

SOFF Readiness Funding Request Template

Version 1.0

Systematic Observations Financing Facility





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 | National Directorate of Meteorology and Geophysics Republic | |
|---|--|--|
| | of Timor-Leste (DNMG) | |
| Country Focal Point | Mr. Terencio Fernandes Moniz | |
| | Director National Directorate of Meteorology and Geophysics | |
| | Timor-Leste. Email: <u>tfmoniz.moniz@gmail.com</u> | |
| Peer advisor | Finnish Meteorological Institute, Finland (lead) | |
| | The Agency for Meteorology, Climatology and Geophysics of the Republic of Indonesia (BMKG) to be subcontracted | |
| Peer advisor Focal Point | Edith Rodríguez, email: edith.rodriguez@fmi.fi, phone | |
| | number +358504006750 | |
| Prospective Implementing Entity | UNEP | |
| Prospective Implementing Entity Focal Point | Jochem Zoetelief jochem.zoetelief@un.org | |
| Total budget USD | 130,000 | |
| Delivery timeframe | 6 moths after approval of funding request | |
| Date of approval | | |
| Signature SOFF Steering Com funding request) | mittee co-chairs (after Steering Committee approval of the | |



2. SOFF Programming criteria

Please provide below an initial short description of the application of the SO<u>FF programming</u> <u>criteria i</u>n the country.

Table 1: Programming criteria

| Close the most significant data gaps | Timor Leste is a tropical island country with a total area of approximately 14,874 km2. The country is some 400 km long, stretching from the exclave of Oecusse to the eastern coast of the Timor Island. Based on the WMO Global WIGOS Data Quality Monitoring System there are currently 3 surface observation stations in Pante-Macassar, Dilli and Baucau added in to the WIGOS observation system. However, there is no data available from any of these stations. The horizontal coverage with 3 stations would barely fulfil on average the GBON criteria of 200 km station interval. There are no upper air sounding stations in Timor-Leste. However, Indonesia has two stations nearby, Kupang (west of Timor-Leste) and Saumlaki (east of Timor Leste), located with approximately 1000 km distance from each other, Timor Leste between them. The distance of the sounding stations doesn't, fulfil the GBON requirement of 500 km in land area, and establishing sounding station in Timor Leste seems to be justified. |
|--|---|
| | BMKG Indonesia has also one surface land observation in Kupang which has data availability issues and reports with 3-hour interval. Another nearby station is in Kalabahi (approx. 100 km from Timor Leste), which also reports with three-hour interval. |
| Target easy fixes | The biggest data gap in Timor-Leste are with upper air observations and on the other hand dissemination of the surface observation data. The country is expecting to have at least 4 stations on upper air observation on the International Airport in Dili, Oecussi, Suai and Baucau through a GCF-funded project, implemented by UNEP. There are also 7 AWS to be procured in the project. This provides an excellent opportunity for cooperation between the SOFF and the GCF project. An easy systematic mechanism for instrument sensor calibration will to be considered with the assistance or under the guidance of peer advisor. |
| Maximize delivery capacity | UNEP is currently working on implementing a GCF-funded 5-year project "Enhancing Early Warning Systems to build greater resilience |



| | to hydro-meteorological hazards in Timor-Leste" where strengthening observational capacity is one of the key components. An in-country Project Management Unit is being established, hosted in the same building as the National Directorate of Meteorology and Geophysics (NDMG), which will enhance UNEP's ability to provide on-the-ground support to national stakeholders, especially NDMG. UNEP is also co-leading Pillar 2 of Early Warnings for All Initiative (Observations & Forecasting). |
|-----------------|--|
| | The Peer Advisor does not receive any for ongoing or planned activities in Timor-Leste other that SOFF funding, Nevertheless, the Peer Advisor has a long-lasting and extensive experience in working worldwide in many hydro-meteorological development projects (projects in over 100 countries). Moreover, the leading peer Advisor (FMI) is sub-contracting the BMKG, national meteorological institute of Indonesia, in implementation of the SOFF readiness phase in Timor-Leste. Based on this experience and geographical expertise the peer advisor has an extensive knowledge in all relevant fields needed for the successful implementation of the project, including required capacity development in institutional, procedural areas and human resources in accordance with the different phases of SOFF. For example, FMI was the System Integrator (lead consultant) in the recently completed World Bank funded PPCR project in Nepal, that conducted the full modernization of the DHM Nepal infrastructure, including observation and data management systems. Moreover, FMI has completed a series of Finnish-Funded capacity building projects during the recent years in SIDS's countries in the Caribbean (SHOCS II and II) and Pacific region (FPPICS and FINPAC). Through the knowledge of the latest technology and geographically specific issues as well as organizational and institutional arrangements and procedures, gained through many projects, the efficiency and effectiveness will be maximized when delivering the services through all the phases of SOFF. |
| Create leverage | UNEP is currently implementing a GCF-funded 5-year project "Enhancing Early Warning Systems to build greater resilience to hydro-meteorological hazards in Timor-Leste". The GCF-funded project will expand/upgrade the surface-based observation network in compliance with the expected GBON requirements. SOFF Readiness support would enable validation of GBON network requirements. The SOFF Investment phase funding will complement the ongoing activities by investing in the upper-air observation network, which is not covered under the GCF project, enabling further strengthening of observational capacity in Timor-Leste. The SOFF Compliance phase would support long-term sustainability of the GCF project outcomes. |



