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The Federal Democratic Republic of Ethiopia  
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Ethiopian Meteorological Institute

ቁጥር / Ref. No : ..... 70114 .....  
ቀን / Date: ..... 23/02/2023 .....

Mr. Markus Repnik  
Director  
Systematic Observations Financing Facility Secretariat  
Email: mrepnik@wmo.int  
World Meteorological Organization

Sub: Systematic Observation Facility Fund (SOFF) readiness support request for Ethiopia

Dear Mr. Markus,

We recall, the third SOFF Steering Committee, at its meeting on 2<sup>nd</sup> November 2022, approved with decision 3.4 that Ethiopia is among the countries identified to benefit SOFF readiness support in the first batch of counties. Accordingly, Ethiopian Meteorological Institute (EMI) was working with the SOFF secretariat and identified Norwegian Meteorological institute (MET Norway) as a peer advisor and UNDP as implementing entity. Then, we jointly develop the funding request for SOFF readiness support for Ethiopia, received feedback from SOFF secretariat and prepared the final document.

Therefore, the Ethiopian Meteorological Institute of Ethiopia submit to the SOFF secretariat, with this letter, Ethiopian SOFF readiness support request for your kind consideration.

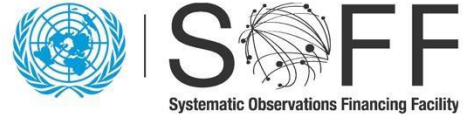
CC:

- Met Norway
- UNDP



Sincerely Yours,

Fetene Teshome  
Director General &  
Permanent Representative  
Of Ethiopia With WMO



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# SOFF Readiness Funding Request Template

Version 1.0

17 January 2023

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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](mailto: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**.



<b>SOFF Beneficiary Country</b>	<i>Federal Democratic Republic of Ethiopia</i>
<b>Country Focal Point</b>	<i>Mr. Fetene Teshome , Director of EMI, PR to WMO</i>
<b>Peer advisor</b>	<i>Norwegian Meteorological institute (MET Norway)</i>
<b>Peer advisor Focal Point</b>	<i>Kristine Gjesdal, email: kristineg@met.no, phone 004798021555</i>
<b>Prospective Implementing Entity</b>	<i>UNDP</i>
<b>Prospective Implementing Entity Focal Point</b>	<i>Benjamin Larroquette, benjamin.larroquette@undp.org</i>
<b>Total budget USD</b>	<i>185625</i>
<b>Delivery timeframe</b>	<i>April to October, 2023</i>
<b>Date of approval</b>	<i>March 2023</i>
Signature SOFF Steering Committee co-chairs (after Steering Committee approval of the funding request)	





## 1. SOFF Programming criteria

An initial short description of the application of the [SOFF programming criteria](#) in the country.

**Table 1: Programming criteria**

<p><b>Close the most significant data gaps</b></p>	<p>Ethiopia runs 17 synoptic surface observation stations and 3 upper air stations. For a 1.1 million square kilometres of land area, we need to have more surface and upper air stations to meet GBON minimum level spatial resolution specification. All our 17 surface stations are manned and observations are taken only five times a day from 03 to 15 GMT, except at Addis Ababa Bole International Airport, where observations are taken in hourly intervals. Data from these stations are transferred to the HQ via SSB radio and telephone for communication to WMO-GTS. Missing data are not uncommon due to observers' absence, failure of instrument and communications. The upper air observation at Addis Ababa used to take afternoon radiosonde and morning pilot balloon observations, but observation stopped in 2020, due to lack of balloons and radiosonde. MESSEIR COM system is used as a GTS communication facility from Addis to Nairobi GTS-hub, but this system is not networked to the GBON stations. Therefore, Ethiopia GBON gaps are multi-faced including spatial coverage, observation frequency, communication, operation and maintenance of GBON stations as well as skills of observers and maintenance engineers, and lack of spare parts.</p>
<p><b>Target easy fixes</b></p>	<p><i>All 17-manned stations have to be replaced by AWS/AWOS and additional new sites have to be identified based on GBON minimum requirement. Required communication system both at the stations and the center has to be installed, so that GBON requirement is fulfilled to report hourly data to GTS. For the upper air observation, the existing three upper air stations need rehabilitation and other new upper air stations have to be installed in new locations, based on GBON minimum spatial requirement. Further, operational consumable for the upper air (radiosonde and balloons) as well as spare parts for AWS/AWOS, maintenance and calibration facilities with capacity building for maintenance engineers has to be fulfilled to enable Ethiopia to comply with GBON requirements.</i></p>
<p><b>Maximize delivery capacity</b></p>	<p><i>Peer advisor, MET Norway will allocate dedicated resources to ensure SOFF activities in the readiness phase to be carried out. This includes digital meetings, reporting, meetings at EMI, participate in and together with EMI facilitate workshops, ... etc. Parts of the work will be performed together with Finnish Meteorological Institute, FMI.</i></p>
<p><b>Create leverage</b></p>	<p><i>There is an ongoing EWS project, which is financed by Finnish Public Fund and expected to expand EMI Weather Radar network, Lightning detection network, air-quality monitoring network and central system integration, data visualization and presentation, which is implemented by FMI and Vaisala jointly.</i></p> <p><i>There is also a Norad funded project (in the process of approval) aiming at building weather and climate services that could be integrated with SOFF</i></p>



