DECISION (3)**

The Steering Committee decides to:

- a) Establish a task force to oversee the cycle work in the future and to make sure that recommendations feed into the next IP.
- b) This work is not necessarily limited to energy, water and carbon but may also extend to other crossdomain efforts such as for instance sea ice for which ECVs from different domain are needed.
- c) The Steering Committee also decideds that, where possible, requirements should be aligned with existing ECVs. The Steering Committee also notes that differing requirements for different uses may be needed for a specific cycle.

**Background**

1. One of the main activities of GCOS is to maintain and review the Essential Climate Variables (ECV) and their requirements. GCOS is currently finishing the Status report and started preparing to produce a new Implementation Plan in 2022 which will contain revised ECV requirements.

2. In the IP-2016 for the first time, the ECVs were presented in the context of providing information of the Earth's energy water and carbon cycle.
  3. For each cycle in the Marakech Joint Panels meeting, review papers were started to identify gaps in the cycle's and efforts to close the budgets based on existing ECV's
  4. The paper on the energy cycle was recently published (Schuckmann et al., Earth Syst. Sci. Data, 12, 2013–2041, 2020 <https://doi.org/10.5194/essd-12-2013-2020>), the water cycle paper was recently submitted to BAMS and the carbon cycle paper is close to submission.
  5. Following the success of the energy cycle paper and the expected (media) attention also for the other two, increased effort should be focused towards defining observation gaps in the cycle and requirements for key ECVs.
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