



Eighth Steering Committee  
18-19 June 2024

---

## Compliance Phase Framework: Design and Consultation Process

INF 8.5

---

Systematic Observations  
Financing Facility

**Weather  
and climate  
data for  
resilience**



### Purpose of this Document

This document has been jointly prepared by the SOFF Secretariat and WMO Technical Authority. Its purpose is to seek initial inputs from the SOFF Steering Committee on critical design aspects of the SOFF Compliance Phase Framework and the proposed process for consultation to further develop the framework.

## Table of contents

1. SOFF Compliance phase: the unique element ensuring long-term sustainability of SOFF investments.....	3
2. Critical design elements of the Compliance phase .....	4
2.1. Defining the scope of SOFF Compliance phase support.....	4
2.2. Incentivizing regional efficiency and collaboration.....	5
2.3. Supporting countries in the effective use of global forecast products – ensuring SOFF support is a “two-way-street” .....	6
3. Proposed consultation process.....	7

# Compliance Phase Framework: design and consultation process

## 1. SOFF Compliance phase: the unique element ensuring long-term sustainability of SOFF investments

The SOFF Compliance phase is recognized as a defining and unique element of the SOFF country support model and essential in achieving the ultimate objective of sustained compliance with Global Basic Observing Network (GBON) standards. The importance of the Compliance phase has been emphasized by all SOFF partners, as captured in the [Independent External Review](#) completed in October 2023.

The [Operational Manual](#) in section 4.5.3 describes the SOFF Compliance phase and provides the basis for the SOFF Compliance phase framework. As outlined in the SOFF Operational Manual and in the Steering Committee [Decision 5.7 on SOFF and GBON Compliance](#), the Compliance phase provides results-based finance and peer advisors' technical assistance to beneficiary countries to operate and maintain the surface-based observation network and the international sharing of data based on the principle of additionality.<sup>1</sup> The Compliance phase results-based funding is provided annually on an open-ended basis.

The responsibility for implementing the Compliance phase sits with the National Meteorological and Hydrological Services (NMHS) of each SOFF beneficiary country. During the Compliance phase, the NMHS is responsible for operating and maintaining the SOFF-supported GBON network and ensuring data sharing according to the GBON requirements. Peer advisors provide on-demand GBON operational and maintenance advisory support throughout the Compliance phase. When issues occur with the data performance of SOFF funded stations, or GBON compliance is threatened or compromised, the SOFF peer advisors liaise with the respective Regional WIGOS Centre (RWC) and the NMHS to ensure the fastest possible resolution of issues, keeping the WMO Technical Authority informed of issues and progress towards their resolution. The NMHS is also expected to alert the SOFF Secretariat on potential issues or special national circumstances that may hamper the operation and maintenance of the national SOFF supported stations and data sharing.

---

<sup>1</sup> The term additionality is applied here as used e.g. in REDD+ funding mechanisms and as quoted in the 2020 Evaluation Cooperation Group Report on MDBs additionality: "An intervention may be described as additional if it results in something that would not otherwise have occurred." The GBON National Contribution Plan from the SOFF Readiness Phase includes a risk assessment which examines the likelihood that reporting stations that do not receive SOFF investment support will cease reporting if SOFF were not to provide Compliance phase support.

The Decision document [5.7 SOFF and GBON Compliance](#) requested the SOFF Secretariat and WMO as the SOFF Technical Authority to develop a SOFF Compliance Phase Framework drawing on lessons learned from the implementation of SOFF Readiness and Investment phase activities. The objective of this document is to outline key Compliance phase design elements and seek initial inputs from the SOFF Steering Committee. The document also outlines the approach for the further consultation process towards proposed submission of the draft Compliance Phase Framework for consideration and adoption of the Steering Committee in 2025.

## 2. Critical design elements of the Compliance phase

### 2.1. Defining the scope of SOFF Compliance phase support

SOFF support is delivered in three phases: Readiness, Investment, and Compliance. As a result of the Readiness and Investment phases, countries entering the Compliance phase are expected to have the capacity and physical infrastructure needed to operate and maintain their GBON national networks and to share the data internationally according to the GBON regulations.

Compliance monitoring is done by WMO as SOFF Technical Authority through the publicly available data from the [WIGOS Data Quality Monitoring System \(WDQMS\) monitoring tool](#) and a transparent methodology established by WMO to assess the reporting status of each station. WMO will provide SOFF-tailored quarterly GBON compliance reports showing the performance of all stations that benefit from SOFF investment support as well as the total number of GBON-compliant stations for each SOFF beneficiary country. The quarterly monitoring reports will trigger beneficiary countries and their peers to undertake corrective measures to ensure GBON compliance in all the nominated station(s) and related payments.

During the Compliance phase, SOFF beneficiary countries will receive financial and technical support, as long a country remains a SOFF beneficiary country. Compliance phase annual results-based payments are open-ended unless the beneficiary country's eligibility status changes, if the country wishes to end its engagement with SOFF, or if circumstances outside SOFF control impede the continuation of SOFF Compliance Phase and the associated financial support in the country.

Results-based financial support will be provided retroactively annually, based on the SOFF-tailored annual WMO GBON compliance report and corresponding WMO verification of compliance. The report will be issued for each SOFF operational year (1<sup>st</sup> of July to 30<sup>th</sup> June) and will summarize and update the information previously provided in the SOFF-tailored quarterly reports. The quarterly and annual compliance reports will be made publicly available on the SOFF website.

