SOFF Readiness Funding Request Template

Version 2.0

April 2023

Systematic Observations Financing Facility

Weather and climate data for resilience

SOFF Readiness Funding Request

The funding request should be prepared by the SOFF beneficiary country in collaboration with the SOFF peer advisor in coordination with the prospective SOFF Implementing Entity. In case of questions on how to complete this template, please contact the SOFF Secretariat at: soffsecretariat@wmo.int.

The SOFF Readiness Funding Request template includes the following sections:

1. **Basic information**
2. **SOFF Programming criteria**
3. **Readiness phase outputs, timeline and budget**
4. **Monitoring**
5. **Readiness Phase Risk Management Framework**

The **Assignment Terms of Reference** are included in **Annex 1**.

General recommendations to fill in in the template

Section 2. Programming criteria: Please make sure that you provide clear but succint information to relevant to the programming criteria. This is an essential requirement for the submission of the funding request to the Steering Committee.

- **GBON gap and easy fixes:** Please be aware of the limitations of SOFF scope of support. SOFF only supports GBON standard density and surface and upper-air stations over land. However, SOFF does encourage peers and beneficiary countries to during the Readiness phase look at the situation of GBON high-density networks (for those countries that already have them) and marine stations for potential easy fixes opportunities via SOFF support or other future support. We encourage beneficiary countries and peer advisors to ensure that the readiness funding request focuses on the areas of work related to SOFF scope of support to avoid misinterpretations and wrong expectations for the Investment and Compliance phase. For more guidance and details on SOFF scope of support, please see the GBON National Gap Analysis and the GBON National Contribution Plan technical guidance documents.

  The information provided on the GBON Gap, and the easy fixes should be high-level, as the details are expected to be scoped out during the Readiness phase. Please avoid excessively detailed information on how many stations to rehabilitate/install.

- **Maximize delivery capacity**: Please clearly state any ongoing or planned activities in the country for which the peer advisor receives funding from other sources. This is a mandatory requirement, as per Assignment Agreement 5.4. If there are none, please explicitly state so.

Section 3. Budget: The budget is expected to reflect a strict and careful assessment of the costs for the provision of the advisory services, following a cost-recovery approach and abiding to the eligible expenditure categories according to the Umbrella Agreement. While a budget breakdown is not required in the funding request, the SOFF peer advisor must be in a position to provide copies of all the documents, including budget and costing breakdown, including for audit purposes.

Section 6: Risk management framework needs to be carefully developed indicating discrete risks and strong mitigation measures.

Annex 1: Terms of Reference. The delivery process needs to be described, including indicative timeline of planned activities, workshops, missions, delivery of the outputs and delivery team. Without this, the funding request cannot be submitted to the SOFF Steering Committee.

1. Basic information

SOFF Beneficiary Country	The Bahamas
Country Focal Point	Jeffrey Simmons Acting Director Bahamas Department of Meteorology jeffreysimmons@bahamas.gov.bs Tel: (242)-702-5250
Peer advisor	Finnish Meteorological Institute (FMI), Finland
Peer advisor Focal Point	Anni Karttunen anni.karttunen@fmi.fi
Prospective Implementing Entity	Inter-American Development Bank
Prospective Implementing Entity Focal Point	Gerard Alleng gerarda@iadb.org
Total budget USD	131653
Delivery timeframe	6 months from financial decision
Date of approval	
Signature SOFF Steering Committee co-chairs (after Steering Committee approval of the funding request)	

