Systematic Observations Financing Facility

Intersessional Steering Committee
19 September 2023

Third batch of SOFF Readiness funding requests

Intersessional Decision 1.1.

Version 2 corrected

Systematic Observations
Financing Facility

Weather and climate data for resilience

Intersessional Decision 1.1: Approval of the third batch of SOFF Readiness funding requests

The SOFF Steering Committee

Approves the third batch of 24 Readiness Phase funding requests including an addendum to the previously approved funding request for Mozambique RPFR 017 for a total budget of USD 3,622,071.98.

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.

Third batch of SOFF Readiness funding requests
Project Document

Project Title: Third 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 – third batch of funding requests for the implementation of the SOFF Readiness phase in 20 countries across Africa, Latin American and the Caribbean, 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 20 September 2023 – 20 October 2024** USD 3,622,071.98 **Project Start Date:** 20 September 2023 **Proposed Project End Date:** 20 October 2024 **Project Duration:** 13 Months
Recipient UN Organization and signatory: Petteri Taalas Secretary-General, World Meteorological Organization Signature: Date:10.10.2023	**Chair of the SOFF Steering Committee:** Jørgensen Aage Co-Chair of the SOFF Steering Committee Signature: Date: 10 October 2023

Third batch of SOFF Readiness phase funding requests

1. Introduction

At its fifth meeting on 20 – 21 June 2023, the SOFF Steering Committee approved the third batch of programming countries (Decision 5.4) including 22 countries in Africa and the Indian Ocean, Asia, Latin America and the Caribbean. With Decision 5.4, the Steering Committee also decided to expand SOFF support to all UN Early Warnings for All Initiative (EW4All) initial focus countries and to further accelerate SOFF implementation as a foundational element and delivery mechanism of the initiative. The table below provides an overview of the countries included in this batch.

Table 1. Programming countries adopted by the Fifth SOFF Steering Committee, Decision 5.4

Region	Country	EW4All
Africa and Indian Ocean	1. Comoros	Y
	2. Djibouti	Y
	3. Mauritius	Y
	4. Niger	Y
	5. Seychelles	
	6. Somalia	Y
Asia	7. Bangladesh	Y
	8. Tajikistan	Y
Latin America and the Caribbean	9. Antigua and Barbuda	Y
	10. Bahamas	
	11. Barbados	Y
	12. Cuba	
	13. Dominica	
	14. Dominican Republic	
	15. Guatemala	Y
	16. Haiti	Y
	17. Jamaica	
	18. Saint Kitts and Nevis	
	19. St Lucia	
	20. St Vincent and Grenadines	
	21. Suriname	
	22. Trinidad and Tobago	

Nineteen countries from this list submitted a funding request for consideration by the Steering Committee intersessional decision. Three countries, namely Haiti, Guatemala and Antigua and

Barbuda, were not able to complete the funding request in time but are expected to submit one for the next Steering Committee funding decision.

In addition, Mozambique, for which funding was approved as part of the decision on the first batch (Decision 3.4), submitted a funding request RPFR 056 as an addendum to a previously approved funding request RPFR 017 in order to deliver the Country Hydromet Diagnostics which was not previously included.

The table below presents an overview of the funding requests submitted for consideration by the Steering Committee inter-sessional decision.

Table 2. List of SOFF Readiness phase funding requests for Intersessional Steering Committee decision

No.	Country	Peer advisor	Prospective Implementing Entity	Duration months	SOFF funding USD
RPFR 037	Comoros	Morocco	African Development Bank (AFDB)	6	120'000.00
RPFR 038	Djibouti	Austria	United Nations Development Programme (UNDP)	8	147'217.00
RPFR 039	Mauritius	South Africa, India	AfDB	6	147'575.00
RPFR 040	Niger	Nigeria	AfDB	6	170'000.00
RPFR 041	Seychelles	South Africa	AfDB	6	129'200.00
RPFR 042	Somalia	Nigeria	UNDP	6	150'000.00
RPFR 043	Bangladesh	Norway	Islamic Development Bank (IsDB)	7	165'330.00
RPFR 044	Tajikistan	Finland	World Bank (WB)	6	134'842.00
RPFR 045	Bahamas	Finland	Inter-American Development Bank (IADB)	6	131'653.00
RPFR 046	Barbados	Finland	IADB	6	129'943.00
RPFR 047	Cuba	Spain	UNDP	6	160'000.00
RPFR 048	Dominica	Austria	World Food Programme (WFP)	8	135'650.00
RPFR 049	Dominican Republic	Spain	WFP	6	160'000.00
RPFR 050	Jamaica	Finland	IADB	6	125'799.00
RPFR 051	Saint Kitts and Nevis	Finland	IADB	6	128'463.00

