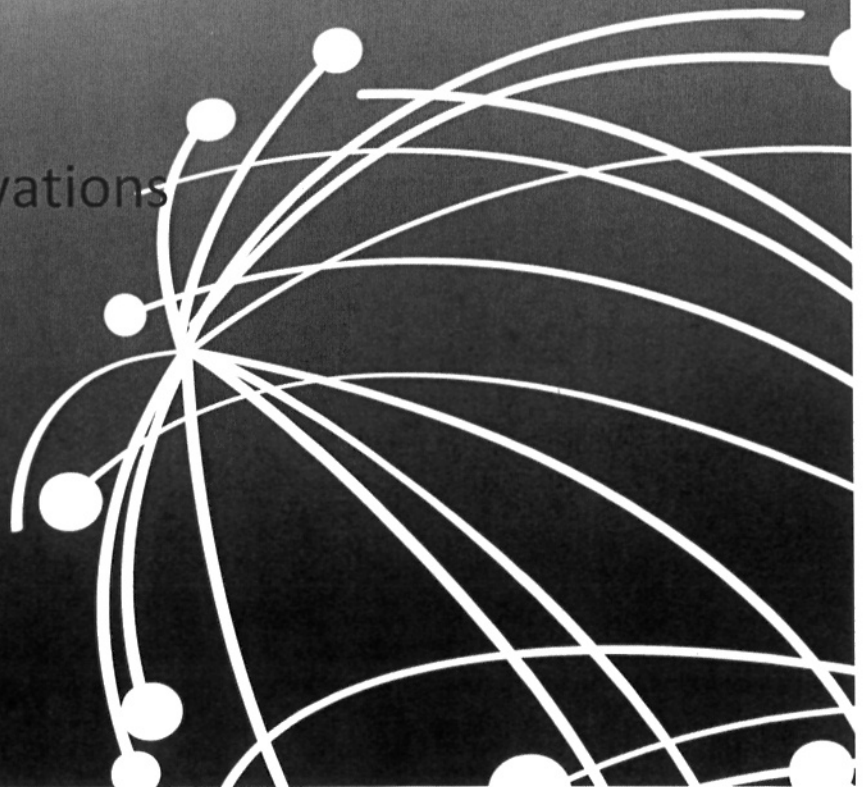

SOFF Readiness Funding Request Template

Version 1.0

17 January 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**.

1. Basic information

SOFF Beneficiary Country	BELIZE
Country Focal Point	Ronald Gordon National Meteorological Service of Belize.
Peer advisor	Met Office, UK
Peer advisor Focal Point	Tim Donovan
Prospective Implementing Entity	Inter-American Development Bank
Prospective Implementing Entity Focal Point	Gerard P. Alleng
Total budget USD	\$199,757
Delivery timeframe	6 months duration starting in April 2023.
Date of approval	30 March 2023
Signature SOFF Steering Committee co-chairs (after Steering Committee approval of the funding request)	

2. SOFF Programming criteria

Please provide below an initial short description of the application of the *SOFF programming criteria* in the country.

Table 1: Programming criteria

<p>Close the most significant data gaps</p>	<p><i>Based on the WMO Global GBON Gap Analysis for the country, please provide a brief summary of the initial indications regarding the GBON gap in the country.</i></p> <p>Belize has a vast network of manual (20 stations) and automatic weather (52 stations) stations and there are plans to install at least 35 more stations within the next year. Therefore, in terms of spatial resolution the country is compliant with the GBON requirement for surface weather stations. However, only one of these stations is currently transmitting globally.</p> <p>The plan is to have four more stations across the country transmit data globally. This would bring the total to 5 stations transmitting globally and the proposed stations are selected to match the GBON surface station high-density (100km resolution). All five stations can be considered surface stations. Of those 5, 1 is also a marine station and one an upper air station. All surface stations will be automatic weather station and can transmit at a high frequency of every 5 minutes, but this can be scaled down to every hour, if desired. The upper air station transmits twice daily on a routine basis, but this can be increased to 4 times daily during a hurricane emergency.</p> <p>If the low density GBON requirement of 200-km is considered, this would only require one station in Belize transmitting data for GBON given the relatively small size of the country. In that case, all the SOFF support would be geared at maintaining the current GTS station at the Phillip Goldson International Airport which is also an upper air station. The support could also include capacity development both in terms of human and material resource to ensure adequate and continuous observations from this surface station at the highest possible frequency of 1-hour.</p>
<p>Target easy fixes</p>	<p><i>Based on the WMO Global GBON Gap Analysis, please provide initial indications on the opportunities for rehabilitation and improvement of potential GBON stations in the country.</i></p>

