



## **Fourteenth Steering Committee** **27-29 May 2026**

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# **SOFF collaboration with the Global Climate Observing System (GCOS)**

## Decision 14.4

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Systematic Observations  
Financing Facility

**Weather  
and climate  
data for  
resilience**



## Decision 14.4 SOFF collaboration with the Global Climate Observing System (GCOS)

The Steering Committee

**Notes** the importance of systematic observation for the implementation of the Paris Agreement, calling for sustained and enhanced observations, essential to improve scientific knowledge of climate systems, inform mitigation and adaptation, and support climate services under Articles 7 and 8 of the Agreement.

**Further notes** the role of the Global Climate Observing System (GCOS) in promoting and coordinating systematic observation and acknowledges its sustained contributions in providing guidance and informing Parties' efforts to maintain and strengthen observing systems and data exchange, ultimately serving end-users.

### Acknowledges

- the combined efforts of GCOS and SOFF in their UNFCCC and COP engagement in strengthening systematic observation, reflected in SBSTA conclusions that highlight the importance of both partners.
- the existing collaboration between GCOS and SOFF, including GCOS's inclusion in the SOFF Advisory Board ([Decision 8.8](#)) as a key partner to strengthen SOFF's positioning within the UNFCCC process.
- the forthcoming Seventh Assessment Reports of the IPCC, and the periodic Global Stocktake under the Paris Agreement, noting that systematic observations provide critical inputs, improve understanding of the climate system, inform countries' National Determined Contribution assessments, and support adaptation, mitigation, and loss-and-damage planning.

**Welcomes** further operationalizing the GCOS and SOFF collaboration through creating and leading a multi-stakeholder partnership to conceptualize and deliver a Global State of Systematic Observation Report, envisioned to serve as catalyst for SOFF resource mobilization and a springboard for a potential future Global Goal on Observation.

**Approves** the allocation of USD 50,000 to initiate a kick-off phase, aimed at creating the partnership for the development of the Global State of Systematic Observation Report, conceptualize the report, secure partners' contributions, and agree on a timeline towards the envisioned launch at COP32.

### Requests

- (i) the UNMPTF Office to disburse the amount of USD 50,000 to WMO and manage a Trust Fund that will financially sustain this joint effort.
- (ii) GCOS and SOFF Secretariats to seek resources from additional partners for the production of the report.
- (iii) the GCOS and SOFF Secretariats to report back at the 16th Steering Committee meeting on the outcomes of the kick-off phase and provide a timeline and next

steps for the development of the first Global State of Systematic Observation Report.

### **Purpose of this Document**

This document outlines the proposed stepped-up collaboration between the Global Climate Observing System (GCOS) and SOFF aimed at creating a multi-stakeholder partnership for the development of the first Global State of Systematic Observation report envisioned to be launched at UNFCCC COP32.

SOFF funding is proposed to initiate a kick-off phase aimed at creating the partnership to conceptualize the report, mobilize partners' contributions and agree on a production timeline.

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# SOFF collaboration with the Global Climate Observing System (GCOS)

## 1. Systematic Observation in the Paris Agreement and UNFCCC

### 1.1 Paris Agreement Mandate

Systematic Observation is a key element of the Paris Agreement under the United Nations Framework Convention on Climate Change. [Article 7, Paragraph 7c](#) calls for the strengthening of systematic observation to directly inform climate services and decision-making. Systematic observation is also a key component of Loss & Damage ([Article 8](#)) that relies on continuous data to predict extreme weather and monitor slow-onset events and Accountability. Finally, the Global Stocktake as stated in [Article 14](#) depends heavily on systematic observation.

### 1.2 Foundational to the UNFCCC

[Articles 4 and 5](#) of the United Nations Framework Convention on Climate Change (UNFCCC) explicitly call for international cooperation, systematic observation, and the exchange of climate data. These efforts are supported by the work of the Subsidiary Body for Scientific and Technological Advice (SBSTA), including its periodic [Earth Information Day](#), which serves as a platform to showcase advances and promote coordination in global climate observation and data systems. The Global Goal on Adaptation and its target 10a features systematic observation and includes tracking of observations.

