



Fifth Steering Committee
20-21 June 2023

Ref.: 1A471/2023-1.11

Second batch of
SOFF Readiness funding requests

Draft Decision 5.3

Systematic Observations
Financing Facility

**Weather
and climate
data for
resilience**



Draft Decision 5.3: Approval of Second batch of SOFF Readiness funding requests

The SOFF Steering Committee

Approves the second batch of 10 Readiness phase funding requests for a total budget of USD 1,570,262.45

Urges Beneficiary Countries and Peer Advisors to complete the Readiness phase within the time frames indicated in the respective funding requests.

Encourages the SOFF Advisory Board Members to identify country-level synergies and complementarities and inform the SOFF Secretariat accordingly.



Requests

- the UNMPTF Office to disburse the above stated amount to WMO.
- WMO to issue Assignment Agreements with the peer advisors that include the Terms of Reference as stated in the annex of each funding request.

Ref: 14471/2023-1.1.1

Second batch of SOFF Readiness funding requests Project Document

Ref.: 1A471/2023-1.1.1

Project Title: Second batch of SOFF Readiness funding requests	Recipient UN Organization: World Meteorological Organization
Project Contact: Markus Repnik SOFF Secretariat 7bis Avenue de la Paix Case postale 2300 Nations, 1211 Genève Telephone: +41797901882 E-mail: mrepnik@wmo.int	Project Location: WMO Secretariat Geneva 7bis Avenue de la Paix Case postale 2300 Nations, 1211 Genève
Project Description: Readiness phase support - second batch of funding requests for the implementation of the SOFF Readiness phase in 10 countries across Africa, Asia and the Pacific. The Readiness phase provides technical assistance for the development of the Global Basic Observing Network (GBON) National Gap Analysis, National Contribution Plan, and the Country Hydromet Diagnostics.	Total Project Cost for 1 July 2023 – 1 August 2024 USD 1,570,262.45
	Project Start Date: 1 July 2023 Proposed Project End Date: 1 September 2024 Project Duration: 13 Months
Recipient UN Organization and signatory: Petteri Taalas Secretary-General, World Meteorological Organization Signature:  Date: 23.06.2023	Chair of the SOFF Steering Committee: Anthony Rea Co-Chair of the SOFF Steering Committee Signature:  Date: 23 June 2023

Second batch of SOFF Readiness phase funding requests

1. Introduction

At its fourth meeting on 30 March 2023, the SOFF Steering Committee approved the second batch of programming countries ([Decision 4.4](#)). This batch included 14 countries with large GBON data gaps in Africa, Asia and the Pacific.

Table 1. Programming countries adopted by the Fourth SOFF Steering Committee, Decision 4.4 (countries in red did not submit a funding request)

Regions	Countries
Pacific	Federated States of Micronesia, Marshall Islands , Nauru, Palau , Papua New Guinea, Tonga, Vanuatu
Africa	Sao Tome and Principe, Guinea-Bissau, Zambia, Uganda, Sudan
Asia	Cambodia, Lao People's Democratic Republic

10 countries submitted a funding request to the SOFF Secretariat for consideration by the 5th SOFF Steering Committee. One country, namely Sudan, is not in a position to submit a funding request. Due to the current political situation in the country, all SOFF related activities have been suspended. Three countries in the Pacific were not able to complete the funding request in time. These beneficiary countries, with the support of the peer advisors are expected to be able to submit the funding requests for the next Steering Committee funding decision. The following table presents an overview of the 10 funding requests.

Table 2. List of SOFF Readiness phase funding requests - Fifth Steering Committee

No.	Country	Peer advisor	Prospective Implementing Entity	Duration months	SOFF funding USD
RPFR 27	Cambodia	UK	World Bank	6	199,757
RPFR 28	Lao People's Democratic Republic	Austria in collaboration with China	World Bank	7	195,000
RPFR 29	Nauru	Australia	UNEP	6	86,255
RPFR 30	Papua New Guinea	Australia	UNDP	6	138,601
RPFR 31	Tonga	New Zealand	World Bank	6	99,200
RPFR 32	Vanuatu	New Zealand	World Bank	6	103,965
RPFR 33	Guinea-Bissau	Portugal	UNEP	6	120,000
RPFR 34	Sao Tome and Principe	Netherlands	UNDP	6	125,000
RPFR 35	Uganda	Netherlands	IsDB	7	200,000

RPFR 36	Zambia	UK	WFP	6	199,757
Subtotal	1,467,535.00				
WMO indirect support costs (7%)	102,727.45				
TOTAL	1,570,262.45				

2. Process

The process for preparing these funding requests followed the provisions stated in the [SOFF Operational Manual](#).