1. SOFF Programming criteria

Table 1: Programming criteria

Close the most significant data gaps	The Bahamas Department of Meteorology (BDM) is responsible of providing weather and climate forecasts and warnings for the wellbeing and socio-economic development of the population. One of its core tasks is to provide accurate and reliable warnings to the population during the hurricane season and to contribute to the regional hurricane cooperation by sharing valuable observations. Weather observation and forecast services are also key in supporting many of the economic sectors such as traffic (both aviation and marine), tourism and fishing. The country consists of more than 700 islands and cays spread as a chain over some 800 km in the Atlantic Ocean (over 470 000 km2 of ocean space). The Bahamas Department of Meteorology's surface weather observation network consists of mostly automatic (15 stations) stations and two manual stations in Freeport and Nassau, with a horizontal coverage that fulfils the GBON requirements. BDM has procured ten new automatic stations to expand the network and is planning to gradually install these. Operational stations are reporting to OSCAR database on RBON status, but none of the stations are registered in the WDQMS GBON database, although some stations are providing sparse observations to the global NWP collection. The stations in the local network are successfully operating, but the data sharing and management provides an issue for the further dissemination. BDM has one upper-air sounding stations in Nassau, but the station has not been operational in recent years due to problems with the balloon hydrogen generator and is not registered in the WDQMS database. The station is part of the Cooperative Hurricane Upper-Air Stations Network and receives technical support from NOAA. BDM plans to fix the existing station and operate soundings twice daily as per GBON requirements. Having one upper-air GBON station in the Bahamas is well in-line with GBON resolution requirements. Data communication with the regional WMO data centre is manual and recommended to be upgraded to automatic with automatic data management system in place.
Target easy fixes	As the existing network horizontal resolution is high enough the target would be to upgrade three (3) surface weather stations from RBON status to GBON by strengthening the data communication and data management system to regional WMO communication center. This potentially requires automatization of dataflow from stations and

	modernization of database. In order to meet the observation interval requirements, possibilities for automatizing the manual stations is investigated during the implementation of the readiness phase. Sensor upgrade needs will be assessed station by station. In addition, the upper-air sounding station in Nassau should be strengthened to serve the daily operations of two soundings for the future. This includes repairing the old Hydrogen Generator or replacing it with a new one. The need to strengthen calibration, maintenance and data management system and processes will be considered in detail during the readiness phase.
Maximize delivery capacity	Implementing Entity IDB has extensive experience related to implementing projects in the Bahamas and regional projects in the Caribbean. IDB is also currently working with the SOFF funding instrument in other countries in the Caribbean region. The Peer Advisor has long and extensive experience in working worldwide in many hydro-meteorological development projects (projects in over 100 countries). FMI has long experience of working with BDM. During 2016-2019 FMI participated in a project to upgrade the radar observation networks and airport weather observation systems as well as the forecast and service provision systems. During this project FMI delivered and installed a forecast and service provision systems which is currently operated at BDM independently and daily as the main forecasting tool. FMI has completed a series of Finnish-funded capacity building projects during the recent years in SIDS's countries in the Caribbean (SHOCS I and II) and Pacific region (FPPICS and FINPAC). SHOCS projects that focused on improving Caribbean countries resilience to impacts of hydro-meteorological hazards including the impact of climate change with multi-hazard early warning systems and disaster risk reduction and the human capacity. The projects included 16 Caribbean countries including the Bahamas. The SHOCS II project included a dedicated activity on the rehabilitation and development of the existing AWS network over the Caribbean region and the peer advisor is therefore well aware on the current situation, needs and challenges in the region in development of the observation systems. Peer Advisor has currently no ongoing activities in the Bahamas.
Create leverage	In recent years BDM has been investing in strengthening national observation networks with national weather radar network acquisition (2016-2019), upgrading of airport AWOS stations and by expanding the AWS network with 10 new stations, and is currently looking into procuring network management software to improve the