### 1.3 Existing capabilities and gaps

Significant global space-based monitoring capacity contrasts with persistent surface-level gaps, particularly in developing countries and remote locations. Global climate tracking relies on 55 Essential Climate Variables (ECVs) spanning the atmosphere, ocean, cryosphere and terrestrial domains defined by the Global Climate Observing System (GCOS), with a subset of surface-based variables aligned with the Global Basic Observing Network (GBON) and supported through the Systematic Observations Financing Facility (SOFF).

## 2. GCOS-SOFF collaboration

### 2.1 Advocacy

GCOS and SOFF share a common mandate to strengthen sustained climate observations. The partnership was formalized by GCOS's inclusion as a member of the SOFF Advisory Board ([Decision 8.8](#)). Together, they engage in the UNFCCC process through coordinated presentations at the Earth Information Days of COPs to advocate for the critical importance of systematic observation.

### 2.2 Scientific

SOFF contributes to strengthening the availability and exchange of observations of a subset of ECVs, while improving the continuity and quality of weather and climate data in supported countries.

SOFF [Impact Experiments](#) conducted by the European Centre for Medium-Range Weather Forecasts (ECMWF) further demonstrate that these data significantly reduce forecast uncertainty particularly in data-sparse regions.

### 2.3 Operational

Since GCOS joined the SOFF Advisory Board, progress has been made in maximizing GCOS-SOFF collaboration at country station level. One concrete step has been the prioritization of the GCOS Surface Network (GSN) and the GCOS Upper Air Network (GUAN) during the SOFF Readiness Phase for proposed GBON investments. This requirement is now also reflected in the [SOFF Operational Guidance Handbook](#).

SOFF investments support the strengthening and operationalization of Climate Data Management System (CDMS) capabilities in SOFF countries, enabling them to systematically collect, store, quality-control, and share essential climate observations. A robust CDMS will allow climate data records to be securely preserved, easily accessed, and effectively integrated into national, regional, and global systems. By strengthening these capabilities, countries can improve weather and climate services, support early warning systems, and enhance evidence-based decision-making for climate adaptation and resilience.

### 2.4 Secretariats

WMO is hosting the GCOS as well as the SOFF Secretariat at WMO headquarters which facilitates close collaboration among the teams that led to the proposal for the further stepped-up collaboration.

## 3. Proposed stepping up of GCOS – SOFF collaboration – Global State of Systematic Observation report

### 3.1 Rationale

GCOS and SOFF share complementary mandates to strengthen sustained and coordinated climate observations. GCOS defines the observing requirements and standards for the [Essential Climate Variables](#) (ECVs). Of these, a subset of surface-based atmospheric variables is directly supported through SOFF with long-term financing and technical assistance to help countries meet GBON obligations and close critical data gaps.

While GCOS represents the scientifically authoritative voice on systematic observations for climate, including to UNFCCC parties, their technical reports remain largely inaccessible to key political and financial decision-makers. Therefore, a critical gap to be filled is the need for clearer narrative framing and stronger socio-economic analyses to provide more policy-relevant packaging to the underlying science.

Both, GCOS and SOFF would significantly benefit from this further stepped-up collaboration and co-led partnership in developing the Global State of Systematic Observation report. It would amplify GCOS's scientific work and substantially enhance SOFF visibility among UNFCCC parties, support resource mobilization, and further position SOFF as the UN specialized fund on systematic observation.

### 3.2 Objectives and scope

- Widely communicate beyond the scientific community the fundamental importance of systematic observation to monitoring and understanding the global climate system as well as informing effective climate policies and actions.
- Assess state and trends of climate observation.
- State the absolute minimum observation requirements across all domains and the corresponding gaps and set high-level recommendations to close these gaps.
- Assess the risks of these gaps for the world economy and climate resilient development.
- Demonstrate the socio-economic benefits of closing the gaps across key sectors, both locally and globally. Position the report as the scientific and policy foundation for scaled up financing of observation, including in particular for SOFF.
- Position report as a springboard for a potential future Global Goal on Observation.