As for the previous batch, following the Steering Committee Decision 4.4 on the accelerated SOFF implementation approach and the second batch of SOFF programming, the SOFF Secretariat informed the countries and sought expressions of interest from the pool of the 27 peer advisors and 8 Implementing Entities (IEs). Based on the expressions of interest and the preferences indicated by the beneficiary countries, the SOFF Secretariat facilitated the matching between beneficiary countries, peer advisors and Implementing Entities.

Based on the experience with the first batch, the SOFF Secretariat included additional guidance on how to fill in the Readiness Funding request template to optimize the preparation process. The updated template was circulated with the countries, peer advisors and the Implementing Entities.

The peer advisors supported the beneficiary countries in preparing the funding requests in collaboration with the prospective Implementing Entities.

The SOFF Secretariat gave countries and peer advisors feedback on their draft funding requests to ensure compliance with SOFF funding request template requirements. By 2 June 2023, 10 beneficiary countries submitted the final Readiness phase funding requests to the SOFF Secretariat.

3. Funding requests overview

The total funding requested by the 10 countries corresponds to USD 1,570,262.45. The range of budgets for this round of Readiness funding requests is between USD 86,255 and USD 200,000. The differences among budgets are due to multiple factors, including different standard cost-recovery rates of peer advisors from different geographies, various operating costs in different countries and regions, and the size of the GBON challenge in each country. The budgets closer to the lower end were common in small countries, some SIDS, or countries where due to ongoing development activities, GBON-related technical assessments are already at relatively advanced stages. Budgets at the higher end are typical for large beneficiary countries, countries with complex socio-political circumstances, and countries in locations difficult to reach or far from the peer advisors' headquarters.

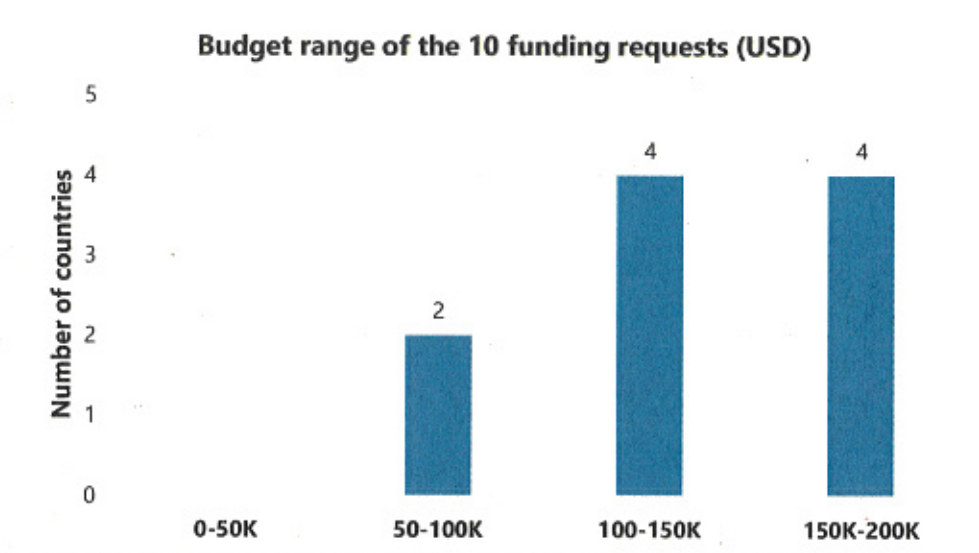


Figure 1. Overview of the budget ranges for the 10 countries' funding requests.

