



SOFF Investment Phase Funding Request

Version 2.0

15 May 2024

Systematic Observations
Financing Facility

**Weather
and climate
data for
resilience**



SOFF Investment Phase Funding Request

The funding request should be prepared by the SOFF beneficiary country in collaboration with the SOFF implementing entity and supported by the SOFF peer advisor. The funding request reflects and is based on the National Contribution Plan. In case of questions on how to complete this template, please contact the SOFF Secretariat at: soffsecretariat@wmo.int.

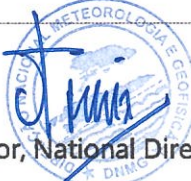
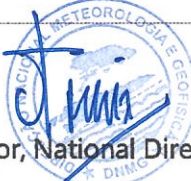


The SOFF Investment Funding Request template includes the following sections:

- 1. Basic Information**
- 2. Programming Criteria**
- 3. Readiness and Country Context**
- 4. Investment Phase Outputs and Budget**
- 5. Investment Phase Implementation Arrangements**
- 6. Investment Phase Monitoring, Reporting, and Verification**
- 7. Investment Phase Risk Management Framework**

The **GBON Gap Analysis**, the **GBON National Contribution Plan** and **Country Hydromet Diagnostic** are included in **Annex 1, 2, 3**.

The **Terms of References** of the advisory services provided by the **SOFF peer advisor** are provided in **Annex 4**.

1. Basic Information

SOFF Beneficiary Country and Focal Point	Timor-Leste Mr. Terencio Fernandes Moniz, Director, National Directorate of Meteorology and Geophysics (DNMG) Email: tfmoniz.moniz@gmail.com			
Country classification	<input checked="" type="checkbox"/> LDC	<input checked="" type="checkbox"/> SIDS	<input checked="" type="checkbox"/> FCS	<input checked="" type="checkbox"/> ODA-recipient
SOFF Implementing Entity and Focal Point	United Nations Environment Programme (UNEP) Mr. Jochem Zoetelief, Head, Climate Early Warning and Capacity Building Unit, Early Warning and Assessment Division Email: jochem.zoetelief@un.org			
SOFF Peer Advisor and Focal Point	Finnish Meteorological Institute (FMI) Mr. Harri Pietarila, Director of Expert Services Email: harri.pietarila@fmi.fi			
Total Budget (USD)	Total: 5,731,094.17 First tranche 4,828,222.95 (90%) Second tranche: 536,469.22 (10%)			
Delivery timeframe	60 months			
Date of Steering Committee Approval				
Signatures	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Mr. Terencio Fernandes Moniz, Director, National Directorate of Meteorology and Geophysics (DNMG), Timor-Leste</p>   </div> <div style="width: 45%; text-align: center;"> <p>17.05.2024</p> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <p>Mr. Jochem Zoetelief, Head, Climate Early Warning and Capacity Building Unit, Early Warning and Assessment Division, United Nations Environment Programme (UNEP)</p>  </div> <div style="width: 45%; text-align: center;">  </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <p>Mr. Harri Pietarila, Director of Expert Services, Finnish Meteorological Institute (FMI)</p> </div> </div>			

2. SOFF Programming Criteria (2 pages)

Alignment with the SOFF Programming Criteria

This section should be based on the SOFF Readiness Phase outputs, i.e. the National GBON Gap Analysis and GBON National Contribution Plan, and the Country Hydromet Diagnostic where available.

Close the most significant data gaps

Based on the WMO Global Basic Observing Network (GBON) Global Gap Analysis and GBON National Contribution Target, to meet the GBON standard density requirements there is a need to improve 1 surface station and install one automatic upper-air sounding station in Timor-Leste.

In addition, there is an ongoing Green Climate Fund (GCF)-funded project [“Enhancing Early Warning Systems to Build Greater Resilience to Hydrometeorological Hazards in Timor-Leste” \(2022-2027\)](#) (UNEP GCF FP-171) implemented by UNEP under which 9 Automated Weather Stations (AWS) are being installed to establish a higher-resolution network in Timor-Leste necessitated by its extremely mountainous topography. **This project had been approved by the GCF board late 2021 with SOFF being indicated as a critical component of its sustainability strategy (section “B.6. Exit Strategy and Sustainability”)** following the advice from the WMO representatives during the project development stage. Therefore, this project requests SOFF support for continuous maintenance and calibration of these additional 9 AWSs, which will help maintain sustainability of the GCF investments, as well as largely benefit the global and regional numerical weather prediction models.

Furthermore, to ensure data transmission to [WMO Information System 2.0 \(WIS 2.0\)](#) - a new framework for data sharing introduced by the WMO to gradually replace [Global Telecommunications System \(GTS\) / WMO Information System 1.0](#) (WIS 1.0, also known as WIS)- there is a need to upgrade the ICT infrastructure as described in the GBON National Contribution Plan (Annex 2), as well as upscale the data ingestion module of the Climate Data Informatics System (CDIS) which is being installed under the GCF-funded project. This upscale would include:

- Code expansion to:
 - Accommodate integration of other data sources,
 - Ensure validation and data quality assurance,
 - Properly route data captured to data consumer or storage;

- Creation/updating of mechanisms to ingest data depending on the data source: application programming interface (API), upload, manual input, messages from text, email, etc;
- Expansion of monitoring and management, including reports generation and health report of assets and system.

In addition, since WMO Information System 2.0 (WIS 2.0) uses public internet (unlike GTS which uses private dedicated links), implementation of WIS 2.0 requires stable high-speed internet connectivity (10 Gigabit or more). This is currently unavailable at the Timor-Leste’s National Directorate of Meteorology and Geophysics (DNMG), which is the national hydrometeorological service in Timor-Leste. Therefore, additional support is required to procure and install reliable power supply (e.g., solar panels) and internet connectivity (e.g., Very Small Aperture Terminal (VSATs)², cable, satellite, towers). This need and the related budget has been identified as a part of the National Framework for Climate Services (NFCS) developed through the UNEP GCF-funded project using a [standard methodology approved by the WMO](#). However, this project only requests a half of the required budget to only accommodate the telecommunications needs that are relevant to GBON.