<b>Sub-regional gains</b>	<i>Ethiopia is the second populous country in Africa, with a population of over 120 million, and a member of AUC and IGAD. EMI is actively participating in the IGAD Climate Prediction and Application (ICPAC) activities. Considering the combined station network coverage over IGAD region, optimization could be analyzed for fulfilment of GBON minimum requirement across the region.</i>
<b>Ensure country balance</b>	Ethiopia is one of the Least Developed Countries in sub-Saharan African region, which is impacted by frequent drought and flood, yet need critically to build resilience to climate change and variability as well as ensuring sustainable development.

## 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.

*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 <sup>1</sup>
<b>National GBON Gap Analysis</b>						
<b>GBON National Contribution Plan</b>						
<b>Country Hydromet Diagnostic (on demand)</b>						
<b>Total budget USD<sup>2</sup></b>	<b>185 625</b>					

<sup>1</sup> 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.

<sup>2</sup> 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
<b>1. GBON National Gap Analysis</b>	GBON gap established and reviewed (Y/N)	GBON gap analysed and reviewed by WMO Technical Authority
<b>2. GBON National Contribution Plan</b>	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
<b>3. Country Hydromet Diagnostic (on demand)</b>	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

*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
<b>Contextual risks</b> Risks related to conflicts, safety and political insecurity jeopardizing the delivery of the Readiness phase outputs	Conflict and security problem in some parts of Ethiopia could hinder physical access to make site level assessment of the stations during the readiness phase	Medium	Work on desk review based on prior studies, like EMI station master plan and EMI station resources
<b>Institutional risks</b> Risks related to the beneficiary country's institutions participation in the Readiness phase activities	Limited EMI Regional Meteorological Services Centers capacities in providing sufficient input in the meetings, consultations and assessments initiated by the peer	low	Ensure good internal communication at EMI in all departments contributing to SOFF for both management and staff
<b>Programmatic risks</b> Risks related to country ownership of the Readiness phase outputs	All EMI entities might not own the project in their top priority list	Low	Sufficient awareness and communication work through workshop on GBON and SOFF to EMI management and staff at all level





## 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 *Norwegian Meteorological institute (MET Norway)* to the *Federal Democratic Republic of Ethiopia* 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, unless the country context does not allow it.
  - MET Norway plan to visit EMI, Ethiopia during May 2023 for finalising the National Gap Analysis and outline the GBON National Contribution Plan
  - MET Norway plan for a workshop in Addis Ababa during September 2023 to finalise the Country Hydromet Diagnostic
  - In between we will schedule monthly digital meetings to monitor
- Coordination arrangements with the prospective Implementing Entity
  - MET Norway set up monthly digital status/information meetings with UNDP
- In-person or virtual consultation meetings with relevant national and international stakeholders and partners



MET Norway will discuss with NORAD how to best integrate SOFF with ongoing projects

- Delivery partners that support the peer advisor in the delivery of the outputs, as applicable
  - NORAD
- Peer advisor delivery team and focal point  
Focal point: Kristine Gjesdal, [kristineg@met.no](mailto:kristineg@met.no)

Team: Elinah Khasandi Kuya [elinahkk@met.no](mailto:elinahkk@met.no), Teferi Demissie [teferidem@gmail.com](mailto:teferidem@gmail.com)

- **Timeline for the development of the outputs**
  - 15.06.2023 National GBON Gap Analysis delivery
  - 15.08.2023 GBON National Contribution Plan delivery
  - 15.10.2023 Country Hydromet Diagnostic delivery





## 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).

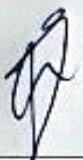
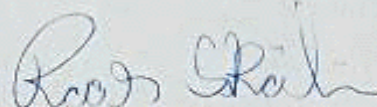
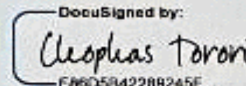
### Completion

- **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.

<b>Beneficiary country</b>	
	<b>Fetene Teshome</b> Director General & Permanent Representative Of Ethiopia With WMO
<b>Peer advisor</b>	
Oslo, 23.02.2023	
Roar Skålin, Director General, MET Norway PR of Norway with WMO	
<b>Prospective Implementing Entity</b>	
Cleophas Torori	DocuSigned by:  F86D5842289245F...
DRRP	cleophas.torori@undp.org
UNDP Ethiopia	23-Feb-2023

DS  
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