In extreme cases of *force majeure*, stations delivering observations less than GBON compliance criteria could be supported based on a peer advisor's assessment of the reasons and an assessment of station performance and progress.

A country-tailored fixed value payment per compliant surface-based and upper-air station is proposed. The country-tailored rate per station will be calculated for each country during the Investment Phase, drawing on operation and maintenance costing insights from this phase. The country-tailored rate should be agreed upon between the beneficiary country, the Implementing Entity, and the Peer Advisor.

SOFF beneficiary countries would be expected to contribute financially or in-kind to Compliance payments. The exact contribution from countries would consider country circumstances. In addition to the provision of results-based financial support, beneficiary countries can access, on a demand basis, technical assistance provided by the country's peer advisor. An annual financial cap for peer advisory support will be established.

**Guiding question: How to ensure transparency in the calculation of the country-tailored fixed value amount for compliant stations and the required country contribution, taking into consideration difference in country context and financial capacity?**

## 2.2. Incentivizing regional efficiency and collaboration

SOFF follows the GBON country-based model – each country is mandated to achieve GBON standard density compliance under the responsibility of the country's NMHS. While achieving GBON compliance is a national obligation, SOFF is aiming at incentivizing regional and sub-regional efficiencies and synergies. Therefore, the SOFF Steering Committee adopted with [Decision 1.4](#) the criteria on opportunities to create economies of scale and optimize the design of the observing networks through multi-country/sub-regional implementation as one of the six SOFF programming criteria.

Already in the Readiness and Investment phases, SOFF aims to identify opportunities to create economies of scale and optimize the design of the observing networks through multi-country/sub-regionally coordinated implementation. Through [Intersessional Decision 2.1](#) on SOFF Regional workshops the Steering Committee allocated resources for SOFF regional engagement and workshops aimed at fostering regionally coordinated SOFF implementation.

While the foundational elements are set for regional efficiency during the Readiness and Investment phase, the Compliance phase offers additional opportunities. Potential elements for regional efficiency during the Compliance phase include:

- Support through Regional WMO centers, such as Regional WIGOS Centres (RWC) which play a crucial role in addressing GBON data performance issues.

- Support through Regional Instrument Centres (RIC) which provide vital support for calibration and maintenance, ensuring the accuracy and reliability of meteorological instruments.
- Regional pools of spares or regional operations and maintenance support provided by a regional SOFF beneficiary country.
- Regional data sharing arrangements
- Regional troubleshooting and/or peer advisory support

Guiding question: While the SOFF Compliance phase will provide support to individual SOFF beneficiary countries, how could additional (sub) regional Compliance phase support be designed?

### 2.3. Supporting countries in the effective use of global forecast products – ensuring SOFF support is a “two-way-street”

The overall purpose of GBON is to secure an adequate supply of observational data to the global Numerical Weather Prediction (NWP) centres, that serve all countries with forecast model products, ensuring the most important variables are measured with sufficient spatial density, temporal frequency, and quality.

The WDAQMS web tool monitors the availability and quality of observational data based on near-real-time information from the four participating global NWP centres: the German Weather Service (DWD), the European Centre for Medium-Range Weather Forecasts (ECMWF), the Japan Meteorological Agency (JMA) and the United States National Centers for Environmental Prediction (NCEP).

Early in the establishment of GBON and design of SOFF, beneficiary countries requested a “two-way-street”, namely committing to close their GBON gap while at the same time having access to the improved forecast products produced by the participating NWP and getting support in the effective use of these forecast products. This request has been considered in the SOFF design through Output 8 of the [SOFF Theory of Change](#) states that weather and climate analysis products are freely available through WMO Global Producing Centers.

Having access to improved forecast products and strengthening the ability of beneficiary country NMHSs to make effective and country-tailored use of the global NWP products is not only crucial for better national forecasts, but it also contributes to avoiding over-investments in countries (e.g., computing infrastructure) and incentivizes GBON compliance.

As a SOFF Advisory Board member, ECMWF outlined in the [INF-5.2 ECMWF support to SOFF beneficiary countries](#) document a preliminary list of NWP Forecast products and capacity building activities that could be considered by SOFF. Other NWP centres have also expressed interest in supporting SOFF countries with products and services.

Guiding question: Should SOFF, in collaboration with the participating global NWP centers and the SOFF peer advisors, develop and fund a global yet country-tailored training program for national forecasters on the effective use of improved forecast products to incentivize and make use of GBON compliance of these countries?

### 3. Proposed consultation process

It is proposed that the final SOFF Compliance phase framework be presented in October 2025 in a Decision document for consideration by the Steering Committee. In the lead up to this decision, an inclusive and robust consultation process is required, as emphasized in the Independent External Review. The key activities and milestones for this consultation process are outlined as follows:

June 2024	Initial Steering Committee consultation and discussion at 8 <sup>th</sup> SOFF Steering Committee meeting
Sept 2024 to June 2025	Consultations with countries and partners including through planned regional workshops  WMO led consultations with RWCs, including surveys and focus groups
October 2024	Consultation with peer advisors and Implementing Entities in meeting hosted by KNMI in the Netherlands
March 2025	Consultation with SOFF Advisory Board
June 2025	Final consultation with SOFF Steering Committee
October 2025	Decision document to SOFF Steering Committee for consideration