Type of station	Baseline (Results of the GBON National Gap Analysis)				GBON National Contribution Target	
	Target (# of stations) ¹	GBON-compliant stations (#)	Gap		To improve	New
			New	To improve		
Surface	1	1		1	1	
Upper-air	1	1	1			1
Marine	*when applicable					

Table 1. GBON National Contribution Target

Target easy fixes

One of the main easy fixes would be to upgrade Climate Data Informatics System (to be installed under the GCF-funded project “Enhancing Early Warning Systems to Build Greater Resilience to Hydrometeorological Hazards in Timor-Leste”) to enable data transmission to WIS 2.0. Other easy fixes include continuous support for maintenance and calibration of

¹ For SIDS, for the WMO GBON Global Gap Analysis in January 2022, the EEZ area has been added to the total surface area which is the basis for the target number of stations. The standard density requirements for SIDS have been calculated with 500 km for surface stations and 1000 km for upper-air stations.

² VSAT (Very Small Aperture Terminal) is a two-way satellite ground station with a dish antenna that is smaller than 3.8 meters.

	<p>9 Automated Weather Stations (AWS) installed under the UNEP GCF FP-171 project, which would be critical to ensure the sustainability of the GCF investments as per the sustainability strategy of the UNEP GCF FP-171 project approved by the Board of the Green Climate Fund (GCF) following advice from WMO representatives during the project development stage. Support for maintenance and calibration of 9 AWS would also help to ensure accurate weather and climate forecasting in Timor-Leste in the context of its extreme mountainous topography.</p>
<p>Create leverage</p>	<p>SOFF investments will largely build upon, complement and ensure the sustainability of the GCF-funded project “Enhancing Early Warning Systems to Build Greater Resilience to Hydrometeorological Hazards in Timor-Leste” (2022-2027)” (UNEP GCF FP-171) which aims to comprehensively strengthen climate information and early warning systems in Timor-Leste.</p> <p>For example, UNEP GCF FP-171 provides comprehensive support and training for data transmission to WMO Information System 1.0 (WIS 1.0) / Global Telecommunication System (GTS), as well as significantly enhances the overall ICT infrastructure of DNMG, however, it does not cover the WMO Information System 2.0 (WIS 2.0) component, which is where the SOFF investments could be largely complimentary. WMO Information System 2.0 has been designed to meet the shortfalls of the current WIS and GTS, support the WMO’s Unified Data Policy and the Global Basic Observing Network (GBON), and meet the demand for high data volume, variety, velocity, and veracity. Another significant gap that SOFF funding would be able to fill is upper-air observations, which are not covered under the UNEP GCF FP-171 project. SOFF funding could also largely complement and expand capacity development activities under the GCF-funded project. For example, while UNEP GCF FP-171 project already supports some trainings for operations and maintenance, the SOFF project also needs to support implementation of standard operating procedures for the maintenance of the stations, provide comprehensive trainings on calibration, enhance the entire process of competence building in DNMG, etc. Regarding staffing, one of the key challenges in Timor-Leste is frequent departure of educated and professional people. To avoid that, SOFF support will be requested to support salary payments to 4 meteorological technicians recruited under the GCF-funded project after the project termination to ensure stable working conditions. Finally, SOFF investments are critical to ensure sustainability of the 9 AWS installed under the UNEP GCF FP-171, as per the project’s sustainability strategy developed following the advice from the WMO representatives during and approved by the GCF board.</p>

	<p>In addition to GCF, the Least Developed Countries Fund (LDCF) operated by the GEF also provided support to Timor-Leste to build climate resilience through two closely connected projects. However, those mostly related to constructing climate-resilient infrastructure and engaging communities for building resilience, hence, they are of less relevance to GBON.</p> <p>Timor-Leste is also expected to receive Climate Risk and Early Warning Systems (CREWS) support under the Accelerated Support Window to strengthen disaster risk knowledge based on the systematic collection of data and disaster risk assessment. However, since the core focus of this initiative will be to strengthen data collection on disaster risk losses and strengthen people-centred early warning systems, it will not overlap with SOFF funding.</p>
<p>Maximize delivery capacity</p>	<p>UNEP has strong expertise and experience in supporting climate information and early warning systems in Timor-Leste. It is currently implementing a GCF-funded 5-year project "Enhancing Early Warning Systems to build greater resilience to hydro-meteorological hazards in Timor-Leste" (UNEP GCF FP-171). Through this project, UNEP has established productive and efficient working relations with DNMG, as well as other relevant national stakeholders (Ministry of Agriculture and Fisheries, National Disaster Management Directorate (NDMD) and others). Through the project, UNEP has also engaged and closely worked with a range of technical partners with strong expertise and experience of work in Timor-Leste, which will continue to be involved in the SOFF project (including Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES) and the Agency for Meteorology, Climatology, and Geophysics of the Republic of Indonesia (Badan Meteorologi, Klimatologi, dan Geofisika - BMKG)). SOFF investments will largely build on and complement the existing GCF project implemented by UNEP, maximizing delivery capacity.</p> <p>The peer advisor Finnish Meteorological Institute (FMI) has not been involved in any other projects in Timor-Leste, however, it has a long-lasting and extensive experience in working worldwide in many hydro-meteorological development projects in over 100 countries including small island developing states (SIDS) (e.g. in the Caribbean region (Strengthening Hydrometeorological Operations and Services in Caribbean SIDS II (SHOCS II) and the Pacific region (Finnish-Pacific Project to Reduce Vulnerability of the Pacific Island Countries' livelihoods to the effects of Climate Change - FINPAC)). FMI will continue to be engaged in the Investment Phase as a peer advisor providing a range of services as per the Annex 4. For implementation of SOFF readiness phase FMI has</p>

	<p>sub-contracted BMKG which has extensive experience of providing support to Timor-Leste, including on the basis of the Memorandum of Understanding (MoU) signed in 2016 with Timor-Leste’s Ministry of Public Work, Transport and Communication (under which the DNMG operates). This MoU regulates collaboration between the governments of Indonesia and Timor-Leste regarding consultations on calibration of meteorological and seismological equipment, human resource development, exchange of data and information in the field of meteorology, climatology and geophysics.³ BMKG will continue to be engaged in the Investment Phase as a technical partner.</p>
<p>Sub-regional gains</p>	<p>Sub-regional collaboration plays an important role for DNMG. Timor-Leste largely benefits from climate services provided by the neighbouring countries (including maritime forecasts, earthquake information and impact-based forecasts from BMKG; tropical cyclone advisory from Australian Bureau of Meteorology (BoM), etc). BMKG is providing multiple trainings to DNMG (including through the UNEP GCF FP-171 project), while BoM is responsible for provision of services for aviation. Existence of GBON-compliant stations in Indonesia and Australia also supports the DNMG’s activities. Still, there are many more opportunities of sub-regional collaboration which could be leveraged with the SOFF support.</p> <p>1. Improved data sharing</p> <p>Currently Timor-Leste does not share any data internationally due to the lack of appropriate policies and infrastructure. UNEP GCF FP-171 will facilitate global data sharing through WIS/GTS, and the SOFF project will ensure that data is sent to WIS2.0. However, with SOFF support, data sharing could also be improved at the regional level. For example, if there is interest from other countries in the region, SOFF could support convening regional meetings and workshops which could facilitate bilateral and multilateral data sharing agreements.</p> <p>2. Upper-air radio sounding</p> <p>SOFF will facilitate installation of the first radio-sounding system in Timor-Leste. This means that sharing experience and expertise with peers such as BMKG will be very important and strongly recommended during the investment phase. SOFF support would be required to facilitate relevant capacity building activities, including benchmarking and developing an</p>