	management of the systems. All of the investments have been made using BDM budget. SHOCS projects I and II focused on improving policies, communication and human capacity on national and regional level to strengthen resilience to impact of hydro-meteorological hazards was funded by the Finnish Government. The regional aspect of maintaining and harmonizing practices for the Caribbean network is present as FMI is acting as the SOFF Peer Advisor in five countries in the region. This is further emphasized as the Implementing Entity IDB is working with the same countries as well as countries with different Peer Advisors. To strengthen the regional capacity collaboration and knowledge sharing with other important regional organizations such as Caribbean Meteorological Organization (CMO), Caribbean Institute for Meteorology and Hydrology (CIMH) and Caribbean Disaster Emergency Management Agency (CDEMA) should be included when feasible. Especially crucial role plays the CIMH in the region in terms of the observation data quality as it operates the regional instrument calibration facilities in the Caribbean region. Synergies and means for the instrument calibration procedures in collaboration with the CIMH will be sought during the implementation of the SOFF.
Sub-regional gains	The Bahamas Department of Meteorology is a member of WMO and participates actively in the WMO region IV. BDM also participates in the regional Hurricane monitoring and tracking led by NOAA Hurricane Center. The regional collaboration and capacity will be strengthened by facilitating regional calibration and maintenance workshop between Caribbean SOFF countries and the Caribbean Institute of Meteorology and Hydrology (CIMH) to ensure GBON network required uptime and quality and benchmarking good data management and communication processes between the institutes. Moreover, this workshop is proposed to find and design unified solutions for acquiring observation and data management systems in the FMI and IDB implemented SOFF projects in the Caribbean region.
Ensure country balance	The Bahamas is a Small Island Developing State.

2. Readiness phase outputs, timeline and budget

The Terms of Reference for the development of the SOFF Readiness phase outputs (see Annex I) provide more detailed information. They also summarize the roles and responsibilities, as stated in the SOFF Operational Manual,, of the beneficiary country, the peer advisor, the prospective Implementing Entity and WMO Technical Authority for the delivery of the Readiness phase outputs.

The budget for the development of the SOFF Readiness phase outputs by the SOFF peer advisor shall be a lump-sum, fixed cost amount. It shall be calculated using a cost-recovery approach based on the peer advisors' standard cost recovery rates.

Table 2: outputs, timeline and budget

Outputs	Timeline					
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6[1]
National GBON Gap Analysis						
GBON National Contribution Plan						
Country Hydromet Diagnostic (on demand)						
Total budget USD[2]	***131653***					

[1] It is expected that the assignment is completed within six months. If more time is required for exceptional circumstances, please add additional months to the table.

[2] Eligible expenditures are limited to: Staff and consultants; Consultations, national technical workshops, and communications; Travel and transportation costs; Other incidental expenditures.

3. Monitoring

The beneficiary country and peer advisor shall notify the SOFF Secretariat on any delays that may impede the timely delivery of the Readiness phase outputs. If the assignment takes more than six months, the SOFF peer advisor shall submit semi-annual progress reports to the SOFF Secretariat (form to be provided by the SOFF Secretariat) stating the delivery status of the outputs.

The Readiness phase completion will be monitored by the peer advisor and the SOFF Secretariat using the following country-level Results Framework for the Readiness phase.

Table 3: Result framework

Outputs	Indicator	Target
1. GBON National Gap Analysis	GBON gap established and reviewed (Y/N)	GBON gap analysed and reviewed by WMO Technical Authority
2. GBON National Contribution Plan	GBON national contribution plan developed (Y/N)	GBON national contribution plan developed and reviewed by WMO Technical Authority
	GBON National Contribution Plan includes gender considerations (Y/N)	GBON National Contribution Plan includes gender considerations
3. Country Hydromet Diagnostic (on demand)	Country Hydromet Diagnostic developed (Y/N)	Country Hydromet Diagnostic developed

4. Evaluation

An evaluation from both, the beneficiary country and the prospective Implementing Entity on the quality of support received by the peer advisor will be conducted at the end of the Readiness phase and the peer advisor's assignment (form to be provided upon completion of the Readiness phase by the SOFF Secretariat).

5. Readiness Phase Risk Management Framework

Table 3: Risk Management Framework

Risk category	Description	Probability	Mitigation action
Contextual risks Risks related to conflicts, safety and political insecurity jeopardizing the delivery of the Readiness phase outputs	Natural disasters or severe weather events may cause delay in the implementation (in the Hurricane season June-November) Pandemic/ epidemic related travel restrictions will delay the implementation	Low to Medium Low	Concentrating in-country missions outside of the hurricane season. Preparation to conduct relevant FMI work also remotely using online tools. Vaccinations.
Institutional risks Risks related to the beneficiary country's institutions participation in the Readiness phase activities	The Meteorological Department does not have the needed resources to implement the activities.	Low	Include the cost in the budget planning and request the funding on time to the government.
Programmatic risks Risks related to country ownership of the Readiness phase outputs	All employees might not own the project as their top priority.	Low	Sufficient awareness and communication on GBON and SOFF to management and staff on all levels.

