



Thirteenth Steering Committee
18 February 2026

Draft Updated SOFF Results Framework for the Extended First Implementation Period 2022-2027

INF 13.4

Systematic Observations
Financing Facility

**Weather
and climate
data for
resilience**



Purpose of this Document

The SOFF Results Framework is the basis for measurement of high-level outcomes and related outputs for SOFF as a fund. The framework presents the baseline and targets for the SOFF Readiness, Investment and Compliance phase for the first implementation period (July 2022 – June 2025). The first SOFF Results Framework ([Decision 3.2](#)) provided baseline and targets for the Readiness phase only and was subsequently updated through [Decision 6.7](#).

Through [Decision 11.3](#), the SOFF First Implementation Period (July 2022 - June 2025) was extended until June 2027. This document outlines the updated Results Framework required to align with this extended period. A new Annex I has been added to provide additional detail about the outcomes and indicators included in the framework. The updated framework is for review by the 13th Steering Committee before consideration and adoption at the 14th Steering Committee.

Draft updated SOFF Results Framework for the Extended First Implementation Period 2022-2027

1. High-level outcome

The SOFF high-level outcome is '*Improved weather and climate prediction products*'. The measurement of this indicator is done through the reports prepared by WMO in collaboration with selected WMO Global Producing Centers on the impact of observations.

The SOFF Steering Committee, through [Decision 6.8](#), endorsed and approved funding SOFF Impact Reports based on scenarios of GBON implementation. The study was conducted in three phases. The first phase ([Decision 9.2](#)) provided a literature review and assessment of the state of knowledge on forecast skill improvement and established the importance of surface and upper-air observations. In the second phase ([Decision 11.2](#)), targeted experiments used synthetic data to assess the impact of Global Basic Observing Network (GBON) infrastructure in under-observed regions. The results of the experiments quantified the forecast skill improvements from expanded GBON coverage, with results showing up to 30% uncertainty reduction in Africa and significant global benefits. With [Decision 12.4](#), SOFF Steering Committee approved the third phase of the Impact Experiments to extend results of Phase II into the medium-range. These studies are undertaken by the European Centre for Medium-Range Weather Forecasts and coordinated by WMO.

2. Outcome

The SOFF outcome is '*Sustained compliance with GBON*'. Acknowledging the complexities of achieving full GBON compliance in SIDS and LDCs this indicator measures progress toward GBON compliance.

According to [Decision 5.7](#) the definition of GBON compliance includes two parts: (a) station-level compliance and (b) country-level compliance. SOFF supports and rewards progress by focusing on station-level compliance while striving to support countries to achieve country-level compliance as much as possible.

During the last year of the Investment Phase, the country is expected to fully operate and maintain the network striving to achieve the sustained operation of all the SOFF-supported stations according to the GBON compliance criteria. This is called the 'Commissioning Period'.

3. Outputs

SOFF has eight outputs for the Readiness, Investment and Compliance phases. The baseline and targets for the Readiness and Investment phase outputs are based on the

updated SOFF work programme for the first implementation period (Decision 6.6), submitted for consideration by the sixth Steering Committee and extended until 2027 by Decision 11.3.

For the Readiness Phase the proposed target of countries accessing Readiness funding is 75. With this target, SOFF will provide support to 50% of the 149 SOFF eligible countries for Readiness phase, and nearly all SIDS and LDC countries eligible for SOFF support will receive Readiness phase support.

The indicators for the Investment Phase reflect the operational experience so far and provide a measurement of progress towards the delivery of the outputs. Based on the SOFF work programme, 55 countries are expected to enter the Investment Phase by June 2027.

Since it is unlikely that any country will move into the Compliance phase by June 2027, the targets for the respective outputs are zero with the exception of the annual GBON compliance report to be produced by WMO and SOFF annual¹/action reports.

The indicators will continue to be monitored by the SOFF Secretariat in accordance with the Operational Manual and the Monitoring, Evaluation and Learning Framework to be approved at the 14th SC for all the three SOFF phases.

¹ The Annual Report includes the UNMPTF-prepared financial report and the SOFF Secretariat-prepared narrative report, both based on inputs from operational partners, whilst the SOFF Action Report is prepared by SOFF Secretariat in addition to the Annual Report for the engagement at COPs to communicate high level messages of SOFF implementation and achievement.

Table 1: SOFF updated results framework

High-level outcome		Indicator	Baseline	Target ²	Source
Improved weather and climate prediction products		Improvement in NWP standard measure of skills	0	Tbd	Global Producing Centres
Outcome		Indicator	Baseline	Target ³	Source
Sustained compliance with GBON		Countries progress against the GBON gap analysis baseline	0	Tbd	WMO Technical Authority
	Outputs	Indicator	Baseline ⁴	Target	Source
Readiness phase	1. GBON gap established and reviewed	# of GBON gap reports produced and reviewed	0	75	SOFF Secretariat
	2. GBON national contribution plan developed	# of GBON national contribution plan developed	0	75	SOFF Secretariat
Investment phase	3. GBON infrastructure in place	# of surface stations rehabilitated and/or installed with SOFF support	0	55	SOFF Secretariat Implementing Entities
		# of upper air stations rehabilitated and/or installed with SOFF support	0	3	SOFF Secretariat Implementing Entities
	4. GBON human and institutional	# NMHS staff trained	0	150	SOFF Secretariat

² This target will be set for the Sustaining and Implementation period in collaboration with the Global Producing Centers and WMO

³ This target will be set for the Sustaining and Implementation period and monitored through the SOFF Compliance Phase