³ <https://bmkg.go.id/berita/?p=penandatanganan-mou-antara-timor-leste-dan-indonesia&lang=ID&>tag=international-activities>

	<p>observation process of upper-air sounding, basic training on the upper-air system operations and maintenance, etc.</p> <p>3. Calibration support from BMKG</p> <p>In 2016, Timor-Leste’s Ministry of Public Work, Transport and Communication (under which DNMG operates) signed a Memorandum of Understanding (MoU) with BMKG, which regulates collaboration between the two countries on calibration of meteorological equipment, human resource development, as well as exchange of data and information about meteorology, climatology and geophysics.⁴ Furthermore, as an established WMO Regional Training Centre, BMKG also delivers training and capacity building in meteorology, hydrology and related sciences to fulfil the needs of the RA II (Asia) and RA V (South-West Pacific) regions.</p> <p>Due to the low overall capacity of DNMG, at this stage it is not recommended for DNMG to construct its own calibration lab. Instead, in line with the MoU mentioned above, it is recommended that BMKG calibrates surface stations in Timor-Leste using field calibration kits procured under the GCF-funded project and further supported by SOFF funds. This equipment, in its turn, should be regularly recalibrated at the BMKG facilities in Indonesia.</p> <p>Furthermore, BMKG will provide comprehensive trainings on calibration to DNMG staff to ensure that DNMG can carry out calibration more independently and sustainably in the future. In the future, construction of a separate calibration laboratory can also be explored in Timor-Leste.</p>
--	--

3. Readiness and Country context (1 page)

	<p>SOFF Beneficiary Country Capacity Assessment</p> <p>According to the Country Hydromet Diagnostic (Annex 3), the overall capacity of the National Directorate of Meteorology and Geophysics of Timor-Leste (DNMG) averaged across 10 elements ranks between 1 and 2 (out of 5), which is quite low. While UNEP GCF FP-171 focused on enhancing the overall capacity of Timor-Leste for climate information and early warning systems to build climate resilience, SOFF support is critical to address several gaps and needs in DNMG preventing GBON compliance in the long term.</p>
--	--

⁴ <https://bmkg.go.id/berita/?p=penandatanganan-mou-antara-timor-leste-dan-indonesia&lang=ID&>tag=international-activities>

First, the institute requires middle and long-term strategic planning to finance and develop its activities and services. For this, managerial personnel need specific training on strategic planning, as well as mid-and long-term financial planning.

Second, there is a shortage of technical staff in DNMG. There are not enough ICT experts to maintain the data network and enable data transmission to WIS2.0. In addition, 4 meteorological technicians recruited under the GCF-funded project have short-term contracts, which need to be extended to ensure motivation of staff as well as to reduce the turnover rate of staff. Finally, since Timor-Leste is new to upper-air observations, there is a need to recruit dedicated staff for its maintenance. Stable work conditions and fair salaries for the institute's employees need to be secured to avoid staff departing from DNMG. Therefore, SOFF support is requested to: (1) maintain salaries for 4 technicians recruited under the GCF project, (2) recruit one dedicated expert for upper-air observations and maintenance (3) recruit 3 ICT staff with different qualifications and responsibilities (as outlined in the GBON National Contribution Plan). There is also a need for substantial technical capacity building activities, especially related to operations and maintenance of surface and upper-air stations, calibration, data collection and management, and WIS2.0.

Furthermore, DNMG currently does not have any data policy, which prevents internal data sharing and the usage of weather and data by the national stakeholders. For data provision, different institutes in Timor-Leste signed an MoU for cooperation, however, this has demonstrated to be inefficient and has not guaranteed cooperation. Therefore, SOFF support is requested to develop proper data-sharing policies to promote internal cooperation and data sharing between the different stakeholders. SOFF support could also facilitate data sharing agreements at the regional level.

Finally, SOFF support would be requested to strengthen engagement of the private sector and CSOs in climate services. This could be achieved through maintaining the National Climate Outlook Forum (NCOF) established through the UNEP GCF FP-171 to (1) provide a facilitated forum for DNMG to obtain feedback on how effectively its products and services are meeting the needs of user communities, (2) build dialogue between climate service users (including government agencies, NGOs, private sector representatives, civil society organisations, women's groups and community representatives) and technical institutions responsible for the observation, reach and information system pillars of the National Framework for Climate Services (NFCS) – in particular, DNMG, (3) support improved climate literacy in the user community and literacy of the climate community in user needs, (4) provide a mechanism to monitor and evaluate the development, delivery and effectiveness of climate services in Timor-Leste to ensure that products and services meet the needs of stakeholders.

Investment Phase Alignment with the GBON National Contribution Plan

- Upon further consultations with the DNMG it has been agreed that SOFF support is requested to maintain positions of 4 meteorological technicians recruited under the GCF project rather than 2 ICT experts as mentioned in the NCP.

4. Investment Phase Outputs and Budget

The GBON National Contribution Plan provides detailed information on the Investment Phase Outputs (please see Annex 1).