	<p>There is the potential to improve all 5 stations that will be GBON stations. Currently two of the stations do not meet the GBON requirements for parameters measured. The station that will be designated as surface/marine will require additional sensors to measure variables relevant to the marine environment such as sea-surface temperature and wave height. The other surface station located in Belmopan will require additional sensors. Four (4) of the 5 stations have 10m masts and will need sensors to meet GBON requirements. The last station should have a 10m mast, upgraded within a year and will also need sensors to meet GBON requirements.</p> <p>As stated previously, at the low resolution of 200-km only one station will need support in the form of maintenance. This can be both in the form of equipment/spare parts to keep it operational, as well as training of adequate personnel to maintain the station including communication equipment.</p>
<p>Maximize delivery capacity</p>	<p><i>Outline the capacity of the peer advisor and the prospective Implementing Entity to deliver SOFF support efficiently and effectively in the country. State any ongoing or planned activities in the country for which the peer advisor receives funding from other sources.</i></p> <p>The Peer Advisor (PA) has experience in managing and sustaining its own nation's surface and upper air networks in line with GBON requirements. The PA collaborates with WMO in developing observations network and data management policies, guidelines and procedures. The PA also works with NMHSs in several countries supporting development activities.</p> <p>The PA has no ongoing or planned activities with Belize.</p> <p>The InterAmerican Development Bank has been accompanying the process that the NMS of the Government of Belize has been developing with SOFF and is interested in participating in the financing process of the accompanying investment and compliance stages. The programming is in alignment with the Bank's country strategy for Belize (2022-2025) in the cross-cutting area of climate change. The Bank has significant experience in project implementation in Belize over the last couple of decades, including in programming areas related to climate change and disaster risk management.</p>



Weather and climate data for resilience

<p>Create leverage</p>	<p><i>Provide initial indications on opportunities for complementarity of SOFF with previous, ongoing and planned operations by the SOFF Implementing Entities and other funds.</i></p> <p>The NMS of Belize has gradually developed its network of automatic weather stations through different projects and grants. This started off as a grant from the Caribbean Catastrophic Risk Financing Facility (CCRIF). Through this grant the NMS was able to install the first 52 automatic weather stations it currently operates. A subsequent grant from CCRIF enabled the department to add additional sensors to the existing network. Now with funding from the Global Environmental Facility implemented by the World Bank in the Energy Resilience for Climate Adaptation Project (ERCAP), the department will add 35 additional weather stations. The funding through the SOFF will therefore help in the maintenance and upkeep of this network of weather stations. It will also add functionality such as better communication features to share information regionally and globally. It also envisioned that the SOFF support can help in building the human and institutional capacity of the department that will help it in maintaining the network of stations and being sustainably GBON compliant.</p> <p>Additionally, the NMS of Belize has been selected to be a part of the WIS 2.0 Pilot Project in which 10 stations will be chosen to send data via WIS2box. The SOFF funding could therefore complement this project ensuring its sustainability in the longer term.</p>
<p>Sub-regional gains</p>	<p><i>Provide initial indications on opportunities to create economies of scale and optimize the design of the observing networks through multi-country/sub-regional SOFF implementation e.g. existing sub-regional cooperation or opportunities for sub-regional procurement and operations and maintenance.</i></p> <p>The NMSB already shares real-time information from its network of automatic weather stations regionally both in Central America and the Caribbean. In Central America rainfall data is shared in real-time through the Central American Flash Flood Guidance System while in the Caribbean it is shared on the DEWETRA platform which is a platform geared at providing real-time information to governments and disaster management agencies on potentially hazardous weather conditions. This type of arrangement can be upscaled through the</p>

	SOFF initiative by improving the mode of communicating the information, installation of additional sensors as well as installation of weather stations in the marine environment which is something that is currently lacking in the current network.
Ensure country balance	<p><i>Indicate if the country is a Small Island Developing State, a Least Developed Country, an ODA-recipient country, a Fragile and Conflict-affected State.</i></p> <p>Belize is considered as both a Small Island Developing State and as a Least Developed Country.</p>

3. 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.