⁴ This baseline is based on July 2022 which corresponds to the start of the first implementation period.

	capacity in place	# Institutional capacity building activities	0	30	Implementing Entities
		# National consultations	0	60	
Compliance phase	5. Annual GBON compliance report and SOFF annual reports produced	Annual reports produced	0	1	WMO Technical Authority SOFF Secretariat
	6. GBON data internationally shared and results-based finance provided	Total # of stations internationally sharing GBON data and receiving result-based finance	0	0	WMO Technical Authority SOFF Secretariat
	7. On-demand GBON operational and maintenance advisory provided	# of countries receiving satisfactory advisory services delivered	0	0	SOFF Secretariat
	8. Weather and climate analysis products freely available through WMO Global Producing Centres	# of Global Producing Centres that provide free and open access to data # of forecasts products that have free and open access	tbc	tbc	Global Producing Centers WMO Technical Authority SOFF Secretariat

Annex I: Definition of SOFF Outcomes, Outputs and Indicators in Results Framework

High-level outcome		Indicator	Definition
Improved weather and climate prediction products		Improvement in NWP standard measure of skills	<p>Numerical Weather Prediction (NWP) forecast skill is quantified by measuring reduction in forecast uncertainty.</p> <p>Improved global numerical weather prediction products, enabled through the integration of additional GBON data from data sparse regions, resulting from reduced forecast uncertainty. This indicator is assessed through impact experiments conducted by global producing centers together with WMO.</p>
Outcome		Indicator	Definition
Sustained compliance with GBON		Countries progress against the GBON gap analysis baseline	<p>GBON gap analysis baseline refers to the baseline set in the Global GBON gap analysis produced by WMO in 2023.</p> <p>Progress against these targets refers to GBON infrastructure in place and data internationally shared as monitored in WDQMS.</p> <p>The outcome refers to sustained compliance with GBON, which will be measured by quarter through the WMO GBON Compliance report and tracked over time. Progress will be tracked starting in the Compliance Phase and will be quantified as the number of country's stations that are GBON compliant.</p>
	Outputs	Indicator	Definition
Readiness phase	1. GBON gap established	# of GBON gap reports	The GBON gap reports refers to the GBON gap analysis or GBON National Gap Analysis is developed by the National Meteorological

	and reviewed	produced and reviewed	and Hydrological Services (NMHS) together with SOFF Peer Advisors, using WMO GBON Global Gap Analysis as the reference standard. The results of the National Gap Analysis are reviewed and signed by WMO Technical Authority.
	2. GBON national contribution plan developed	# of GBON national contribution plan developed	<p>A GBON National Contribution Plan is a country-owned plan that defines how a country will establish, operate, and sustain its contribution to the Global Basic Observing Network in line with WMO requirements.</p> <p>The GBON National Contribution Plan is developed by the National Meteorological and Hydrological Services (NMHS) together with SOFF Peer Advisors, using the results of the GBON Gap Analysis as the reference standard. The plan is reviewed and signed by WMO Technical Authority.</p>
Investment phase	3. GBON infrastructure in place	# of surface stations rehabilitated and/or installed with SOFF support	<p>The number of surface/upper surface stations tracks the observing infrastructure that countries have installed or upgraded to meet GBON standards.</p> <p>Thus, the physical network exists and can contribute data, even if full compliance is not yet achieved.</p>
		# of upper air stations rehabilitated and/or installed with SOFF support	
	4. GBON human and institutional capacity in place	# NMHS staff trained	<p>NMHS staff trained tracks the number of trained personnel in areas relevant to GBON, including training on operations, maintenance, data exchange, and quality control for GBON stations.</p>
		# Institutional capacity	

Compliance phase		building activities	Institutional capacity building activities tracks the number of institutional capacity building activities including workshops, trainings and webinars that develop the institutional capacities of the NMHS to achieve GBON compliance.
		# National consultations	National consultations tracks number of engagements with national stakeholders. All the above three indicators are tracked and reported by Implementing Entities in their semi-annual and annual reports, including gender segregated data.
	5. Annual GBON compliance report and SOFF annual reports produced	Annual reports produced	The annual reports produced refer to the WMO annual GBON compliance reports assessing each country's adherence to GBON requirements. The basis for these reports is GBON data from surface and/or upper-air stations shared by countries via WMO systems in near-real-time. WMO's central databases track station metadata, operational status, and reporting compliance.
	6. GBON data internationally shared and results-based finance provided	Total # of stations internationally sharing GBON data and receiving result-based finance	This indicator tracks the number of stations sharing GBON data internationally through WMO's WDQMS and the SOFF Compliance tool. In parallel, the indicator will track those stations receiving annual results-based payments through the annual SC decisions. If both conditions are met, the station will be counted against this target.
	7. On-demand GBON operational and maintenance advisory provided	# of countries receiving satisfactory advisory services delivered	Countries receive tailored technical guidance, troubleshooting, and best-practice recommendations to maintain and operate their GBON surface and upper-air stations in accordance with WMO standards.

	<p>8. Weather and climate analysis products freely available through WMO Global Producing Centres</p>	<p># of Global Producing Centres that provide free and open access to data</p> <p># of products that have free and open access</p>	<p>SOFF-supported GBON contributions enhance the accuracy and reliability of global weather and climate analysis products generated by WMO Global Producing Centres. Impact studies demonstrate measurable improvements in reduction of forecast uncertainty, particularly in data-sparse regions, and products are freely accessible to all countries for operational use, planning, and early warning systems. This output will be measured and verified by the WMO TA and SOFF Secretariat.</p>
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