Output 1. GBON institutional and human capacity developed	Main activities	Budget (USD)
1.1 National consultations including with CSOs, and other relevant stakeholders conducted	<ul style="list-style-type: none"> • Face-to-face inception workshop followed by subsequent stakeholder engagement workshops on the implementation of the SOFF project deliverables • Organising high-level and end user-level engagement events to support SOFF implementation and operation in Timor-Leste • Organizing awareness raising activities for the community, i.a. to prevent vandalism • Maintaining the yearly National Climate Outlook Forum (NCOF) • Conducting private sector engagement/consultations that focus on the sector-specific products/services that DNMG could provide and the potential for private sector investments 	281,920
	<ul style="list-style-type: none"> • Conducting gender workshops to strengthen gender equality in governance, strategy, programmes, and decision making, and facilitate grounds for developing gender policy 	Peer advisor's budget (FMI)
1.2 NMHS institutional capacity required to operate the GBON network developed	<ul style="list-style-type: none"> • Capacity assessment of DNMG as the Executing Entity by the Implementing Entity • Drafting a data policy to strengthen cooperation and data sharing between DNMG and other stakeholders in Timor-Leste • Regional engagement with the neighbouring countries, including to improve data sharing at the regional level 	363,200
1.3 NMHS human capacity required to operate the GBON network developed	<ul style="list-style-type: none"> • Enhancing competence-building process in DNMG • Technical support in radiosounding tender • Technical support in IT hardware tender • Benchmarking portfolio and project management and coordination 	Peer advisor's budget (FMI)
	<ul style="list-style-type: none"> • Maintaining salaries of 4 meteorological technicians for maintenance of the surface stations 	1,612,850

	<ul style="list-style-type: none"> • Recruiting 1 meteorological technician for maintenance of the upper-air station • Recruiting 3 ICT experts • Conducting WIS2.0 training and basic programming training throughout the value chain of observation • Strengthening capacity for data collection, quality control, processing and data sharing • Benchmarking and developing an observation process of upper-air sounding • Benchmarking good practices on archiving, transfer, and QC/QA, and subsequent SOPs; developing a roadmap for QC/QA methods • Training on upper-air system (basic level) and surface weather station (advanced/supplementing) operation and maintenance • Trainings on calibration of the equipment for DNMG staff • Trainings on the IT system, especially for the new ICT staff • Project management 	
Output 2. GBON infrastructure in place	Main activities	Budget (USD)
2.1 New land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place	-	
2.2 Improved land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place	<ul style="list-style-type: none"> • Site preparation and upgrade of 1 AWS • Installation of WIS2.0 in a Box and upscaling data ingestion module of Climate Data Informatics System • Procurement and installation of ICT hardware and infrastructure, including storage capacity for WIS2.0 node • Provision of reliable power supply (e.g., solar panels) and internet connectivity (e.g., VSATs, cable, satellite, towers) 	630,150
2.3 New upper-air stations and related equipment, ICT systems, data management systems and standard operating practices in place	<ul style="list-style-type: none"> • Procurement and installation of one fully automatic upper-air measurement system including ground receiving system, Uninterruptible Power Supply (UPS), hydrogen generator, and consumables for one year (the balloon will be launched twice a day). 	1,083,491

	<ul style="list-style-type: none"> Building required civil infrastructure (e.g., connection to electricity, shelter for hydrogen bottles, room for balloon filling and platform for ground system). 	
2.4 Improved upper-air stations, related equipment, ICT systems, data management systems and standard operating practices in place	-	
Outcome: Sustained compliance with GBON	Main activities	Budget (USD)
3.1 GBON land-based stations' commissioning period completed , country-specific standard cost for operations and maintenance established, and data sharing verified by WMO Technical Authority	<ul style="list-style-type: none"> Spare parts and sensors for the AWS network Maintenance of the AWS network Yearly calibration of the AWS network Yearly recalibration of the calibration equipment 	447,320
3.2 GBON upper air stations' commissioning period completed , country-specific standard cost for operations and maintenance established, and data sharing verified by WMO Technical Authority	<ul style="list-style-type: none"> Automatic upper-air measurement system consumables and maintenance of the upper-air sounding station Vehicle for maintenance of the network 	594,800
Total for all Outputs		5,013,731
Implementing Entity Fee⁵		350,961.17
SOFF peer advisory services	FMI peer advisory (Annex 4)	366,402
Total funding request		5,731,094.17

Budget breakdown by UNDG category	USD
--	------------

⁵ The implementation fee cannot exceed 7% of the total Investment Phase funding request.

(Excluding SOFF peer advisory services)⁶	
Staff and personnel costs	421,200
Supplies, Commodities and Materials	0
Equipment, Vehicles, Furniture and Depreciation	0
Contractual Services Expenses	0
Travel	240,000
Transfers and Grants	4,352,531
General Operating Costs	

⁶ The total budget (excluding the budget for the SOFF peer advisory services) is expected to be disaggregated by UNDG category. It includes direct and indirect costs of the Implementing Entity and beneficiary countries to establish a fully operational observation network, collecting and internationally exchanging data according to GBON requirements. Eligible expenditures are any type of expenditure required to implement the GBON National Contribution Plan, including the requirements of the beneficiary country to manage and administer the day-to-day activities of the Investment Phase. It also includes the budget required for the operation and maintenance of the observing network.

5. Investment Phase Implementation Arrangements

Execution model and implementation arrangements	<p>UNEP will be the Implementing Entity for the Project and will be responsible for the implementation, financial management, evaluation, reporting and closure of the activities under the Project. UNEP will monitor and supervise the execution of the Project and ensure the proper management and application of SOFF Grant Proceeds. UNEP will ensure that the Grant Proceeds are utilised in accordance with the terms of the current Funding Request and that procurement is carried out according to relevant UN principles: a. Best Value for Money; b. Fairness, integrity, and transparency; c. Effective international competition; d. The interest of the UN.⁷</p> <p>UNEP will deploy a hybrid executing model comprising a National Executing Entity and, at the request of the SOFF Beneficiary Country focal point, limited Executing Entity functions by UNEP itself. Through its partnership with United Nations Office for Project Services (UNOPS), UNEP is able to operate at the country level without necessarily having a national office. The UNEP-UNOPS Agreement typically covers the provision of HR and procurement services. UNEP will execute the Project in line with its programme manual and standard business procedures. As a part of its executing functions, UNEP will contract Technical Partner organizations to undertake relevant activities as appropriate. The engagement of Technical Partners with a proven track record in supporting Timor-Leste will contribute to effectiveness, coordination, and sustainability of outcomes.</p> <p>The National Directorate of Meteorology and Geophysics (DNMG) will serve as the national Executing Entity (EE). The DNMG will be accountable to UNEP as IE for Project execution at the national level and for the effective and efficient use of resources. UNEP will enter into an appropriate agreement (Project Cooperation Agreement) with the DNMG for the execution of the Project. The Project Cooperation Agreement (PCA) will establish clear roles and responsibilities for the delivery of the proposed activities, and the schedule and conditions for instalments, the determination of the prevailing fiduciary standards and the terms and conditions for arbitrations and termination of contract. The PCA will include specific obligations for the national EE on Project execution, financial management, personnel administration and reporting, as well as arbitration and liability terms.</p>
--	--

