UN Multi-Partner Trust Fund Office

General Information

Fund	MPTF_00281: The Systematic Observations Financing Facility
FMP Record	SOFF Seychelles Investment Phase
MPTFO Project Id	
Start Date	2027
End Date	2031

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Description

The Systematic Observations Financing Facility (SOFF) initiative is supporting the Seychelles Meteorological Authority (SMA), with the World Bank as SOFF Implementing Entity and the South African Weather Service (SAWS) as SOFF Peer Advisor, to strengthen the Republic of Seychelles' meteorological observation capabilities. Building on the National GBON Gap Analysis and the Seychelles GBON National Contribution Plan (2025), this first Investment Funding Request focuses on Phase 1 activities that rehabilitate, upgrade and sustain the existing GBON-relevant observing network across Seychelles' vast island territory and Exclusive Economic Zone (EEZ).

The Phase 1 package will rehabilitate and modernize the Seychelles International Airport (Mahe) surface and upper-air stations are rehabilitate, replace or reactivate the existing surface Automatic Weather Stations (AWSs) on Aldabra, Desroches, Farquhar, La Digue, Praslin and Coetivy. It will also strengthen SMA's digital infrastructure, including SMAONE-WIS2Box interoperability.

Consistent with the WMO Technical Authority recommendation during the NCP process, the Aldabra automatic upper-air station is moved to Phase 2. The Phase 2 upper-air station, together with its environmental assessments, feasibility studies, logistics and installation costs, is excluded from this first IFR and will be submitted through a separate request once feasibility and safeguards requirements are confirmed. The project will also enhance SMA's institutional and human capacity through technical training on equipment maintenance, field verification, hydrogen generation safety, and data quality management, as well as management and leadership development. Gender equality and community participation will be promoted through collaboration with civil society organizations (CSOs) and local partners across the inner and outer islands, raising awareness of the importance of systematic observations for national resilience.

Through these Phase 1 investments, Seychelles will achieve the first set of GBON implementation milestones and establish the operational, data-management and institutional foundation needed to reach full GBON compliance once the Phase 2 Aldabra upper-air investment is approved and implemented.

Upon completion, the Phase 1 project will directly enhance the quality, reliability and timeliness of weather and climate data shared internationally by Seychelles. Improved surface observations and the rehabilitated Mahé upper-air station, supported by automated transmission through WIS 2.0 and monitoring through WDQMS, will contribute to more accurate national, regional and global weather forecasts, enable timely and actionable early warning systems, and facilitate robust climate information services for aviation, maritime safety, disaster risk management, fisheries, tourism, infrastructure, water, energy and other climate-sensitive sectors. In the process, Seychelles will strengthen its contribution to the global and regional weather monitoring system and to forecasting across the Southwest Indian Ocean. The project will align with, and not duplicate, other GBON-relevant initiatives in Seychelles, including CREWS Southwest Indian Ocean and CREWS ASW, the GCF/AFD/EU FP161 regional Hydromet Project for IOC Member Countries, WISER activities and other national climate-resilience investments. These complementary initiatives support early-warning governance, regional hydromet coordination, impact-based forecasting and climate services; SOFF will provide the GBON-compliant observation and data-sharing backbone on which they can build.