RPFR 052	Saint Lucia	Austria	WFP	9	135'650.00
RPFR 053	St Vincent and Grenadines	Austria	WFP	9	135'650.00
RPFR 054	Suriname	Netherlands	UNDP	8	150'000.00
RPFR 055	Trinidad and Tobago	Finland	IADB	6	129'745.00
RPFR 056	Mozambique	South Africa	WFP	6	52'500.00
RPFR 057	Antigua and Barbuda	United Kingdom	UNDP	6	182'970.00
RPFR 058	Republic of Marshall Islands	United Kingdom	United Nations Environment Programme (UNEP)	6	154'309.00
RPFR 059	Federated States of Micronesia	United Kingdom	UNEP	6	154'309.00
RPFR 060	Palau	United Kingdom	UNEP	6	154'309.00
Subtotal					**USD 3,385,114**
WMO indirect support costs (7%)					**USD 236,957.98**
TOTAL					**USD 3,622,071.98**

2. Process

The process for preparing the funding requests followed the provisions stated in the SOFF Operational Manual.

As for the previous batches, following the Steering Committee Decision 5.4 on 'Expanding SOFF support to all Early Warnings for All priority countries and third batch SOFF Readiness programming', the SOFF Secretariat informed the countries and sought expressions of interest from the pool of the 27 peer advisors and 9 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.

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

After submission of the draft funding requests, the SOFF Secretariat provided feedback to ensure compliance with the template requirements. By 4 September 2023, 20[1] beneficiary countries submitted the final signed Readiness phase funding requests to the SOFF Secretariat.

Three countries, namely Federated States of Micronesia, Marshall Islands and Palau, that were programmed by the Steering Committee as part of the decision on the second batch (Decision 4.4), did not submit a funding request for consideration at the previous Steering Committee Meeting.

The SOFF Secretariat liaised with the three countries, the peer advisor and the implementing entity to provide assistance to complete the funding request preparation process. Despite progress made by the countries in the preparation of the funding request in coordination with the peer advisor and prospective implementing entity, the submission of the funding requests by 4 September was not possible due to an incomplete administrative process by the peer advisor. For the same reason, Antigua and Barbuda did not submit a funding request.

Upon finalization of the process, these countries submitted the signed funding requests on 8 September. They requested to have the funding requests considered exceptionally by the Steering Committee inter-sessional decision. This would allow the countries to move to SOFF implementation in a coordinated manner with the other countries in the respective regions.

Particular attention is required to the current political situation in Niger and international sanctions imposed to the country which might jeopardize the delivery of the Readiness activities. While the peer advisors and the prospective implementing entity indicated readiness to work in the country, the situation will need to be continuously monitored. The implementation of the SOFF Readiness activities will depend on the evolving national situation and will follow the guidance of the SOFF Steering Committee co-chairs.

3. Funding requests overview

The total funding requested by the 24 countries corresponds to USD 3,385,114. The range of budgets for this round of Readiness funding requests is between USD 52`500 and USD 182`970.

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. Furthermore, the funding requests considered here also include FPRF 056 which constitutes an addendum to the previously approved funding request RPFR 017 to deliver only one SOFF Readiness output that is the Country Hydromet Diagnostic (CHD).

[1] This number includes 19 Readiness funding requests and RPFR 056 which constitutes addendum to a previously approved Funding Request for Mozambique RFP017.