### 3.3 Audience

- Senior government officials from donor and recipient countries across different ministries, including finance, foreign affairs and development, climate and environment, and science.
- Senior officials of large foundations and philanthropies
- Senior leadership of private sector entities benefiting from systematic observation

- UNFCCC SBSTA and climate finance negotiators
- Media
- Interested public

### 3.4 Positioning and format

- High-level, glossy, easy to read flagship report
  - Maximum 25-page report, highly visual, for easy global media pick-up
  - Based on the ongoing GCOS assessment of the global observing system and the GCOS status report
  - Synthesize existing scientific and socio-economic knowledge in a highly accessible manner, making the case for increased investments in systematic observation
- In future potentially issued regularly and launched at UNFCCC COPs, potentially every two years
- To underpin and be linked with other global flagship reports, including WMO State of Climate Reports
- First report launched at COP32 November 2027, linked with the Global Goal on Adaptation expected to be finalized at this COP. Interim report to be presented at SBSTA June 2027.

### 3.5 Potential partners

The proposed GCOS-SOFF co-led partnership is expected to bring together a diverse group of stakeholders that would co-author and widely disseminate the report, potentially including the following partners:

- Scientific partners: GCOS, ECMWF, EUMETSAT, EUMETNET, IPCC, WCRP
- UN partners: SOFF co-founders (WMO, UNDP, UNEP) and other UN organizations (incl. UNDRR, WFP, FAO)
- SOFF Advisory Board members
- Academia: Prestigious academia representatives
- UNFCCC partners: UNFCCC Secretariat, UNFCCC RSO and climate finance work programme co-chairs, AOSIS, LDC Group on Climate
- Economic partners: World Bank, WEF, Chicago University, Grantham Institute, WBCSD
- Private sector partners
- Donor partners: bilateral (incl. interested SOFF funders), multilateral and philanthropic funders
- Media partners: international media outlets

### 3.6 Kick-off Phase

To start the work on the Global State of Systematic Observation report, a kick-off phase from June to December 2026 is envisioned. The partners engagement 'kick-off' event workshop to formally launch the process is planned 10-11 September 2026, co-hosted by GCOS and SOFF at WMO headquarters in Geneva. The objectives of the kick-off event are to create a multi-stakeholder partnership to produce the report, conceptualize the report based on the initial concept outlined in the section above, confirm partners' contributions for report production, and agree on a timeline and next steps. COP31 will represent an important milestone of the kick-off phase to generate early visibility for the initiative, including at Earth Information Day.

Looking ahead, at SBSTA in June 2027 the draft report is expected to be presented to provide key inputs ahead of the 2027 Global Stocktake. At COP32 (November 2027, Addis Ababa) the report is expected to be launched to also inform discussions on a possible Global Goal on Observation and strengthened financing arrangements for systematic observation. Jointly with the launch of the report a pledging event for SOFF is envisioned.

## 4. Budget

The budget to cover the additional costs beyond the contributions of WMO (venue, staff time), GCOS and SOFF Secretariats (staff time), and organizations participating in the kick-off event (organizations that have the means to cover the costs of their representatives) corresponds to USD 50.000. The budget will cover the first phase of developing the report in the period between June and December 2026. The budget will cover consultant costs, travel costs, and the WMO fee for administering the trust fund.

The small team of consultants will include a project coordinator as well as internationally recognized senior level representatives who are expected to partially contribute on a pro-bono basis. The consultant team will be guided by and report to the GCOS chair, the SOFF Secretariat Director, and the Director of the WMO Integrated Global Observing System. The consultant team is expected to deliver the following outputs

- Mapping of potential partners for the development of the report, including those to be invited for the kick-off workshop
- Mapping of existing reports and literature as a basis for the global positioning of the report
- Mobilizing of the partners including workshop invitations
- Kick-off event preparation, both, conceptually and logistically
- Co-facilitation of the event

- Event follow up with the partners including securing their potential financial and in-kind contributions for the report production
- Developing an annotated outline and communications plan for the report
- Developing a detailed production timeline and financing plan of the report with the envisioned launch at COP32.

Travel costs will be covered for participants from developing countries as well as the consultants.

The breakdown of the budget is as follows:

- Consultants (including travel): USD 39.000
- Developing Countries participants' travel: USD 7.500
- WMO fee: USD 3.500

Given the tight budget of both GCOS and SOFF Secretariats, it is proposed that the SOFF Steering Committee considers allocating the amount of USD 50.000 to enable to start the work on the Global State of Observation report through the kick-off phase.