Annex 1. Assignment Terms of Reference for the development of the SOFF Readiness phase outputs

1. Purpose and scope

The purpose of this Assignment is to provide SOFF peer advisory services by Finnish Meteorological Institute -Finland, to the Department of Meteorology -The Bahamas to develop the outputs of the SOFF Readiness phase as described in section 3 of these Terms of Reference.

The provisions defined in the Terms of Reference are based on the SOFF Operational Manual, in particular Section 4.4 on Operational Partners and Section 4.5.1 on the Readiness phase.

2. Roles and responsibilities

Beneficiary country National Meteorological and Hydrological Service

- Is responsible for implementing the activities of the Readiness phase with the support from the peer advisor and the prospective Implementing Entity.
- Prepares the Assignment Terms of Reference following the standard Terms of Reference provided by the SOFF Secretariat, in collaboration with the peer advisor and in coordination with the prospective Implementing Entity.
- Submits the funding request for the SOFF Readiness phase support using the standardized template provided by the SOFF Secretariat.
- Is responsible for collaborating with the peer advisor to provide all the necessary information and participate in and facilitate the national activities the peer advisor needs to conduct in order to develop the Readiness phase outputs.
- Confirms receipt of the peer advisors' report with the Readiness phase outputs and provides comments on the outputs as needed.

Peer advisor

- Is accountable to the beneficiary country.
- In dialogue with the beneficiary country, provides independent technical advice, analysis and recommendations to support the beneficiary country in implementing the activities of the Readiness phase.
- Develops the Readiness phase outputs and is responsible for their quality and timely delivery. Communicates regularly with the beneficiary country and the Implementing Entity.
- Engages with the civil society, including on the identification of stakeholders of relevance for GBON implementation.
- Submits the final report with the Readiness phase outputs to the country for comments and to the prospective Implementing Entity for feedback.
- Submits the final report including the beneficiary country's comments and the prospective Implementing Entity's feedback to the SOFF Secretariat.

- Notifies the SOFF Secretariat and the prospective Implementing Entity of any delays that may impede the timely delivery of the outputs, and for assignments for which the delivery takes more than six months submits a semi-annual progress report.

Implementing Entity

- Participates in the Readiness phase activities and collaborates with the beneficiary country and the peer advisor to ensure a common understanding of the Readiness phase outputs and that they address the technical needs for the design and implementation of the Investment phase.
- Contributes to the definition of the Terms of Reference and provides feedback on the outputs delivered by the peer advisor.
- Based on its experience in the beneficiary country, supports the work of the peer advisor, e.g. by sharing its knowledge and facilitating access to the network of relevant stakeholders.

WMO Technical Authority

- Provides basic technical support to the beneficiary country, peer advisor, and prospective Implementing Entity on GBON regulations.
- Is responsible for the technical screening of the draft GBON National Gap Analysis and the draft GBON National Contribution Plan against the GBON regulations.
- Is responsible for establishing and administering the pass-through mechanism for contracting and funding of the technical assistance provided by the peer advisors.

SOFF Secretariat

- Facilitates communication, coordination and collaboration between the beneficiary country, the peer advisor, the prospective Implementing Entity and WMO Technical Authority.
- Reviews the Readiness funding request, including the Terms of Reference, for compliance and consistency with the information requirements in the template and provides feedback as needed. Transmits the funding request to the SOFF Steering Committee for its decision.
- Confirms receipt of the peer advisors' report with the Readiness phase outputs.
- Organizes exchange of knowledge and experiences and captures lessons learned.