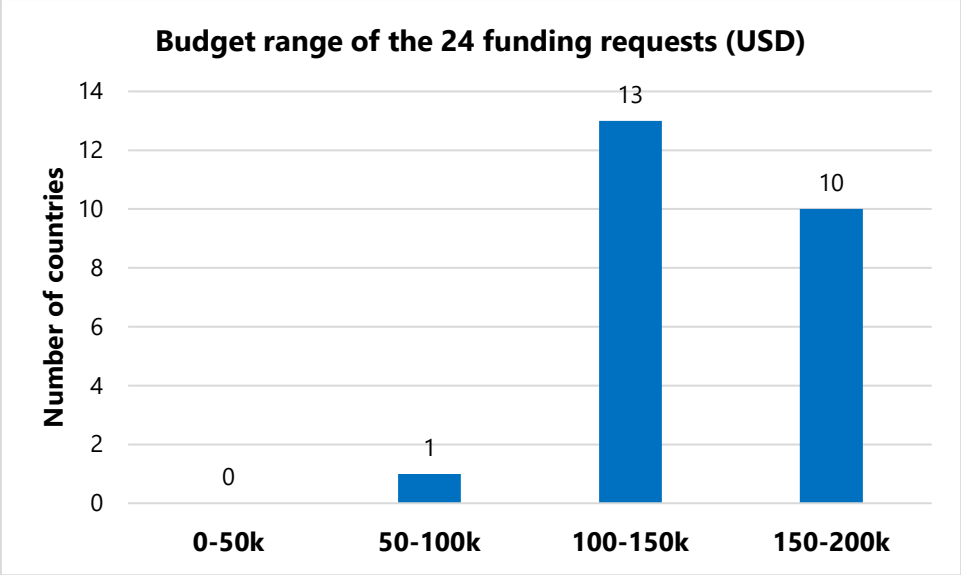


Figure 1. Overview of the budget ranges for the 24 countries' funding requests.

4. Readiness phase implementation schedule

Most countries expect to be able to deliver all the Readiness outputs within six month and complete the Readiness phase by March 2024. Some of these countries might submit an Investment Phase funding request for consideration by the 8th Steering Committee Meeting expected to take place in June 2024.

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

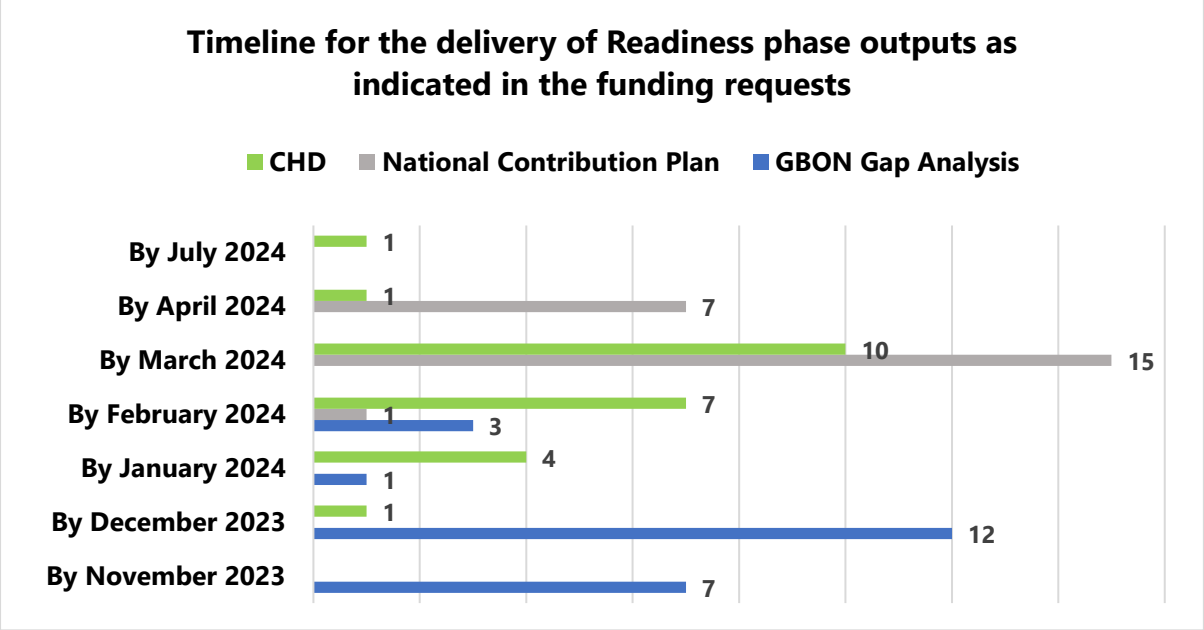


Figure 2. Overview of the delivery schedule of the Readiness outputs in the 24 countries

5. Funding requests risks overview

Based on the Risk Management Framework section from the funding requests, an overview of the risks identified in the 23 countries[2] is provided in Figure 3, and key risks are described below.

- **Contextual risks.** Of the 23 countries, 5 are classified as Fragile Conflict-afflicted States (FCSs). Risks associated with severe weather events such as tropical cyclone are identified as the key concern in most countries while health risks are considered unlikely. A few countries have indicated a "possible" risk of conflicts, safety, and political insecurity jeopardizing the delivery of the Readiness phase outputs. One country, namely Niger, highlighted risks associated to the recent political situation, the international sanctions and the uncertain security conditions in certain areas of the country. 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, using military escorts in cooperation with regional and communal security services, and using virtual platforms for meetings as needed. However, particular attention will be paid to the situation of Niger.
- **Institutional risks**. Limited technical and human resources and lack of coordination among different stakeholders are identified as the primary institutional risks. Several countries also identified cultural festivities potentially impacting the timely delivery of outputs. The main mitigation actions identified include careful planning, and sufficient awareness and communication on GBON and SOFF to stakeholders.
- **Programmatic risks.** Lack of commitment to the SOFF Readiness activities and insufficient participation, limited understanding and cooperation by national institutions and other stakeholders are identified as the main programmatic risks, but they are considered unlikely to occur. 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.