As a member state, Timor-Leste will be exchanging data with Regional Integrated Multi-Hazard Early Warning System for Asia and

| Weather and climate and climate ata for resilience |
|--|
| Africa (RIMES). Strengthening observational capacity in Timor-Leste will enable it to provide better data to RIMES. This data will then be shared with all other member states, which will lead to sub-regional gains. |
| Due to the geographical location and the archipelagic geography number of complementing observations from neighboring countries is limited. The best opportunities are with the Indonesia and BMKG observation network. The synergies will be investigated more thoroughly during implementation of the readiness phase. BMKG will be sub-contracting by the lead peer advisor FMI in Timor-Leste and this provides a natural basis for further discussions. |

Moreover, the limited number of observation stations in nearby areas highlights the importance of improvements of the observation network and implementation of SOFF in Timor-Leste.

Ensure country
balanceTimor-Leste is a Small Island Developing State and categorized in the
group of least developed countries (LDC).

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 <u>SOFF Operational Manual</u>, 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

| Outputc | Timeline | | | | | |
|-------------------------------|----------|---------|---------|---------|---------|----------------------|
| Outputs | Month 1 | Month 2 | Month 3 | Month 4 | Month 5 | Month 6 ¹ |
| National GBON Gap Analysis | | | | | | |

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.



| GBON National Contribution Plan | | | | |
|---|--|-----|------|--|
| Country Hydromet Diagnostic (on demand) | | | | |
| Total budget USD ² | | 130 | ,000 | |

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 | GBON national contribution plan developed (Y/N) | GBON national contribution plan developed and reviewed by WMO Technical Authority |
| Contribution Plan | 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

The major risks in the implementation of the readiness phase are related to the natural disasters or global pandemics and related travel restrictions. These may cause delay in the implementation. Moreover, the adequacy of the beneficiary staff resources to support the implementation forms risks to producing the needed reports.

Table 3: Risk Management Framework

| Risk category | Description | Description Probability | |
|---|---|-------------------------|--|
| Contextual risks Risks related to conflicts, safety and political insecurity | There are potential risks to State fragility related to political instability, limited policy implementation capacity and perception of growing corruption. | Medium | Constant communication with the Finnish embassy will facilitate the planning process. Transparent and clear communication on the funding rules. |
| jeopardizing the delivery of the Readiness phase outputs | A new global pandemic and related travel restrictions will delay the implementation | Low | Engaging BMKG into the delivery. Preparation to conduct relevant FMI work also remotely. |
| | Natural disaster such as earthquakes and tropical cyclones | Low | Engaging BMKG into the delivery. Preparation to conduct relevant FMI work also remotely. |
| Institutional risks Risks related to the beneficiary country's institutions participation in the Readiness phase activities | The DNMG does not have the needed resources to implement the activities. | Low | Include the cost in in the DNMG Budget Planning and request the funding on time to the Timor-Leste government |



| Programmatic risks Risks related to country ownership of the Readiness phase | All DNMG employees might not own the project in their top priority list | Low | Sufficient awareness and communication work on GBON and SOFF to management and |
|--|---|-----|---|
| outputs | | | management and staff at 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 *the* Finnish Meteorological Institute and the National Directorate of Meteorology and Geophysics of Timor-Leste 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 <u>SOFF_Operational Manual</u>, 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 <u>operational guidance documents</u> 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, includes:

- FMI and BMKG plan to visit the DNMG in Timor-Leste during the spring 2023 for finalising the National Gap Analysis and outline the GBON National Contribution Plan
- At least one workshop will be arranged in Timor-Leste together with UNEP during fall 2023 to gather the relevant stakeholder information and to coordinate the work with stakeholders and other projects to strengthen and maximise the SOFF implementation efficiency and to avoid overlapping activities.



 All the activities are going to be coordinated within the DNMG and FMI. In addition, During the implementation phase there will be permanent communication virtually between FMI, BMKG, UNEP and the beneficiary to communicate and agree on the implementation of different activities

Peer advisor delivery team and focal point

Ms. Edith Rodríguez edith.rodriguez@fmi.fi

Mr. Matti Eerikäinen matti.eerikainen@fmi.fi

Mr. Harri Pietarila harri.pietarila@fmi.fi

BMKG focal point: Nelly Florida Riama nelly.florida@bmkg.go.id

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 | | |
| | Business model and institutional development | | |
| Juhana Hyrkkänen | 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 4-6. The National GBON Contribution Plan will be handed over the latest during the



month 6.

 Country Hydromet Diagnostic: during the implementation months 2-6. 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 Timor - Leste | TERENCIO BERNANDES MOMIE |
|---|--------------------------|
| Peer advisor Jussi Kanola JUSSI KAUROLA | |
| Prospective Implementing Entity J3 Jochem Zoetelief, 22.02.2023 | (UNEP) |