4. Readiness phase implementation schedule

Based on the indications provided in the funding requests, six countries are planning to complete the Readiness Phase by December 2023. Some of these countries could potentially submit an Investment Phase funding request to the 7th Steering Committee Meeting in Spring 2024 (see Figure 2). The remaining countries could submit an Investment Phase funding request for the 8th Steering Committee meeting.

The figure below shows the range of timelines for completing the Readiness phase outputs.

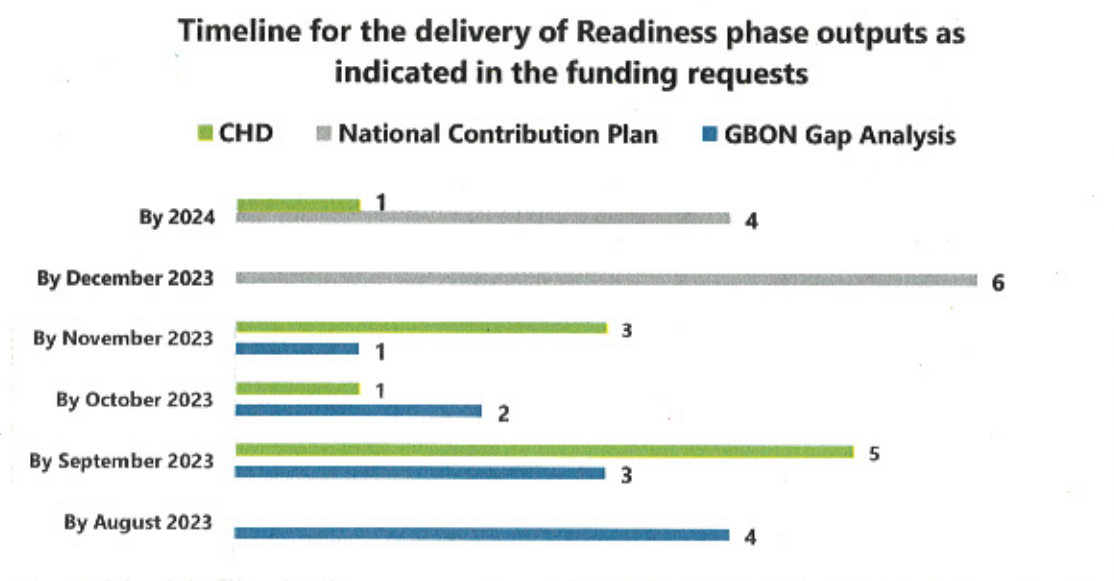


Figure 2. Overview of the delivery schedule of the Readiness outputs in the 10 countries

5. Funding requests risks overview

Based on the Risk Management Framework section from the funding requests, an overview of the risks identified in the 10 countries is provided in Figure 3, and key risks are described below.

- **Contextual risks.** Of the 10 countries, 2 are classified as Fragile Conflict-afflicted States (FCSs). Only a few countries have indicated a "possible" to "likely" risk of conflicts, safety, and political insecurity jeopardizing the delivery of the Readiness phase outputs. Risks associated with natural hazards or health were also identified as a key concern in several countries, but the likelihood of these risks occurring is considered rare in most countries. The peer advisors have a track record operating in the respective countries and already have well-established practices, including maintaining close interactions with their embassies, monitoring the risk of traveling to specific locations, and using virtual platforms for meetings as needed.
- **Institutional risks.** Limited technical and human resources made available by the government to participate in the Readiness activities are identified as the primary institutional risks in 10 beneficiary countries. A few countries also identified the language barrier and traditional festivities as risks that might impact the timely delivery of outputs. The main mitigation actions identified include careful planning to minimize the accumulation of workload and account for festivities, conducting comprehensive reviews of existing documentation before starting the activities, ensuring effective communication, including local interpreters, and securing additional local support.
- **Programmatic risks.** Insufficient awareness of the objectives of the activities and the results of the activities not taken into consideration or not endorsed by national institutions are identified as the main programmatic risks, but their likelihood of occurring is considered rare. The main mitigation actions include ensuring effective communication with all relevant agencies and ensuring the benefits of engagement are clearly understood; engaging all relevant institutions from the beginning to secure buy-in and seeking additional support from other departments as needed.