Please indicate the expected time required to deliver the Readiness outputs and the total budget. See example below.

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						

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.



Country Hydromet Diagnostic (on demand)				
Total budget USD²	199,757			

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

4. 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

5. 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).

6. Readiness Phase Risk Management Framework

Please provide a brief description of the contextual, institutional, and programmatic risks that might hinder the effective delivery of the Readiness phase outputs.

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	Resurgence of covid or other health related issue.	Low	Remain vigilant to advice from relevant agencies. Work remotely, if necessary.
	High-impact tropical cyclone affecting Belize.	Low	Remain vigilant to guidance from relevant agencies. Work remotely, if necessary.
	Personal safety from violent incident.	Low	Maintain low profile, maintain vigilance, and monitor relevant news and other channels for risks information. Work remotely, if necessary.
Institutional risks Risks related to the beneficiary country's institutions participation in the Readiness phase activities	Suitable resource availability from the NHMS, other relevant government agencies and NGOs to commit to the activity timetable.	Low	Effective planning and communication with all relevant agencies, and sure the benefits of engagement are clearly stated. That is ensure buy-in to the project from all relevant agencies by actively engaging them from the onset. Seek additional support from the Policy, Project and Planning Unit within the Ministry.

<p>Programmatic risks Risks related to country ownership of the Readiness phase outputs</p>	<p>Lack of understanding and cooperation to this initiative from government departments and other relevant agencies.</p>	<p>Low</p>	<p>Effective communication with all relevant agencies, and sure the benefits of engagement are clearly stated. That is ensure buy-in to the project from all relevant agencies by actively engaging them from the onset. Seek additional support from the Policy, Project and Planning Unit within the Ministry.</p>
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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 Met Office, UK to Belize 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 one country visit, unless the country context does not allow it. The Met Office and the National Meteorological Service of Belize have enjoyed a strong relationship for many years as members of WMO. The partnership between the organisations will adopt a standard project management approach to the project. This will include routine meetings to discuss activity plans, resource and time allocation, and risks. It is envisaged that following a period of remote desk-based activity, an in-situ meeting will be conducted in month 3 to validate the gap analysis and discuss the initial plans for the national contribution plan and the country hydromet diagnostic. Further remote activity to complete the national contribution plan and country hydromet diagnostic will be followed by a final in-situ meeting in month 6 to agree the final drafts of the reports.

- Coordination arrangements with the prospective Implementing Entity. The Met Office will adopt a standard project management approach to the Readiness Phase and report to the Implementing Entity routinely and when in exception.
- In-person or virtual consultation meetings with relevant national and international stakeholders and partners. Initial engagement with partners will be remote desk-based research, questionnaires, and on-line interviews. The findings will be validated with in-person meetings in months 3 (gap analysis) and 6 (national contribution plan and country hydromet diagnostic).
- Delivery partners that support the peer advisor in the delivery of the outputs, as applicable. No applicable.
- Peer advisor delivery team and focal point. Tim Donovan will act as focal point for the readiness phase and will call upon expert colleagues from the Observations and International Development teams for support, as required.
- Timeline for the development of the outputs:

Project initiation and inception – April 2023

GBON Gap Analysis – months 1 and 2.

GBON National Contribution Plan – months 3 to 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

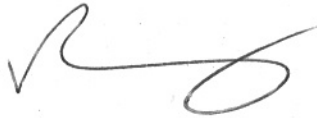
By signing this document, the beneficiary country, peer advisor and the prospective Implementing Entity agree with the provisions stated in this Terms of Reference.

Beneficiary country



Ronald Gordon
WMO Permanent Representative with Belize

Peer advisor



Prospective Implementing Entity

