

Item 7.3

Status Report 2021

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GCOS Steering Committee (SC-27)

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**GLOBAL CLIMATE
OBSERVING SYSTEM**

KEEPING WATCH OVER OUR CLIMATE



WMO



IOC

International
Science Council



UN 
environment

GCOS will prepare a fourth Status Report (SR4) in 2021. This will allow that a fourth Implementation Report can be prepared in 2022.

The SR4 will mainly address:

- the current capability of the global climate observing system to monitor individual ECVs;
- the status of the main global climate networks for the atmosphere, ocean, land and satellites;
- the progress of implementing Actions of the 2016 Implementation Plan.

The information of these three sections will be integrated into conclusions on the overall ability of the global climate observing system to adequately monitor the three main climate cycles and the biosphere.

The SR4 shall address:

- traceability, sustainability and open data
- the current capability of the global observing system for climate to capture extremes and provide observations for and of adaptation (requested by the GCOS Joint Panels Meeting 2019 and by the GCOS Steering Committee Subgroup on observations in support of adaptation).

PROPOSED STRUCTURE FOR THE SR4 2021

1. FOREWORD
2. EXECUTIVE SUMMARY
3. INTRODUCTION
4. STATUS OF THE GCOS ESSENTIAL CLIMATE VARIABLES
 - 4.1 Atmosphere Essential Climate Variables
 - 4.1.1 Surface Air Temperature (example)

Role in the Climate System:

Text from the factsheets, why this variable and its products are relevant for the climate

Status of the Observation

Status of ECV monitoring covering the observations itself, if necessary individually per ECV product. This includes in-situ and satellite.

At the end, a maturity rating for each ECV Product will be provided, red, yellow green. These qualitative judgement should be defined as exact as possible so the individual ECV Stewards can do this rating homogeneously across all ECVs.

Status of Data Availability and Quality

Text about the data availability and quality aspect for the ECV, if necessary individually per ECV product. **For both of these aspects, a rating similar to the maturity rating is given for each ECV product (red, yellow, green).**

Adaptation

If ECV is relevant for adaptation, text from adaptation report (as decided in Marrakesh).

Extreme

Text about the capability to monitor extremes of this ECV, if relevant (as decided in Marrakesh).

4.2 Land Essential Climate Variables

Similar to Atmospheric

4.3 Ocean Essential Climate Variables

Similar to Atmospheric

5. STATUS OF THE OBSERVING NETWORKS

5.1 Atmosphere

5.2 Land

5.3 Ocean

5.4 Satellite

6. STATUS OF THE IMPLEMENTATION OF ACTIONS FROM THE 2016 IMPLEMENTATION PLAN

Table of all actions with text from IP Rapporteurs. **A rating system (red, yellow, green) will indicate progress.** These need to be defined in order to assure homogeneity across domains and actions.

7. CONCLUSIONS

7.1 Principal Findings

7.2 The Earth System Cycles (integrating results of sections 4-6)

7.2.1 The Energy Cycle

7.2.2 The Water Cycle

7.2.3 The Carbon Cycle

7.2.4 The Biosphere

7.3 Observations of and for Adaptation

7.4 Monitoring Extremes

Draft Decision 7.3 (SC-27)

1. The GCOS Steering Committee requests the secretariat to prepare a fourth Status Report (SR4) in 2021.