[2] This analysis does not include RPFR 056 which constitutes addendum to a previously approved Funding Request for Mozambique RFP017.

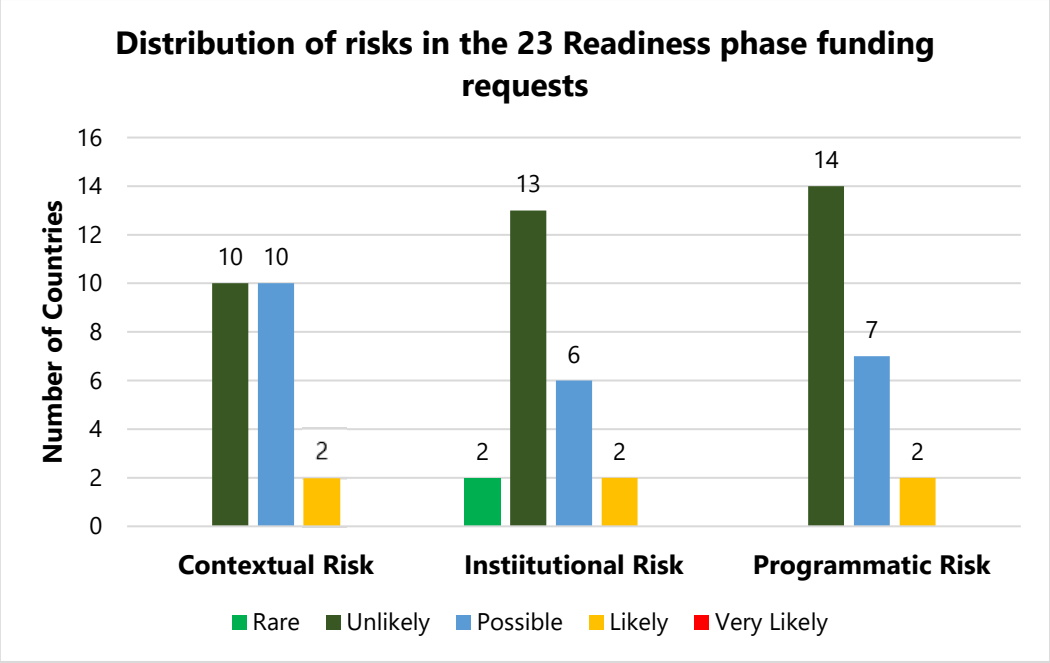


Figure 3. Distribution of risks in the 23 Readiness phase funding requests

6. SOFF Programming criteria

The following section presents an overview of how the 19 countries meet the SOFF programming criteria (SOFF Operational Manual).

6.1. Closing most significant data gaps

The funding requests included in this batch include all the remaining SOFF-eligible Latin American and Caribbean countries, the three remaining Pacific countries and countries with large GBON data gaps in Africa and Asia. The vast majority of countries in this batch are far from meeting the GBON target for the required upper-air and surface stations.

In the SOFF programming document Decision 5.4 it was stated that Bangladesh, Barbados and Jamaica were showing GBON-compliance, based to the WMO GBON Global Gap Analysis, January 2022. They were however included in the third batch of programming countries because: a) Barbados and Bangladesh are part of the EW4All Initiative focus countries. By undertaking the Country Hydromet Diagnostics, these countries will identify any gaps and investments needed to allow the effective implementation of the EW4All activities; b) Jamaica and Barbados are part of the SOFF Caribbean Regional Programme. Through the Readiness phase activities, they would explore how to contribute to a coordinated and standardized implementation of GBON in the Caribbean.

As communicated in Decision 5.7 on 'SOFF and GBON Compliance', a new GBON Baseline as of June 2023 would become available. While the GBON Targets per country remain unchanged, the application of more stringent GBON compliance criteria[3], has resulted, in some cases, in differences related to the classifications of stations as 'GBON compliant'. According to the WMO GBON Gap Analysis June 2023[4] which reflects these criteria, none of the countries mentioned above show compliance except for Barbados.