⁷ <https://www.un.org/Depts/ptd/sites/www.un.org.Depts.ptd/files/files/attachment/page/pdf/pm.pdf>

	<p>Upon further consultations with DNMG, UNEP in its executing role could engage relevant Technical Partner agencies to conduct activities such as trainings. These might include the Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES), the Timor-Leste Red Cross, Agency for Meteorology, Climatology, and Geophysics of the Republic of Indonesia (Badan Meteorologi, Klimatologi, dan Geofisika – BMKG) and others. The peer advisor Finnish Meteorological Institute (FMI) will also continue to be engaged. These partners are highly qualified, internationally recognised professional agencies with many years' experience of partnership in the Asia-Pacific region.</p>
<p>Private sector involvement</p>	<p>Currently private sector engagement in climate services in Timor-Leste is quite low. UNEP GCF FP-171 project contains several interventions that will emphasise and support private sector mobilisation. The project establishes the National Framework for Climate Services (NFCS) which aims to coordinate, facilitate and strengthen collaboration among national institutions for enhanced use of climate information and provision of climate services in Timor-Leste. National Climate Outlook Forum (NCOF) as a part of the NFCS will aim to strengthen dialogue and widen partnerships between the public and private sector, thereby creating an enabling environment for public-private collaboration and mutually beneficial cost-recovery mechanisms. The project will also identify opportunities for specialised climate information and early warning products with commercial value to catalyse private sector interest. Moreover, the project will establish a new financial framework and business model for sustainable climate services which will scope viable opportunities for sectors and business segments to utilise the strengthened climate services and identify opportunities to develop value-added climate products and services; and potential for public-private partnerships and private investment in climate services. In developing the framework, the project will identify suitable revenue streams and effective strategies to incentivise and mobilise private sector resources.</p> <p>SOFF investments could play a critical role in ensuring sustainability of GCF funding aimed at enhancing private sector engagement in climate services in Timor-Leste, as well as expanding it further. More specifically, SOFF support would be needed to:</p> <ul style="list-style-type: none"> • Maintain the yearly National Climate Outlook Forums (NCOF) after the termination of the GCF project to support private sector engagement;

	<ul style="list-style-type: none"> Facilitate private sector consultations that focus on what sector-specific products/services DNMG could provide if sufficient observations data was available, with the aim of looking at where the private sector might wish to invest to fill data gaps. <p>Nevertheless, even though there is an aim to spur private sector interest in the climate information products, cost-recovery strategies involving private sector are still not considered feasible, therefore it is recommended that Timor-Leste maintains fully public business model.</p>
<p>Civil society participation</p>	<p>Multiple efforts are held under the UNEP GCF FP-171 to engage civil society organisations in the provision of early warning services relating to climate change, e.g. as a part of the National Climate Outlook Forum (NCOF). Therefore, through maintaining the NCOF, SOFF investments will facilitate not only private sector but also civil society engagement.</p> <p>In addition to that, the following activities will be undertaken to ensure that the CSOs are regularly consulted during the entire length of the programme cycle:</p> <ul style="list-style-type: none"> Conducting stakeholder engagement workshops on the implementation of the SOFF project deliverables engaging, where possible, local civil society organisations (CSOs) and ensuring that the stakeholders are consulted on operations and maintenance. Organising awareness-raising activities for the community (for example, by engaging the Red Cross), i.a. to prevent vandalism. Organising high level dialogues on benefits, co-production, and ownership of the new national GBON infrastructure. <p>The project will also aim to strengthen gender balance in climate services in Timor-Leste through the following gender-related targets:</p> <ul style="list-style-type: none"> Stakeholders' engagement activities that involve CSOs will target 49% female participation (based on the World Bank data, as of 2022, women constituted 49% of the population of Timor-Leste), Women should represent at least 20 % of all participants in SOFF-related and supported training events.
<p>Fiduciary systems</p>	<p>The financial management and procurement within the Project will be guided by the UN financial regulations, rules and practices, as well as UNEP's Project manual. The financial rules of UNEP, which follow International Public Sector Accounting Standards (IPSAS), are promulgated pursuant to the Financial Regulations and Rules of the UN.</p>

	<p>Within this context, funding allocation mechanisms are managed in accordance with the UN rules and procedures, including eligibility criteria, proposal evaluation processes, quality assurance and control, project monitoring and supervision. UNEP is audited annually by the UN Board of Auditors. UN financial regulations and rules require the segregation of duties, and safeguards to ensure compliance with UN financial rules and regulations.</p> <p>Through its Global Support Services Agreement with UNOPs, UNEP is able to operate at the country level without necessarily having a national office. This Agreement covers the provision of HR and procurement services.</p> <p>Generally, UNEP’s modality for project implementation results in funds being transferred in tranches to the Executing Entities (EEs) and Technical Partners (TPs) once they have satisfied the conditions that are defined under the legal instrument (Project Cooperation Agreement(s): PCAs to be signed between UNEP and the EEs/TPs. The PCAs will include specific obligations on financial management, reporting and procurement, and will require periodic reporting from the EEs/TPs. The National Directorate of Meteorology and Geophysics (DNMG) under the Ministry of Transport and Communication, as the national EE follows the Government of Timor-Leste’s financial and procurement rules. Similarly, Technical Partners and the Peer Advisor supporting execution in Timor-Leste (including e.g., RIMES, BMKG and FMI), are subject to financial and procurement policies of their governments/Member States.</p>
<p>Social and environmental safeguards</p>	<p>Project activities are subject to national and international law, as well as UNEP’s Environmental and Social Safeguard Principles and Standards in accordance with the UNEP Environmental and Social Sustainability Framework (ESSF). The UNEP Environmental and Social Sustainability Framework (ESSF)⁸ was approved in February 2020 and has an overall aim to strengthen the sustainability and accountability of UNEP programmes and projects. The framework identifies UNEP’s commitment to sustainable development and environmental and social standards that are designed to promote human well-being and the protection of the environment. The framework identifies the following purposes:</p> <ul style="list-style-type: none"> • To enhance outcomes by systematically integrating environmental, social and economic dimensions in the UNEP-funded programmes and projects.