3. Readiness phase outputs

The peer advisor should perform the following tasks following the technical guidance and using the templates provided in the operational guidance documents for each one of the outputs. A summary of the key steps and modules to be conducted for each output is presented below.

3.1 GBON National Gap Analysis

The GBON National Gap Analysis defines the gap between the mandatory requirements of the GBON regulations and the existing country surface and upper-air networks. In other words, it serves as the basis for identifying the number of observing stations that need to be installed or rehabilitated to comply with the mandatory requirements of the GBON regulations.

To develop the GBON National Gap Analysis, the following steps should be followed

- **Step 1** – Country information from the GBON Global Gap Analysis
- **Step 2** – Analysis of existing GBON stations and their status against GBON requirements
- **Step 3** – GBON Gap Analysis results
- **Step 4** – Country endorsement for integration of the GBON National Gap Analysis into the GBON National Contribution Plan

3.2 GBON National Contribution Plan

The GBON National Contribution Plan identifies the infrastructure, human and institutional capacity needed to achieve a progressive target toward GBON compliance, including the sustained operation and maintenance of the national GBON observing network.

To develop the GBON National Contribution Plan, the following modules should be completed

- **Module 1. National target toward GBON compliance:** Establishment of a progressive national target toward GBON compliance
- **Module 2. GBON business model and institutional development**: public-private business model as appropriate; partnerships, institutional and financial arrangements needed to operate and maintain the observing network
- **Module 3. GBON infrastructure development**: Appropriate investments needed to increase or improve the observing network and its Information and Communication Technology (ICT) infrastructure
- **Module 4. GBON human capacity development**: Human technical and managerial capacities required to operate and maintain the observing network
- **Module 5. Risk Management:** Operational risks of the observing network and required mitigation measures
- **Module 6. Transition to SOFF Investment phase:** Support the beneficiary country and the Implementing Entity in preparing the Investment phase funding request (template provided by the SOFF Secretariat).

3.3 Country Hydromet Diagnostics

The Country Hydromet Diagnostic (CHD) complements the GBON National Gap Analysis and the GBON National Contribution Plan. It is a standardized, integrated and operational tool and approach for diagnosing National Meteorological Services across the meteorological value chain, their operating environment, and their contribution to high-quality weather,

climate, hydrological and environmental information services and warnings. Its assessment serves as a basis for investments beyond SOFF, across the whole value chain, by the SOFF Implementing Entity and other development partners.

The peer advisor should **assess the 10 CHD elements** with its respective indicators following the matrix provided in the CHD guidance document.

- Governance and institutional setting
- Effective partnerships to improve service delivery
- Observational infrastructure
- Data and product management and sharing policies
- Numerical model and forecasting tool application
- Warning and advisory services
- Contribution to climate services
- Contribution to hydrological services
- Product dissemination and outreach
- Use and national value of products and services

To develop the Country Hydromet Diagnostic, the following **steps** should be completed.

- Stage 1 – Information gathering. As input, the WMO Monitoring Evaluation Risk and Performance unit will provide available country data structured along the CHD elements and their indicators (performed remotely)
- Stage 2 – Validation and analysis (performed in-country if feasible)
- Stage 3 – Closure

4. Delivery process

The peer advisor in collaboration with the beneficiary country and in coordination with the prospective Implementing Entity should establish the specific activities and consultations needed to complete the outputs. The development of the outputs should include the following:

- Collaboration arrangements between the beneficiary country and the peer advisor, including at least two country visits
- In-person or virtual consultation meetings with relevant national and international stakeholders and partners
-
    - A mission on GBON Gap Analysis in the Bahamas including necessary site visits
    - A mission on the national contribution plan and workshop on Country Hydromet Diagnostics in the Bahamas, including relevant stakeholders.
    - Internal stakeholders will be contacted through online conference when necessary
    - Continuous communication between FMI and BDM will be organized through regular online meetings
    - A mission for Bahamas meteorological staff to attend regional calibration and maintenance workshop including tentatively Caribbean Institute of Meteorology

and Hydrology as stakeholder. This workshop is designed to ensure GBON network required uptime and data quality as well as benchmarking good data management and communication processes between the institutes and to the WMO systems. Moreover, this workshop is proposed to find and design unified solutions for acquiring any observation and/or data management systems in the FMI and IDB implemented SOFF projects in the Caribbean region.