[3] The GBON Guide, adopted through the WMO Commission for Observation, Infrastructure and Information Systems (INFCOM)-2 in October 2022 and WMO's Executive Council-76 in February 2023, defines the criteria to judge GBON station compliance. In 2022, before this definition of GBON station compliance was adopted, WMO performed a Global Gap Analysis based on data from the WIGOS Data Quality Monitoring System (WDQMS accessible at: wdqms.wmo.int), which identified the target for each station type, how many stations were reporting to requirements (GBON compliant), the gap of stations to improve and the gap associated with new stations required.

[4] With Decision 5.7 'SOFF and GBON Compliance' the Steering Committee was informed that WMO would undertake an updated Global GBON Gap Analysis as of June 2023, following entry into force of the GBON Technical Regulations on 1 January 2023, and the 19th World Meteorological Congress (22 May – 2 June 2023) and its consideration of GBON. WMO will present this baseline to the SOFF 6th Steering Committee meeting for its consideration and adoption.

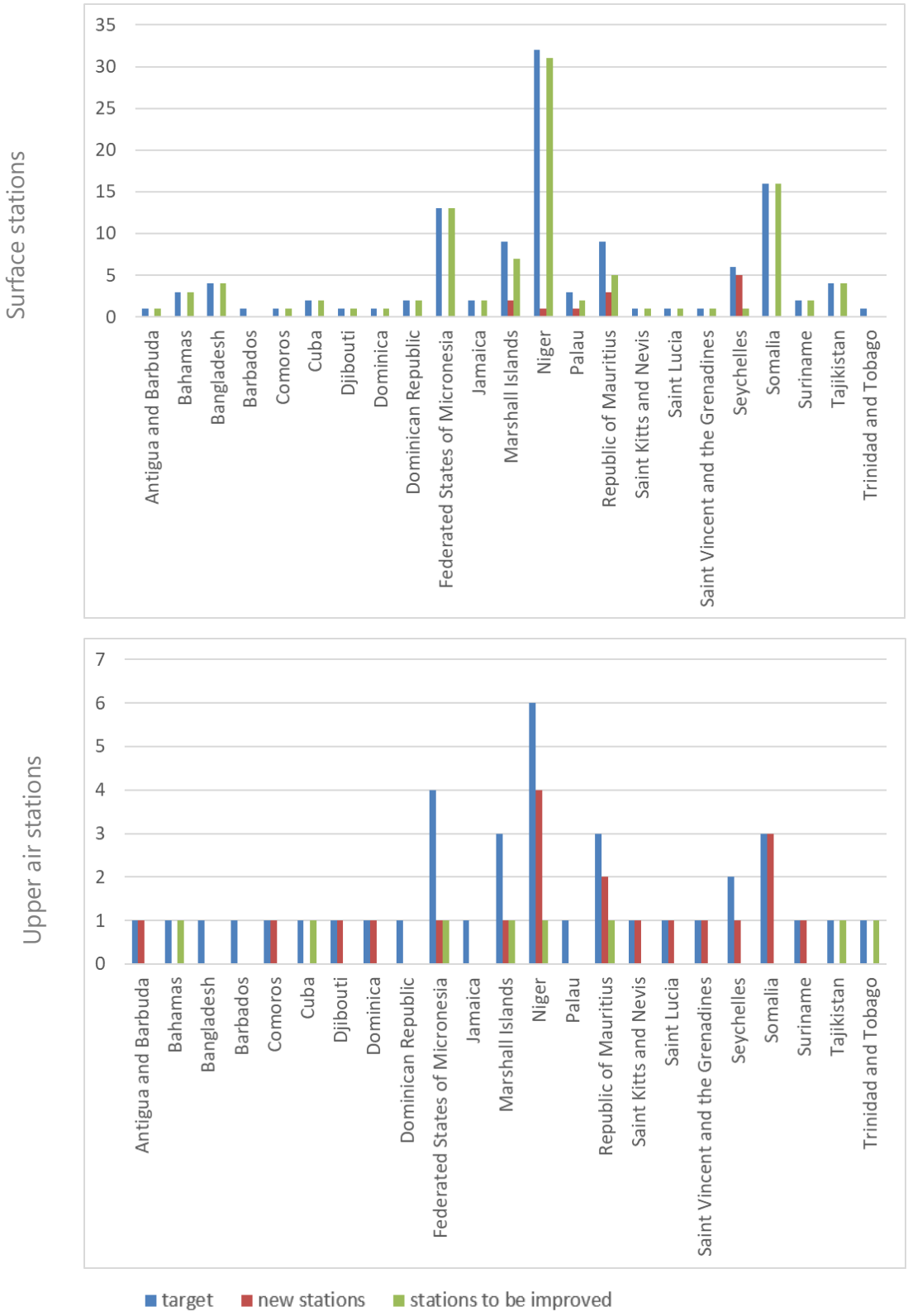


Figure 4. GBON gap for surface and upper air stations for the 23 countries that submitted a funding request in this third batch of SOFF. Based on WMO GBON Global Gap Analysis (as of June 2023).