For all the risks identified, close collaboration and frequent communication between the peer advisors, the beneficiary country, and the prospective Implementing Entity were identified as crucial mitigation actions.

Distribution of risks in the 10 Readiness phase funding requests

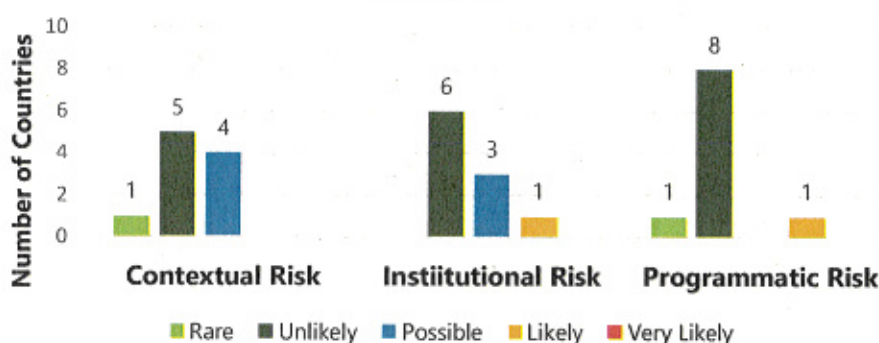


Figure 3. Distribution of risks in the 10 Readiness phase funding requests

6. SOFF Programming criteria

The following section presents an overview of how the 10 countries meet the SOFF programming criteria ([SOFF Operational Manual](#)).

6.1. Closing most significant data gaps

The funding requests included in this round include most of the remaining SOFF-eligible Pacific countries and countries with large gaps in Africa and Asia. The vast majority of countries in this batch are missing nearly 100% of both the GBON-required upper-air and surface stations. Some countries meet the surface stations' GBON targets while missing upper-air observations of high importance for NWP.

Under section 1 of the funding requests, the programming criteria "close the most significant data gaps" and "target easy fixes" provide an overview of key GBON challenges and gaps. Most countries used the information provided by the WMO GBON Global Gap Analysis as of January 2022 but also included additional insights from existing country assessments on the status of the observing systems. The richness of the information provided for this section of the funding requests reflects a productive and encouraging initial collaboration between the peer advisors and the beneficiary countries. Some key issues highlighted in the funding requests are summarized as follows.

- GBON challenges.** The GBON gaps in the countries are multi-faceted, including spatial coverage, observation frequency, poor data quality, communication, operation and maintenance of stations, and skills of observers, maintenance, and management staff. Extreme weather events and the network's resilience were also recurrent topics. The challenging tropical environment and isolated conditions in many of the SIDS covered in this round of funding requests were highlighted among the biggest challenges. This is the case, particularly for the acquisition of consumables and spare parts needed for upper-air stations.



- **Absence of upper-air stations and, in some cases, surface stations:** Some countries included reported not having any existing upper-air infrastructure and capacity or having extremely outdated stations that have not worked for several years. A country in the Pacific does not have any operating Automatic Weather Station (AWS) or upper-air stations.

6.2. Target "easy fixes"

The funding requests indicate significant opportunities for rehabilitation/improvement of existing infrastructure. These include a mixture of manual and AWS and upper air stations (although less often) that are already installed but are not transmitting data globally or do not report as often as needed or with all the parameters required by GBON.

