

GCOS Status Report 2021 – ECV Data Sheets

to be completed by the ECV Stewards

Instructions

1. The review to be presented in the status report will assess the adequacy of the observing system to produce datasets for users, NOT the datasets themselves. Generally, this assessment is against requirements in GCOS Implementation Plan (GCOS-200)¹. It is NOT an assessment individual systems one-by-one, but an overall assessment of the observing system capabilities taken as a whole.
2. In order to minimize effort, where possible, group *ECV Products*² together in order to reduce the number of sheets to be completed
3. In general, the coverage of an ECV should be global, however some are not present everywhere (e.g. glaciers, major lakes and rivers) and so sometimes GCOS has described these datasets as “worldwide”. Here, for brevity, “Global” should refer to everywhere the ECV is applicable.
4. In some cases, the ECV product² delivered to the users may not be the observations directly but the output of a model or reanalysis. In these cases, the assessment should consider the observations and the subsequent processing chain.
5. In this table simply list the main networks and satellite systems contributing under “satellites”, “networks” and “reanalysis”. Only if needed, add text on the networks and satellites below under “other Information” (i.e. significant information on the status of the networks/satellites etc. or any gaps).
6. Information already collected by the ECV stewards should be the basis for completing this data sheet and should provide most of the information needed.
7. 5-step classifications have been proposed for Adequacy of the Observing System and Stewardship:

7.1. **Adequacy of the Observational System** (the ability of the observational system to produce adequate datasets for users). Does the observation system produce adequate datasets that meet the GCOS requirements?

5	<i>Very Good</i>	Meets requirements
4	<i>Good</i>	Generally meets requirements, provides reliable global trends
2	<i>Medium</i>	Does not meet requirements: while observations are useful and reliable from a user’s perspective, they have significant issues at a regional level
2	<i>Low</i>	Can only produce datasets with limited reliability from a user’s perspective at global and regional levels
1	<i>Poor</i>	Do not meet requirements and does not provide reliable trends

¹ In some cases, deficiencies in the requirements in the last GCOS IP have been identified and are being addressed in the on-going consultation on updated requirements that the panels have been working on for the past 2 years. ECV Stewards should use their judgement in these cases.

² These are the individual observations that together describe an ECV as listed in the GCOS IP (GCOS-200) e.g. the ECV Lakes includes the “ECV Products” water level, water extent, water surface temperature, ice thickness and colour.

7.2. **Availability and Stewardship** (availability, discoverability and stewardship). Is the data freely available, discoverable, accessible with QA/QC and adequate metadata?

5	<i>Very Good</i>	Data available worldwide, with high standards of data stewardship
4	<i>Good</i>	Data available but not meeting the highest standards of data stewardship.
2	<i>Medium</i>	Most regions have available data but there may be stewardship issues, however the data are useful and reliable from a user's perspective
2	<i>Low</i>	Some data is available but of limited utility
1	<i>Poor</i>	Useful data is not available at a global or regional level.

8. Both the assessments should each be accompanied by a short (max 120 character) description. These classifications will be reviewed by a small group supported by the GCOS Secretariat to ensure consistency between ECV. If changes are proposed by this group this will be discussed with the ECV steward. The group will include users of the data. A longer discussion will be given below in the "Description" section.
9. The longer text "Description" is important as it will provide the justification for the assessment of the ECV above. This will be published but may not be included in a short version of the report. Electronic publication is being considered. Provide a discussion on the observations of the ECV and its "ECV products" highlighting issues, gaps and deficiencies (maximum one page). Highlight, if there are some applications where the available observations are inadequate.
10. Extremes – If relevant, highlight if the observations are adequate to capture extreme events for this ECV.
11. Adaptation - Identify if the ECV can be used to support or monitor adaptation, or any improvements needed to support adaptation

ECV Data Sheet for the GCOS Status Report 2021

Item		Status
ECV Name		
ECV Products covered by this sheet (group as much as possible)		
Adequacy of the Observational System Assessment	<i>Class (5 – 1)</i>	
	<i>short text</i>	
Availability and Stewardship Assessment	<i>Class (5 – 1)</i>	
	<i>short text</i>	
Networks		
Satellites		
Models, Reanalysis etc.		
Extremes		
Adaptation		

Discussion One-page (max)

Other information (e.g. Networks, Satellites, reanalysis, models etc.)

Timeline for Status Report

The overall timeline for the GCOS Status Report was agreed last year by the panels and GCOS Steering Committee. In order to meet these deadlines, we have prepared a more detailed workplan so that work can start immediately. To produce the GCOS Status Report we will:

1. Ask ECV experts to fill in the ECV datasheets for “their” ECV. We will circulate the datasheets to the panel Co-chairs and ask for comments by next Monday (9 March). Then we will circulate amended worksheets to the experts who will write sections on each ECV asking them to complete the datasheets by the end of June 2020. This work can proceed while the report outline is being finalised. The classifications will be reviewed by the meeting in August.
2. Simultaneously we will draft and circulate an outline for the report. This will be based on the proposed outline agreed by the last GCOS steering committee. The panels and their chairs will be able to discuss and agree and outline also by the end of June 2020.
3. The secretariat will then compile the datasheets into the agreed report outline and invite contributions from relevant organisations (e.g. WGClimat).
4. In August a small group from the panels and some user organisations will meet and will:
 - a. Consider the classification of each ECV to ensure consistency across all ECV. If necessary, the boundaries between the 5 steps of the classification scheme will be adjusted and/or definitions improved.
 - b. Decide if additional inputs are needed and identify their authors.
 - c. Agree and draft the conclusions
5. The Secretariat will compile a clean version of the report in October 2020. This will be circulated to all panel members and authors for review in October and November.
6. In December, the secretariat will compile a clean, complete version which will be subject to a public review in January/February 2021.
7. Any comments will be addressed by the panels and the document agreed by the panel meetings. Following final approval, the report will be released in mid-2021.