⁸ UNEP Environmental and Social Sustainability Framework (2020); Available at: <https://wedocs.unep.org/bitstream/handle/20.500.11822/32022/ESSFEN.pdf?sequence=1&isAllowed=y>

- To strengthen alignment of UNEP’s work with the SDGs and other UN entities and partners in addressing the environmental and social sustainability of development efforts.
- To set standards of sustainability for UNEP’s operations thereby confirming UNEP’s accountability to its member States, and other funders.
- To enable UNEP to work in a safer and smarter manner, thereby minimizing potential risks and harm to intended beneficiaries while enhancing UNEP’s capabilities and credibility.

The framework is structured around guiding principles, safeguard standards and related operational modalities. The guiding principles of the framework are derived from the 2030 Agenda for Sustainable Development and include the following: Leave No One Behind, Human Rights and Gender Equality and Women’s Empowerment, Sustainability and Resilience and Accountability.

The safeguard standards of the framework include the following:

- Safeguard Standard 1: Biodiversity, Ecosystems and Sustainable Natural Resource Management
- Safeguard Standard 2: Climate Change and Disaster Risks
- Safeguard Standard 3: Pollution Prevention and Resource Efficiency
- Safeguard Standard 4: Community Health, Safety and Security
- Safeguard Standard 5: Cultural Heritage
- Safeguard Standard 6: Displacement and Involuntary Resettlement
- Safeguard Standard 7: Indigenous Peoples
- Safeguard Standard 8: Labour and Working Conditions

The following sections set out the overarching approach UNEP will take to operationalize this Framework: a) screening, assessment, management and monitoring of environmental and social risks; and b) steps for ensuring meaningful stakeholder engagement and accountability. To screen projects, UNEP utilizes the Safeguard Risk Identification Form (SRIF). The form is used to identify any potential environmental and social risks and impacts associated with the proposed activities, and to identify opportunities to support other positive changes to the environment and society.

	<p>UNEP’s Gender Equality and Environment policy recognizes the role of gender equality as a ‘driver of sustainable environmental development.’⁹ As the lead organization to coordinate environmental matters within the United Nations System, UNEP has the responsibility to drive the achievement of the System’s gender equality mandate in its environmental assessments and analyses, norms, guidelines and methods, for use by stakeholders looking for guidance on how to effectively manage the environment for their sustainable development and economic growth. To that end, UNEP has sought to formalize and bolster agency-wide gender mainstreaming efforts and has the expertise and personnel to support the analytical underpinning of project-level gender mainstreaming during implementation.</p>
<p>Dispute resolution mechanism</p>	<p>As a part of the UNEP’s ESS Framework, stakeholders who may be adversely affected by the project can communicate their concerns about the environmental and social performance of the project to UNEP. The Grievance Redress Mechanism has been designed to the extent possible according to the effectiveness criteria for non-judicial grievance mechanisms outlined in the UN Guiding Principles on Business and Human Rights.</p> <p>UNEP’s Stakeholder Response Mechanism (SRM) is established through the Independent Office for Stakeholder Safeguard-related Response (IOSSR).¹⁰ The IOSSR serves two functions:</p> <ol style="list-style-type: none"> 1. <u>Compliance Review</u>: processes for responding to claims by Stakeholders alleging that UNEP activities are not in compliance with the ESS Framework; 2. <u>Grievance Redress</u>: provides access to dispute resolution mechanisms used to address project-related disputes that relate to UNEP’s activities. <p>The IOSSR is responsible for the SRM, and thus carries out the following responsibilities:</p> <ul style="list-style-type: none"> • Receives and screens complaints for eligibility; • Maintains a roster of accredited independent experts related to compliance review and dispute resolution;

⁹ UN Environment (2015). “Gender Equality and the Environment: Policy and Strategy”. https://wedocs.unep.org/bitstream/handle/20.500.11822/7655/Gender_equality_and_the_environment_Policy_and_strategy-2015Gender_equality_and_the_environment_policy_and_strategy.pdf.pdf?sequence=3&isAllowed=y

¹⁰ UNEP’s Environmental and Social Sustainability: Stakeholder Response Mechanism (2020), Available at: <https://wedocs.unep.org/bitstream/handle/20.500.11822/32023/ESSFRM.pdf>

	<ul style="list-style-type: none"> • Develops the appropriate TOR for facilitating the compliance review or dispute resolution; • Manages and oversees all experts engaged in compliance review and dispute resolution; • Maintains the IOSSR website that provides the public with access to all relevant documents related to compliance review and dispute resolution; • Issues reports to the UNEP Executive Director with findings and recommendations for compliance reviews, and outcomes for dispute resolution processes; • Monitors the implementation of decisions related to compliance review and grievance redress; • Reports on the IOSSR operations and provides advice based on lessons learned; • Conducts outreach to Stakeholders regarding the IOSSR; • Seeks to minimise risks of retaliation to complainants. <p>Complaints can be filed to the Stakeholder Response Mechanism through the online project concern form, email or mail to the following address:</p> <p style="text-align: center;">Independent Office for Stakeholder Safeguard-related Response (IOSSR) & Director of Corporate Service Division United Nations Environment Programme Nairobi, Kenya Email: unenvironment-IOSSR@un.org</p> <p>Details are available in the UNEP's SRM Operating Procedures.</p>
<p>Additional relevant policies and procedures</p>	<p>As part of the Secretariat, UNEP follows UN policies, rules and regulations.</p>

6. Investment Phase Monitoring and Reporting

The implementing entity, with the support of the peer advisor, is expected to monitor the implementation of the Investment Phase following an output-based approach. The Investment Phase outputs as well as respective indicators and targets are presented below.