- Coordination arrangements with the prospective Implementing Entity
    - The work between Peer Advisor and Implementing Entity will be synchronized during regular online status meetings.

- Delivery partners that support the peer advisor in the delivery of the outputs, as applicable: not applicable.

- Peer advisor delivery team and focal point:
    - The peer advisor focal point is:
        - Ms. Anni Karttunen, anni.karttunen@fmi.fi
    - The delivery team members are:
        - Mr. Matti Eerikäinen, matti.eerikainen@fmi.fi
        - Mr. Harri Pietarila, harri.pietarila@fmi.fi

    - In addition to the dedicated delivery team members, the peer advisor will utilize experts from the SOFF delivery support expert pool, depending on the gaps found and required expertise needed. The SOFF delivery support expert pool:

Name	**Expertize**
Mikä Hyötylä	• Surface observation networks
Vilma Kangasaho	• Surface observation networks
Anu Petäjä	• Observation network operation and costing
Timo Laine	• Upper air radio soundings
Jaakko Siltakoski	• Observation equipment
Elmeri Nurmi	• Data management systems
Minna Huuskonen	• GBON and WIGOS compliance
Janne Kauhanen	• Data management • Forecast models
Sami Kiesiläinen	• Data management systems
Julia Warley	• Observation equipment
Anne Hirsikko	• Observation networks
Jenni Latikka	• Forecast production and service delivery
Juhana Hyrkkänen	• Business model and institutional development • Legal framework • Observation network operation design

- Timeline for the development of the outputs
    - National GBON Gap Analysis: during the implementation months 1-3. The gap analysis report will be handed over by the end of the month 3.
    - National GBON Contribution Plan: during the implementation months 3-6. The National GBON Contribution Plan will be handed over the latest during the month 6.
    - Country Hydromet Diagnostic: during the implementation months 1-6. The Country Hydromet Diagnostic will be handed over the latest during the month 6.

5. Reporting and completion

Reporting. For assignments for which the delivery of advisory services takes more than six months, the SOFF peer advisor shall submit a semi-annual progress report to the SOFF Secretariat (form to be provided by the SOFF Secretariat).

Completion

- **Step 1.** The peer advisor submits the draft GBON National Gap Analysis and the GBON National Contribution Plan reports to WMO Technical Authority and, as applicable, the draft Country Hydromet Diagnostics to the Monitoring Evaluation Risk and Performance unit of the WMO Secretariat. The draft reports have to follow the templates provided in the SOFF operational guidance documents.
- **Step 2.** WMO Technical Authority screens the draft GBON National Gap Analysis and the draft GBON National Contribution Plan to ensure consistency with the GBON regulations. The WMO Monitoring Evaluation Risk and Performance unit screens the draft Country Hydromet Diagnostics and provides feedback for revisions as needed.
- **Step 3.** The peer advisor submits the report with the Readiness phase outputs for beneficiary country and prospective Implementing Entity feedback.
- **Step 4.** The peer advisor finalizes the report for confirmation of receipt by the beneficiary country and, as needed, beneficiary country comments. Following beneficiary country receipt of the report, the peer advisor submits the report, including beneficiary country's comments and the prospective Implementing Entity's feedback, to the SOFF Secretariat.
- **Step 5.** The SOFF Secretariat confirms the satisfactory receipt of the report and informs the country and the prospective Implementing Entity accordingly. The SOFF Secretariat authorizes WMO to proceed with the release of the final payment and informs the SOFF Steering Committee of the completion of the SOFF readiness phase.

6. Signatures

By signing this document, the beneficiary country, peer advisor and the prospective Implementing Entity agree with the provisions stated in this Terms of Reference.

Beneficiary country 
Peer advisor 
Prospective Implementing Entity