- **Existing GBON-related observing networks:** Although SOFF support focuses on the establishment of GBON standard density networks, the funding requests reflect opportunities for countries and their peer advisors to explore easy fixes to upgrade existing stations (including high-density networks) and make them able to share their data internationally. Many countries have a wealth of AWS that have the capacity to become relatively rapidly GBON-compliant through fixes in the frequency of data communication and data transmission through the WMO Information System, often due to limited maintenance capacity in terms of manpower, mobility, and spares. While many stations have been deployed, resources for operation and maintenance are currently insufficient to ensure the proper functioning of the stations. The situation is different regarding upper-air stations. Most countries do not have the existing capacity and infrastructure to deliver upper-air observations.
- **WMO Information System (WIS).** Countries frequently highlighted issues related to data transmission to the WIS, communication systems, and data management as some of the most significant bottlenecks preventing the existing networks from sharing the data. Most recurrent issues with the existing networks are related to connectivity and resources for maintenance, training, telecommunications, and station infrastructure to support data exchange (WIS), lack of spare parts, and old sensors. Capacity building on operating the WIS, acquisitions (e.g., WIS 2.0), and improvements in the data management systems are often stated as easy fixes. Measures related to the review and update of the WMO Observing Systems Capability Analysis and Review tool (OSCAR) with accurate metadata were commonly suggested as activities that could bring many existing stations into compliant reporting.
- **Upper air stations.** A few countries have upper air stations primarily funded by previous international development or climate finance projects. Problems with these stations are largely related to the cost and availability of hydrogen gas supply, lack of consumables (radiosondes and balloons), and calibration. Countries with upper-air stations reported a high risk of failing to cover the operation and maintenance costs of the upper-air stations and, therefore, infrastructure becoming run-down or outdated.

- **Marine observations.** Although SOFF support does not yet cover GBON marine meteorological observations, many funding requests highlight the importance of these observations for NWP. Countries are interested in using SOFF peer advisors' technical assistance to evaluate potential easy fixes for their existing marine stations or for potential future SOFF support.
- **Sub-regional GBON optimization:** Many countries have already identified potential options to work with neighboring countries in the optimization of the GBON design, e.g., considering collaboration with bordering countries with more capacity and resources for upper air observations coverage, sharing technical facilities (such as validation, calibration and backup services, software solutions) and expertise. Several countries see the potential to become regional centers or laboratories for calibrations, maintenance, communications and training centers, data processing and database management. Many countries highlighted the importance of ensuring that data is shared globally and at a sub-regional level through existing regional centers and mechanisms (e.g., Regional WIGOS centers).

6.3. Maximize delivery capacity

The peer advisors are the leading operational partner in the Readiness phase. However, the delivery of the Readiness outputs is done in coordination with the Implementing Entities. Five prospective Implementing Entities have been identified to support the 10 countries.

All peer advisors and prospective Implementing Entities have a previous track record and experience in the country or region, including implementing SOFF in the first batch of countries and/or ongoing activities complementary to SOFF support.

6.4. Create leverage

Countries highlighted significant opportunities for creating leverage by aligning SOFF operations with complementary investments by other international climate and environment funds covering the latter parts of the meteorological value chain. SOFF support will ensure the sustainability of the various investments previously made in observations that, in many cases, did not result in data sharing.

Four countries of the second batch (Cambodia, Lao People's Democratic Republic, Tonga, and Uganda) are part of the initial priority countries selected as part of the Early Warnings for All initiative. The initiative focuses on strengthening the early warnings value chain, including advancing disaster risk knowledge, closing the observations gap and improving forecasting capacity, enhancing preparedness and response capabilities, as well as ensuring effective dissemination and communication of warnings.

Most countries have CREWS projects ongoing or in the pipeline. SOFF and CREWS play complementary roles as CREWS operations focus on the latter parts of the value chain.

Below is an overview of ongoing projects and programmes in the 10 countries.