Output 1. GBON institutional and human capacity developed	Indicator	Target Y1	Target Y2	Target Y3	Target Y4	Target Y5
1.1 National consultations including with CSOs, and other relevant stakeholders conducted	Number of stakeholder engagement workshops	1	1	1	1	1
	Percentage of female participants	49	49	49	49	49
	Number of National Climate Outlook Forums (NCOF) held			1	1	1
	Data sharing policy developed		x			
1.3 NMHS human capacity required to operate the GBON network developed	Number of technical staff paid by the project	4	4	8	8	8
	Number of technical trainings conducted	2	2	2	2	2
	Percentage of female participants in technical trainings	20	20	20	20	20
Output 2. GBON infrastructure in place	Indicator	Target Y1	Target Y2	Target Y3	Target Y4	Target Y5
2.1 New land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place	# stations as per the GBON National Contribution Plan	-	-	-	-	-
2.2 Improved land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place	# stations as per the GBON National Contribution Plan			1		

	WIS2.0-in-a-Box set up		x			
2.3 New upper-air stations and related equipment, ICT systems, data management systems and standard operating practices in place	# stations as per the GBON National Contribution Plan			1		
2.4 Improved upper-air stations, related equipment, ICT systems, data management systems and standard operating practices in place	# stations as per the GBON National Contribution Plan	-	-	-	-	-
Outcome: Sustained compliance with GBON	Indicator	Target Y1	Target Y2	Target Y3	Target Y4	Target Y5
3.1 GBON land-based stations' commissioning period ¹¹ completed, country-specific standard cost for operations and maintenance established, and data sharing verified by WMO Technical Authority	# stations as per the GBON National Contribution Plan					10
3.2 GBON upper air stations' commissioning period completed, country-specific standard cost for operations and maintenance established, and data sharing verified by WMO Technical Authority	# stations as per the GBON National Contribution Plan					1

¹¹ The commissioning period is the last year of the Investment Phase. The beneficiary country, supported by the Implementing Entity, must demonstrate the sustained operation of all the SOFF-supported stations according to the GBON compliance.

The implementing entity is expected to report on progress as described below.

- **Quarterly updates** to the SOFF Secretariat: A simple standardized form providing a progress update against the Investment Phase Outputs' indicators (and Outcome, where applicable¹²) and flagging major issues that are delaying implementation, if any.
- **Annual narrative and financial reports** according to the UNMPTF reporting requirements indicated in the legal agreements. The annual narrative report reports on progress on the delivery of the Investment Phase Outputs, measured by the Investment Phase Indicators. It includes also a review of the Investment Phase risks and an update on environmental and social safeguards, including gender.
- **Final narrative and financial reports** according to the UNMPTF reporting requirements indicated in the legal agreements. The final narrative report confirms the completion of all the activities and report on the number of stations that have completed the commissioning period (outcome). The WMO technical authority verifies GBON compliance of the indicated stations and provides a verification report to the SOFF Secretariat. Upon WMO verification, the Investment Phase can be considered completed. The Final Report should describe the Investment Phase results achieved and lessons learned; and it should also specify the long-term institutional arrangements to secure sustained GBON compliance with SOFF Compliance Phase support.

¹² The quarterly reports should also include, when applicable, progress achieved in terms of new or rehabilitated stations that have become operational and are already sharing the data into the WIS 2.0 system as confirmed through the WIGOS Data Quality Monitoring System (WDQMS) web tool.

7. Investment Phase Risk Management Framework

The Investment Phase Risk Management Framework should be based on the [SOFF Risk Management Framework](#), incorporating relevant programmatic risks and including additional country-specific risks. Please follow the [methodology established by the Multi-Partner Trust Fund Office \(MPTFO\)](#) presented below.

		Impact				
		Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Extreme (5)
Likelihood	Very Likely (5)	Medium (5)	High (10)	High (15)	Very High (20)	Very High (25)
	Likely (4)	Medium (4)	Medium (8)	High (12)	High (16)	Very High (20)
	Possible (3)	Low (3)	Medium (6)	High (9)	High (12)	High (15)
	Unlikely (2)	Low (2)	Low (4)	Medium (6)	Medium (8)	High (10)
	Rare (1)	Low (1)	Low (2)	Medium (3)	Medium (4)	High (5)

Risk	Risk level	Likelihood	Impact	Risk Mitigation Measures
Non-compliance with fiduciary and procurement standards in some SOFF activities	Medium	Rare	Major	UNEP will undertake an assessment of the financial management capacity of the national Executing Entity (EE) to identify risk elements and to prepare appropriate mitigation measures, including ongoing capacity development support by UNEP. UNEP will also

				<p>closely monitor the financial management of the Project using the established Monitoring and Evaluation procedure and financial reporting mechanism, including an annual audit; and establish internal controls for the Project and project fund management. The Project Cooperation Agreements (PCAs) between UNEP and the national EE and Technical Partners will include warranties and caveats by the EE to inter alia ensure compliance with the Anti-Fraud and Anti-Corruption Framework of the United Nations Secretariat.</p>
<p>SOFF-funded investments cause environmental or social impacts</p>	<p>Medium</p>	<p>Unlikely</p>	<p>Moderate</p>	<p>The potential impacts are likely to be very limited in terms of magnitude and easily avoided by proactive planning. Many of the project activities are related to capacity</p>

				<p>building and training, which are inherently low-impact activities. While the activities related to infrastructure development and installation of new observation equipment will require low-level monitoring, management of environmental and social risks will be a matter of following industry best practice. As a mitigation measure, it is recommended that all contractors involved are made aware of their environmental and social responsibilities, and that professional oversight is engaged where necessary in order to ensure that those responsibilities are upheld.</p>
NMHS staff depart after being trained	High	Possible	Major	To mitigate the risk of the staff departing, the Investment Phase

				will work on providing additional incentives for the staff including regular opportunities for regional trainings and workshops. It is recommended that the Compliance phase includes budget to cover salaries for the new staff, as well as to cover participation in some of the trainings and workshops which would contribute to the staff wellbeing.
Slow implementation and delays in procurement, installation and capacity building activities	Low	Unlikely	Minor	Seamless collaboration between the Implementing Entity, peer advisor, beneficiary country and technical partners will help to ensure that the project activities are executed without any delays.
After the conclusion of the Investment phase, GBON data	Medium	Rare	Moderate	The Investment Phase will include budget operations

<p>are not collected or shared or are shared of insufficient quality</p>				<p>and maintenance of the equipment to ensure that GBON Infrastructure has been installed and internationally exchanges data. This will also help in smooth transition to the compliance phase. After this the country will receive SOFF support in the compliance phase which will help to ensure that all the equipment is properly functioning and sharing data. In addition, trainings held during the Investment Phase will help to ensure that the beneficiary country has the capacity to manage quality of the data.</p>
<p>Destruction or theft of SOFF-financed equipment and infrastructure</p>	<p>Medium</p>	<p>Unlikely</p>	<p>Moderate</p>	<p>The Investment Phase will ensure that all the observation sites will be fenced and guarded to minimize the risk of theft. However,</p>