Based on the GBON Global Gap Analysis 2023, 89% of the gaps for surface-based observations in countries included in this batch are associated with needs of improvement of existing station. This indicates that many countries in this batch, in particular in Latin America and the Caribbean, have a wealth of surface-based observations networks that can be rehabilitated or upgraded to meet GBON requirements. Only a few new stations, amounting to approximately 11% of the gap, need to be newly installed. On the other hand, the gaps for upper-air observations indicate that the amount of new upper stations required is significantly higher (71%) than the stations that can be improved (29%) to meet GBON requirements.

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. Some of the key issues highlighted in the funding requests are summarized as follows.

- **Common challenges:** The challenges faced by countries to meet the GBON requirements are multi-faceted, including spatial coverage, observation frequency, poor data quality, communication, operation and maintenance of stations, lack of spare parts and limited human resources in term of quantity and skill, extreme weather events, e.g. hurricane season and the network's resilience were also recurrent topics.
- **GBON surface and upper air stations gaps:** The observation frequency of surface observations was highlighted in many countries as a major challenge to meet the GBON requirements, mainly because the surface stations are manned stations, and they don't have sufficient observers to perform 24 hours operation. Most of the countries included in this batch reported not having any existing upper-air infrastructure and capacity or having extremely outdated stations that have not worked for several years, for example due to malfunction of hydrogen generator.

6.2. Target "easy fixes"

The funding requests indicate significant opportunities for rehabilitation/improvement of existing infrastructure. These include upgrading the existing manual stations to automatic system and transmitting data internationally from already installed automatic stations.

- **Existing surface stations:** Many countries have been operating manned stations with temporal resolution that doesn't comply with GBON requirements or have installed automatic weather stations (AWS), but the data are not transmitted internationally. There is an opportunity to upgrade and or rehabilitate the existing infrastructure, including to automatize the manual stations. This includes exploring the possibility of meeting GBON high density network requirements. Many countries have a wealth of AWSs that have the capacity to become relatively rapidly GBON-compliant through fixes in the frequency of reporting by ensuring that the data can be transmitted to respective WMO Global Information System Centre (GISC) or through the WMO Information System 2.0. Increasing the number of spare parts and capability to maintain and calibrate the systems with a regional approach will be also crucial to maintain the operations sustainability.

- **Upper air stations:** While many countries don't have upper air stations infrastructure, a few upper stations are operating with only one sounding per day or stopped operations due to malfunctioning of the hydrogen generator. Feasibility of switching from manual sounding station which is very human resource heavy to operate at GBON required level to an automatic sounding can be considered. The manual sounding performance can be improved by repairing the old hydrogen generator or replacing it with a new one. A few countries have upper air stations primarily funded by previous international development or climate finance projects.
- **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, 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.
- **Marine observations**. Although SOFF support does not yet cover GBON marine meteorological observations, some of the 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 neighbouring countries in the optimization of the GBON design, e.g., regional capacity development activities on calibration and maintenance, 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 centres or laboratories for calibrations, maintenance, communications and training centres, 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 centres and mechanisms (e.g., Regional WIGOS centres).

6.3. Maximize delivery capacity

Nearly all the peer advisors and prospective Implementing Entities supporting these countries 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. Some examples of the peer advisors previous experience have been provided below.

The Finnish Meteorological Institute (FMI) has recently completed a project on 'Strengthening Hydro-Meteorological Operations and Services' in the Caribbean islands focused on improving Caribbean countries resilience to the impacts of hydro-meteorological hazards including the

impact of climate change by developing multi-hazard early warning systems. Under this project, capacity building activities were conducted in 16 Caribbean countries, 12 of which (Antigua and Barbuda, Bahamas, Barbados, Dominica, Dominican Republic, Jamaica, Cuba, St. Kitts & Nevis, St. Lucia, St. Vincent & Grenadines, Suriname, and Trinidad & Tobago) are included in this batch.

Geosphere Austria, has extensive experience in delivering advisory services, including performing the Country Hydromet Diagnostic in Kazakhstan, North Macedonia, and Albania, and deploying early warning systems in Myanmar.

The South African Weather Services work with National Hydro-Meteorological Services in in several African countries to support institutional capacity development activities. They currently host a Regional WMO Integrated Global Observing System (WIGOS) Centre for Southern Africa.

