



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**.

SOFF Secretariat feedback

21 February 2023

General comments

- **Section 1: Timeline.** Please indicate the specific months (also under Section 3) for the delivery of the outputs.
- **Section 2: Programming criteria.**

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 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 or decisions on how many stations to rehabilitate/install.

Maximize delivery capacity: Please 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.

- **Section 3. Budget.** This budget appears to be too high for the standard costs in the region. 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 further developed and strengthened, particularly as Liberia is a fragile conflict affected state, to demonstrate serious/concrete considerations have been made to ensure the readiness outputs are delivered. Please see suggestions in the comments provided in the section.
- **Annex 1: Terms of Reference.** The delivery process needs to be described. Without this, the funding request cannot be submitted to the SOFF Steering Committee.

Additional comments are provided in the document.

1. Basic information

SOFF Beneficiary Country	<i>LIBERIA</i>
Country Focal Point	<i>LIBERIA METEOROLOGICAL SERVICE (LMS)</i> <i>Permanent Representative of Liberia with WMO</i>
Peer advisor	<i>NIGERIA METEOROLOGICAL AGENCY (NiMet)</i> <i>Permanent Representative of Nigeria with WMO</i>
Peer advisor Focal Point	<i>OLUWASEUN WILFRED IDOWU, (NiMet)</i>
Prospective Implementing Entity	<i>AFRICAN DEVELOPMENT BANK (AfDB)</i>
Prospective Implementing Entity Focal Point	<i>JAMES KINYANGI</i>
Total budget USD	<i>120,000 USD</i>
Delivery timeframe	<i>April 2023 – September 2023</i>
Date of approval	<i>30 March 2023</i>
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>	<ol style="list-style-type: none"> 1. Upper Air data: There are no existing upper air station to generate upper air data. <ol style="list-style-type: none"> a. There is need to establish at least two Upper Air station for the initial phase to close this gap. 2. Liberia has 18 rainfall stations, 11 AWOS (6 agrometeorological and 5 synoptic) and one (1) manual observing station which are not transmitting data through GTS or WIS2.0 3. There are 11 proposed synoptic stations under the Liberia Meteorological Service observation network Master Plan 4. In closing data gaps, issues of low manpower must be considered. 5. There are no operational Marine stations in the country. 6. Given the need to have data from the continent feeding into NWP models and regular weather prediction in the country, a SOFF intervention in any of the above-mentioned areas will greatly be good for Meteorology and hydrometeorology in Liberia and indeed on the continent, considering the strategic location of the country along the coast of West Africa.
<p>Target easy fixes</p>	<p>The following can be targeted at immediate gains.</p> <ol style="list-style-type: none"> 1. Upgrade of the 18 rainfall stations, 11 AWOS (6 agrometeorological and 5 synoptic stations) to GBON standard and add data transmission functionality. 2. Upgrade of the manual station (located at the airport) to GBON standard with data transmission functionality. 3. Possibilities of expansion of these stations with additional Stations (Synoptic, Upper Air and Marine) with GBON standards and data transmission functionality can be explored. The Observation Network Master plan may be considered. <p>These will assist quickly in meeting GBON standards.</p> <p>Note:</p> <ol style="list-style-type: none"> 1. Upper air stations require more resources in terms of finance and manpower to setup and sustain. 2. Merger of Liberian Meteorological Service (LMS) and Liberian Hydrological Service (LHS) will assist Liberia in converging

	<p>resources that will help in future sustenance of the existing and any additional stations (AWOS and Manual)</p> <p>3. GTS requires acquisition of hardware while the new WMO WIS2.0 only requires a computer and internet connectivity. WMO may be approached to include Liberia in the Pilot phase of WIS.</p>
<p>Maximize delivery capacity</p>	<p>The Peer Advisor conducted the initial Country Hydromet Diagnostic (CHD) Assessment, funded by African Development Bank (AfDB), for Liberia that provided an entry point for AfDB intervention in the country.</p> <p>NiMet (Nigeria) has been providing Public Weather Forecast Support to Liberia under the WMO VCP initiative. This is purely from the Nigeria Federal Government Budgetary provision of NiMet to the tune of about 20,000 USD. This is ongoing.</p> <p>These have created a relationship that can be utilised for supporting Liberia in terms of experience sharing, expert exchanges, and capacity building for the Country to achieve SOFF target.</p> <p>The AfDB has a country office in Liberia with excellent contacts with the Government and other organizations relevant to facilitating interactions for SOFF work and missions during the readiness and implementation phases.</p>
<p>Create leverage</p>	<p>Liberia joined Early Warning project by GEF/LDCF through UNDP. This project is to enhance Liberia’s capacity to manage its vulnerability to climate-related hazards and reduce the impact of climate change on critical socio-economic sectors by enhancing capacity of hydro-meteorological services and networks for predicting climatic events and associated risks; develop a more effective, efficient and targeted delivery of climate information including early warnings; and support improved and timely preparedness and response to forecast climate-related risks and vulnerabilities. The project has been approved and it is expected to be launched in March 2023.</p> <p>The planned implementation of GCF/CDSF by the African Development Bank (AfDB) will also complement SOFF initiative. The project aims at reducing climate-induced natural hazards through a well-functioning national Multi-Hazard Impact-Based Forecasting and Early Warning System (MHIBF-EWS) that will bring together the LMS, LHS, EPA and NDMA in Liberia. The project targets installation of weather radar, lightning detectors and AWS.</p> <p>The AfDB also helped develop the Liberia CHD. The AfDB will continue to provide country support in technical assistance and leverage SOFF through upcoming projects under the newly created</p>