- Pacific countries:** A GCF Pacific programme is investing in surface-based observation network in five countries. SOFF Readiness and Investment phase support will enable full compliance with GBON network requirements and ensure sustainability of these investments. SOFF support is also complementary to the activities conducted under the Weather-Ready Pacific Programme led by the Australian Bureau of Meteorology, which supports NHMSs in the Pacific to strengthen their hydro-meteorological, ocean, and other related environmental infrastructure networks and systems. CREWS is implementing a regional project to enhance the capacity of the national hydrometeorological agencies to provide impact-based forecasts and to enhance the effectiveness of Pacific Islands and Regional Early Warning Systems. This regional project includes all the proposed Pacific islands both in the first and second SOFF batch of programming countries, except Papua New Guinea, which has a national CREWS project. Both the CREWS regional Pacific and Papua New Guinea projects are expected to request additional funding for the extension of their operations, complementing SOFF support.
- Atlantic SIDS:** UNEP is at the early stages of developing a GCF proposal for climate services and EWS to support the Atlantic SIDS (Guinea Bissau, Cabo Verde, São Tomé and Príncipe). SOFF support provides the foundation for the larger UNEP-GCF initiative. SOFF support for Guinea-Bissau would complement and enhance the sustainability of investments to strengthen forecasting systems under the CREWS West Africa project (2018-2022). Cabo Verde is hosting a regional workshop with Guinea Bissau and São Tomé and Príncipe to explore a sub-regional approach for the implementation of SOFF.
- Cambodia and Lao People's Democratic Republic:** CREWS is supporting Cambodia and Lao People's Democratic Republic to enhance the capacities of national and regional stakeholders/institutions to provide hydromet, early action and response services and ensure effective and inclusive risk-informed early warning services. Cambodia is also identified as a potential target country of the GCF EW4All support. The World Bank is also exploring with these countries potential support for the latter parts of the value chain through regional International Development Assistance (IDA) resources.
- Uganda and Zambia:** CREWS has a project in Zambia in the pipeline. In addition, the Water at the Heart of the Climate initiative funded by the Dutch Ministry of Foreign Affairs and led by IFRC, UNDRR, and WMO is currently starting operations focusing on strengthening the whole value chain from observations to humanitarian action. It will support four African countries, including Uganda. The initiative and Uganda's Third National Development Plan will benefit from the support to revamp and upgrade the GBON stations. The installation of the GBON stations is expected to increase the quality and quantity of observations transmitted to the region, thereby improving climate change-related analysis, and underpinning of climate change adaptation actions.

6.5. Regional and sub-regional gains

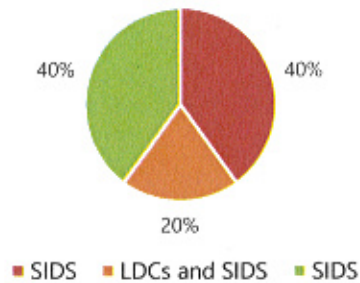
SOFF favors regional/sub-regional approaches to GBON implementation and invited the countries to look into opportunities to create economies of scale and optimize the design of the observing networks.

- **Pacific countries:** The Pacific countries proposed for the second batch advance the SOFF Pacific Regional Programme. By proceeding to implementation in parallel, these countries will benefit from economies of scale and ensure optimal design of the observing networks. Regional coordination, taking advantage of existing Pacific regional architecture such as the Pacific Meteorological Council, will also allow countries to explore options for a standardized approach to bulk procurement of equipment and technology.
- **Atlantic SIDS:** The National Institute of Meteorology (INM) of Sao Tome Principe is exploring opportunities to collaborate with lusophone countries in the region to optimize the installation, operation, and maintenance of the observation network. The INM has previous experience in collaborating with Cabo Verde and Guinea Bissau in the field of weather forecasts and in sharing mutual knowledge.
- **Cambodia and Lao People's Democratic Republic:** opportunities for regional implementation will be explored with the support of the Mekong River Commission.
- **Uganda and Zambia:** Uganda has an existing collaboration with other East African countries related to the installation of observation equipment, operations (e.g., forecasting at various timescales), and maintenance of the observation network. Regionally, Uganda is strategically located in the "centre" of East Africa, which provides an opportunity for Uganda to share GBON observations with all East African countries.

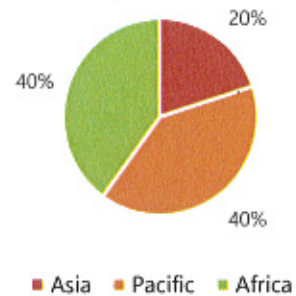
6.6. Country balance

The 10 countries represent a balanced regional distribution which reflects the distribution of the 76 SOFF beneficiary countries eligible for SOFF investment and compliance phase support. All the countries are classified as Small Island Developing States (SIDS) and Least Developed Countries (LDCs).

Balance SIDS and LDCs second batch funding requests



Regional distribution second batch funding requests



Figures 4 and 5. Distribution of risks in the 10 Readiness phase funding requests.