The Moroccan General Directorate of Meteorology, serving for the first time as SOFF peer advisor, is a WIGOS regional training centre with an area of responsibility in 14 countries; Regional Instrument Center and Global Monitoring Center for WMO Information System (WIS) 2.0 and has assisted several African countries in the dissemination of data through WIS 2.0.

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. Peer advisors and implementing entities are gaining experience working together, sometimes in the same region, which is expected to increase the efficiency of how SOFF support is delivered. The Implementing Entities also play an important role to ensure that the countries are supported beyond SOFF.

6.4. Create leverage

SOFF programmatic approach aims at identifying opportunities to align SOFF operations with complementary investments by other international climate and environment funds covering other parts of the meteorological value chain.

In the funding requests countries indicated a wealth of ongoing or planned investments complementary to SOFF support. On one hand, projects and programmes focused on the latter part of the meteorological value chain will contribute to maximize the impacts of SOFF results and enable countries to make the best use of the improved data; on the other, SOFF support will ensure the sustainability of the investments previously made in observations that, in many cases, did not result in data sharing. This is the case for several projects funded by the Green Climate Fund (GCF) which referred to SOFF as a mechanism to ensure sustainability of the observation infrastructure investments.

Nine countries, namely Antigua and Barbuda, Barbados, Comoros, Djibouti, Mauritius, Niger, Somalia, Bangladesh, and Tajikistan are part of the initial focus countries 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.

Two countries in this batch and five from the previous two batches (Cambodia, Chad, Ecuador, Ethiopia, Fiji and Somalia) are part of a large project preparation grant for the Green Climate Fund currently being developed to accelerate the implementation of the EW4All activities.

CREWS and SOFF play complementary roles. Currently CREWS has projects ongoing or in the pipeline in most countries.

Below is an overview of some of the ongoing projects and programmes in the 19 countries.

- **Latin America and the Caribbean.** In the Caribbean, CREWS just completed a Caribbean regional project to strengthen hydro-meteorological early warning services in the CARICOM member countries, including Antigua and Barbuda, Barbados, Jamaica, Saint Kitts and Nevis, St Lucia, Bahamas, Dominica, St Vincent and Grenadines, Suriname and Trinidad and Tobago. A funding proposal is being developed for a second phase of the same project. UNDP is currently supporting countries in the region to improve their hydrometeorological surveillance and monitoring systems. This has been achieved through the transfer of technology for data acquisition and processing, which has helped improve weather forecasting systems and decision-making as part of early warning systems. WFP is working with Caribbean countries to develop anticipatory actions frameworks, the implementation of which will significantly benefit from SOFF support. In Jamaica, SOFF operations will directly contribute to enhance the results of of the Climate Investment Funds (CIFs)'s project implemented by World Bank on "Improving Climate Data and Information Management".
- **Africa and the Indian Ocean.** In the Indian Ocean, SOFF will complement the ongoing CREWS South-West Indian Ocean regional project by closing the remaining GBON gap and ensuring sustainability of GBON observations previously financed by CREWS. CREWS and SOFF commit to a fully coordinated country engagement, building on a GCF-financed project implemented by the Agence Française de Développement (AFD) which is supporting Comoros, Madagascar, Mauritius, and Seychelles to develop a multi-hazard early warning system and increase capacity in the region to manage risks and impacts of climate-induced disasters. Complementarity will also be explored with the project under preparation by the AFDB to build resilience to extreme weather events in the Southern Indian Ocean. AFDB has also large investments in Niger, including a programme in the Sahel to access the Climate Action Window; the Africa Climate Risk Management project to build capacities for climate services in Niger and four other Sahel countries; and a Climate Information Development and Forecasting Project and a Climate-Sensitive Agriculture Support Project. Somalia is part of a sub-regional project in the Horn of Africa, where CREWS is providing support to enhance the capacity of regional and national entities to produce and use climate, weather, and hydrological services, including early warning systems. UNDP will align SOFF support

with its ongoing activities in Somalia as part of the Resilience and Climate Change Portfolio.

- **Asia and the Pacific.** In the Pacific, SOFF support will enable full compliance with GBON network requirements and ensure sustainability of various previous investments, including a GCF Pacific programme. SOFF operations are also complementary to the activities conducted under the Weather-Ready Pacific Programme, 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. In Tajikistan, the World Bank recently completed the Central Asia Hydrometeorology Modernization Project which focused on improving the accuracy and timeliness of hydromet services. The Project successfully strengthened regional hydromet collaboration, operationalized more robust data exchange, developed a regional weather forecasting system, established the Central Asia Flood Early Warning System (CAFEWS), and installed a distance learning system with a suite of modules to foster shared learning and training. A World Bank follow-on project for improving hydromet services in Central Asia is in preparation and is expected to be approved towards the end of 2024. The new project will focus on service delivery, user engagement, regional collaboration, and technical capacities. SOFF Readiness activities, in particular the Country Hydromet Diagnostic are expected to inform the upcoming investments in Tajikistan under this pipeline project.