	<p>Climate Action Window.</p> <p>The availability of expertise in the region (e.g., NiMet, ACMAD) can provide easy-reach capacity support for the implementation phase.</p>
Sub-regional gains	<p>Achieving GBON standard stations in Liberia will assist the country, the continent and specifically West Africa in providing quality data as part of initialisation data into WMO Global NWP centres.</p> <p>The success of the SOFF initiative will also provide a success story that will attract more investments in other countries in the region that are in need of support.</p> <p>Aviation is a highly regulated consumer of meteorological data. Aviation has no boundary, hence improving observation capacities of Liberia will translate to improvement in the aviation industry.</p> <p>The AFDB will continue to provide linkages through regional hydromet projects with AGRHYMET and ACMAD, particularly on infrastructure for Numerical Weather Prediction and closing the GBON gap to deliver early warning.</p>
Ensure country balance	<p>Liberia is 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

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.

National GBON Gap Analysis						
GBON National Contribution Plan						
Updating the Country Hydromet Diagnostic (on demand)						
Total budget USD²	120,000 USD					

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

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

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
<p>Contextual risks Risks related to conflicts, safety and political insecurity jeopardizing the delivery of the Readiness phase outputs</p>	<p>Post-war recovery and potential instability hinder the organization of physical meetings.</p>	<p>Medium</p>	<p>Mitigation action: if physical meetings cannot be held, virtual meetings will be organized.</p>
<p>Institutional risks Risks related to the beneficiary country's institutions participation in the Readiness phase activities</p>	<p>There has been low level investment in Public Sector, including the Liberian Met. Service (LMS). Therefore, there is low capacity (human and infrastructure) to observe, forecast and communicate.</p>	<p>Medium</p>	<p>NiMet has been providing technical support to the country and can provide personnel to support the implementation phase. Involvement of WMO Regional Office in follow-up activities and consultations.</p>
<p>Programmatic risks Risks related to country ownership of the Readiness phase outputs</p>	<p>Low level coordination mechanism among LMS management and staff.</p>	<p>Medium</p>	<p>Direct involvement of LMS Personnel in the SOFF activities. Continuous interaction between the LMS and the Peer Advisor. The Peer Advisor will provide recommendations on activities related to mentorship in management</p>



			strategy to be implemented during the investment phase
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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 Nigerian Meteorological Agency (NiMet)** to **Liberia** 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.
[Liberia and the Nigerian Meteorological Agency have agreed to organize regular consultation virtual meetings for gathering of relevant information and data. Besides the virtual meetings, it has also been agreed to plan and organize at least two in-country technical visits by the peer advisor for on-site assessment and identification of suitable areas for SOFF intervention in the country.]
- Coordination arrangements with the prospective Implementing Entity

[Liberia, Nigerian Meteorological Agency, and African Development Bank have all agreed to hold regular coordination virtual meetings for information sharing.]

- In-person or virtual consultation meetings with relevant national and international stakeholders and partners
[During the implementation period, regular in-person or virtual consultation meetings with relevant national and international stakeholders and partners will be planned and organized by Liberia through Liberian Meteorological Service in collaboration with the peer advisor and the prospective Implementing Entity]
- Delivery partners that support the peer advisor in the delivery of the outputs, as applicable **[The delivery partners include: SOFF Secretariat, ACMAD, AGRHYMET, WMO, prospective Implementing Entity and the Liberia (LMS)]**
- Peer advisor delivery team and focal point
[A team of experts (Prof. M.B. Matazu, O.W. Idowu, W.A. Ibrahim, B.K Nwogbaga, A.A. Bello and R.O. Obansola) from the Nigerian Meteorological Agency ably led by Professor Mansur Bako MATAZU. Focal Point: Oluwaseun Wilfred IDOWU]
- Timeline for the development of the outputs
[April 2023-September 2023]

Summary of Activities

Activity	Responsibility	Timeline (April-September 2023)
Information gathering	LMS, NiMet	Weekly Virtual meetings
Information sharing and progress reports	LMS, NiMet, AfDB, Partners (ACMAD, AGRHYMET, WMO etc.)	Bi-monthly virtual meetings
Onsite Assessment	LMS, NiMet	At least two visits (June and August 2023)
Draft Report 1	NiMet, LMS	June 2023
Draft Report 2	NiMet, LMS	July 2023
Draft Report 3	NiMet, LMS, AfDB	August 2023
Final Report	NiMet, LMS, AfDB	September 2023

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

LIBERIA
PERMANENT REPRESENTATIVE OF LIBERIA WITH WMO



Peer advisor

NIGERIAN METEOROLOGICAL AGENCY (NiMet)
PERMANENT REPRESENTATIVE OF NIGERIA WITH WMO
PROFESSOR MANSUR BAKO MATAZU



Prospective Implementing Entity

AFRICAN DEVELOPMENT BANK (AfDB)
James KINYANGI