			<p>given that Timor-Leste is very vulnerable to the impacts of climate change and might be subject to climate-related disasters, there is a risk that the equipment will be destroyed by a natural hazard. The project will support Standard Operating Procedures (SOPs) for equipment, including early action protocols in case of climate-related hazards. Mitigation measures will be taken as a part of site preparation. The budget for the GBON equipment procurement will also cover additional equipment needed to safeguard against the climate-related hazards to the extent possible (e.g. lightning rod). DNMG will be responsible for keeping the stations operational, but</p>
--	--	--	--

				during the tropical cyclones, all the systems will be down.
Countries cannot make optimal use of data, including accessing or using improved forecasts products from the Global Producing Centers throughout the hydromet value chain	Medium	Unlikely	Moderate	To mitigate the risk, it is proposed that the Investment Phase includes extensive and comprehensive training for the DNMG staff from the peer advisor and technical partners, including on observations, data management, data processing and impact-based forecasting. This will help to ensure that the country has enough capacity to make the optimal use of data, including accessing or using improved forecasts products from the Global Producing Centers throughout the hydromet value chain.

Annex 1: National Gap Analysis

The National Gap Analysis for Timor-Leste is available here: <https://www.un-soff.org/wp-content/uploads/2024/05/Timor-Leste-GBON-National-Gap-Analysis.pdf>

Annex 2: National Contribution Plan

The National Contribution Plan for Timor-Leste is available here: <https://www.un-soff.org/wp-content/uploads/2024/05/Timor-Leste-GBON-National-Contribution-Plan.pdf>

Annex 3: Country Hydromet Diagnostics

The Country Hydromet Diagnostics for Timor-Leste is available here: https://www.unsoff.org/wp-content/uploads/2023/12/TImor_Leste-CHD.pdf

Annex 4: Terms of Reference for the provision of technical advisory services during the SOFF Investment Phase

1. Purpose and scope

These Terms of Reference describe the provision of technical advisory services by FMI to Timor-Leste to contribute to the delivery of the SOFF Investment Phase outputs as described in Section 3.

The Terms of Reference are based on the [SOFF Operational Manual](#), Section 4.4.3 on the Operational Partners and Section 4.5.2 on the Investment Phase; as well as on the [SOFF Investment Framework](#), Section 4.5 on the Peer Advisors and WMO Technical Authority.

2. Roles and responsibilities

Beneficiary country National Meteorological and Hydrological Service

- Is responsible for implementing the activities of the SOFF Investment Phase activities with the support of the Implementing Entity and the peer advisor.
- Submits the SOFF Investment Phase funding request using the standardized template provided by the SOFF Secretariat, including the Terms of References for the peer advisor's technical advisory services during the Investment Phase.
- Is responsible for collaborating with the Implementing Entity to provide all the necessary information, participate in and facilitate the national activities that the Implementing Entity and peer advisor need to conduct in order to deliver the SOFF Investment Phase outputs.
- Confirms the completion of all the Investment Phase activities and provides comments as needed on the final report prepared by the Implementing Entity.

Peer advisor

- Is accountable to the beneficiary country and the Implementing Entity.
- Is contracted via the WMO pass-through mechanism and operates on a cost-recovery basis.
- Provides technical advisory services to support beneficiary countries and Implementing Entities in the design and implementation of the SOFF Investment Phase activities.
- Contributes to the final report of the SOFF Investment Phase.

Implementing Entity

- Prepares the Investment Phase funding request in collaboration with the beneficiary country and the peer advisor, including the Terms of References for the provision of technical advisory services during the SOFF Investment Phase.
- Manages the Investment Phase activities following the terms specified in the funding request and in collaboration with relevant national partners, including civil society organizations.

- Delivers the Investment phase outputs and is responsible for their quality and timely delivery, in coordination with the country and the peer advisor.
- Provides quarterly updates to the SOFF Secretariat according to a simple standardized form and annual reports according to the United Nations Multi-Partner Trust Fund Office's reporting requirements indicated in the legal agreements.
- Informs the SOFF Secretariat of circumstances that could materially impede the implementation of the Investment phase or any considerable deviation in the conditions of the funding request to achieve its objectives.
- Submits the final report to the SOFF Secretariat including the beneficiary country's comments and the peer advisors' feedback. The final report describes the institutional arrangements to secure sustained operation and maintenance of the investments made.

WMO Technical Authority

- Provides basic on-demand technical assistance to the beneficiary country, Implementing Entity and peer advisor on GBON regulations, including on monitoring and assessing the data-sharing status of the stations using the WDQMS web tool¹³
- Is responsible for the verification of data sharing of the new or rehabilitated surface and upper -air stations as per GBON regulations.
- WMO provides a verification report to the SOFF Secretariat, upon which the Investment Phase can be considered completed.
- Establishes and administers the pass-through mechanism for contracting and funding of the advisory services provided by the peer advisors.

SOFF Secretariat

- Facilitates communication, coordination and collaboration between the beneficiary country, the Implementing Entity, the peer advisor and WMO Technical Authority.
- Reviews the SOFF Investment Phase funding request, including the Terms of Reference for the provision of technical advisory services and provides feedback as needed. Then transmits the funding request to the SOFF Steering Committee for their decision.
- Compiles quarterly updates and annual reports and monitors implementation based on information received from the Implementing entity, the peer advisor and the beneficiary country. Regularly informs the Steering Committee of progress.
- Coordinates regional implementation approaches to the SOFF Investment Phase.
- Confirms receipt of the final report by the Implementing Entity and completion of the Investment Phase based on WMO verification of data sharing.
- Organizes exchange of knowledge and experiences and captures lessons learned.

¹³ The WDQMS web tool monitors the availability and quality of observational data based on near -real-time information from the four participating global Numerical Weather Prediction centres: the German Weather Service (DWD), the European Centre for Medium range Weather Forecasts (ECMWF), the Japan Meteorological Agency (JMA) and the United States National Centers for Environmental Prediction (NCEP). These are four of the ten World Meteorological Centres, designated by WMO to provide global numerical weather prediction products for all WMO Members.

3. Peer advisors' activities during the SOFF Investment Phase

Finnish Meteorological Institute (FMI) as the peer advisor will engage in a number of activities throughout the investment phase as listed below:

- Enhancing competence-building process in DNMG
- Technical support in radiosounding tender
- Technical support in IT hardware tender
- Benchmark portfolio and project management and coordination
- Gender workshop for Meteo staff