6.5. Regional and sub-regional gains

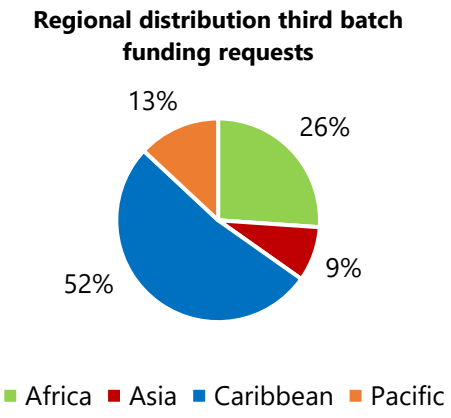
SOFF favors regional/sub-regional approaches to GBON implementation and invited the countries to look into opportunities to create economies of scale and optimize the design of the observing networks.

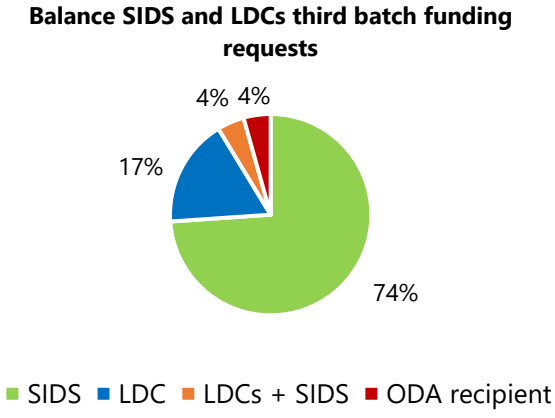
- **Latin America and the Caribbean**: In the region, the Caribbean Institute for Meteorology and Hydrology (CIMH) as a WMO Regional Climate Center provides climate services and technical support to National Meteorological and Hydrological Services. SOFF support will play a complementary role in strengthening these countries' monitoring and observation capacity to provide improved data that lead to improved and more effective climate services. The countries, with the support of the peer advisors, will look at opportunities to strengthen the regional capacity and knowledge sharing in collaboration with other important regional organizations such as the Caribbean Meteorological Organization (CMO) and the Caribbean Disaster Emergency Management Agency (CDEMA). Several countries in the region proposed to organize a regional workshop with the objective of finding and designing unified solutions for acquiring observation and data management systems in the region. The workshop would also delve into calibration and maintenance to ensure GBON required uptime and quality, and to benchmark good data management and communication processes.

- **Africa and the Indian Ocean:** Comoros, Mauritius and Seychelles are working together to strengthen the monitoring capacity in the Indian Ocean. The AFD-funded regional hydromet project will strengthen the role of Regional Centers, i.e. a calibration Centre, a Training Centre, a Research Centre and an Observation/Climate Monitoring Centre. Economies of scale can be created by taking advantage of existing partnerships and sub regional committees such as the Tropical Cyclones Committee for South-West Indian Ocean. Concerning Somalia, it is expected that by receiving SOFF support, the country will be able to contribute to improve the capacity of the Intergovernmental Authority on Development (IGAD) Climate Prediction and Applications Centre (ICPAC) to provide accurate and timely forecasts for the region.
- **Asia and the Pacific:** The three Pacific countries included in this batch complete the SOFF Pacific Regional Programme. By coordinating GBON Implementation with the other nine countries in the region supported by SOFF, they will benefit from economies of scale and will contribute to an optimal design of the observing networks in the region. A SOFF Pacific workshop is envisioned to take place in Fiji in the first quart of 2024 to facilitate regional coordination, taking advantage of existing Pacific regional architecture such as the Pacific Meteorological Council and explore options for a standardized approach to bulk procurement of equipment and technology. In Central Asia, a regional workshop is envisioned to be organized in Tajikistan with the support of the peer advisor to foster collaboration in the sub-region and explore options for regional calibration as well as operations and maintenance.

6.6. Country balance

The 23[5] countries considered in this document include 17 Small Island Developing States (SIDS), 4 Least Developed Countries (LDCs), 1 LDC and SIDS and 1 Official Development Assistance (ODA) recipient country. Of the 17 SIDS, 6 are not ODA recipients but are still eligible for SOFF support.





Figures 5 and 6. Country balance in the 23 Readiness phase funding requests.

[5] Mozambique is not considered in this analysis.