Universal Markers	**Gender Equality Marker**	**Risk**		
	GEM1 - The Key Activity contributes to GEWE in a limited way.	Low Risk		
Optional Markers	**WB Income Category**	High Income		
	UN LDC	No		
	Small Island Developing States (SIDS)	Yes		
Fund Specific Markers	**SOFF Phases**	**SOFF Phases** • Investment Phase		
	EW4All	**Early Warnings for All initial focus countries** • No		
	Fragile and conflict- affected situation	**Fragile and conflict-affected situation** • No		
	Peer advisor	**Peer advisor** • South Africa Weather Service (SAWS)		
Geographical Scope	**Geographical Scope**	**Name of the Region**	**Region(s)**	**Country**
	• Country	Southwest Indian Ocean	• Africa	• Seychelles
Participating Organizations and their Implementing Partners	**UN Participating Organizations**	**Government/ Multilateral/ NGO/ Other**	**New Entities**	**Implementing Partners**
	WMO - WMO (World Meteorological Organization)	Government of Seychelles / CSOs		World Bank
Programme and Project Cost	**Participating Organization**	**Amount (in USD)**	**Comments**	
	Budget Requested			
	• World Bank	$ 3'055'812.80	Includes the 7% IE fee	
	WMO	$ 253'162.00	Includes the 7% WMO fee	
	Total Budget Requested	$ 3'308'974.80		
	Tranches			
	Tranche 1 World Bank (70%) $ 2'139'068.96 WMO (33.33%) $ 84'378.89 **Total:** **$** 2'223'448.55	Tranche 2 World Bank (30%) $ 916'743.84 WMO (33.33%) $ 84'378.89 **Total:** **$** 1'001'123.03	Tranche 3 World Bank (0%) $ 0.00 WMO (33.34%) $ 84'404.21 **Total:** **$** 84'404.21	
	Other Sources (Parallel Funding)			
	Total	**$** 3'308'974.80		
Thematic Keywords				
Programme Duration	**Anticipated Start Date**	1 January 2027		
	Duration (In months)	60		
	Anticipated End Date	31 December 2031		

Narratives

Close the most significant data gaps

The WMO Global Basic Observing Network (GBON) Gap Analysis (June 2023), the Seychelles GBON National Contribution Plan (2025), and WMO Technical Authority guidance identify a phased pathway for Seychelles to meet GBON requirements: rehabilitation of the existing surface network and the Seychelles International Airport (Mahe) upper-air station in Phase 1, followed by consideration of a second upper-air station at Aldabra in Phase 2.

The Seychelles Meteorological Authority (SMA) operates a national network of 24 surface land stations and one upper-air station across the main and outer islands. However, most of the outer-island stations remain silent or non-reporting, creating significant observational gaps across Seychelles' 1.37 million km² Exclusive Economic Zone (EEZ). These gaps reduce the availability of high-quality meteorological data for both national forecasting and global numerical weather prediction systems.

To close the most significant Phase 1 gaps, this IFR will support the rehabilitation, replacement and upgrading of existing observation infrastructure. In the June 2023 baseline, Seychelles had a target of six surface land stations. Following a more detailed national assessment, the National Gap Analysis refined this to seven stations. The additional station identified was Coetivy Island, located about 290 km south of Mahé, to strengthen observational coverage of the southern part of the Seychelles Exclusive Economic Zone (EEZ). The WMO Technical Authority subsequently confirmed the NGA result of seven surface land stations, noting that this reflected Seychelles' specific national circumstances. This seven-station configuration was then carried forward into the National Contribution Plan as the national target for GBON implementation. It will therefore rehabilitate and modernize the Seychelles International Airport surface and upper-air stations, and rehabilitate, replace or reactivate the surface AWSs on Aldabra, Desroches, Farquhar, La Digue, Praslin and Coetivy.

For the upper-air network, Seychelles' GBON target remains two radiosonde stations: one existing station at Seychelles International Airport (Mahe) and one additional station proposed for Aldabra. In line with the WMO Technical Authority recommendation during the NCP process, Phase 1 covers only the improvement/automation of the Seychelles International Airport upper-air station. The Aldabra upper-air station will be considered under a separate Phase 2 request after environmental, logistical and stakeholder feasibility requirements are confirmed, given Aldabra's status as a UNESCO World Heritage Site.

In parallel, under Module 4 and Module 3.2 of the National Contribution Plan, SMA will strengthen its digital infrastructure by enhancing the interoperability between the SMAONE Data Management System and the operational WMO Information System (WIS 2.0). This will ensure automated BUFR reporting, real-time data exchange through the WIS, and continuous monitoring using the WIGOS Data Quality Monitoring System (WDQMS).

Through these targeted Phase 1 investments, Seychelles will achieve a swift and fundable first step toward GBON compliance, ensuring reliable, high-frequency observations from the rehabilitated surface network and the Mahe upper-air station. Full upper-air network completion will be pursued through Phase 2, once the Aldabra feasibility and safeguards process has been completed.

Table 1. GBON National Contribution Target for Seychelles. *Source: GBON National Contribution Plan of the Seychelles (2025)*

Type of Station	WMO GBON Global Gap Analysis June 2023 baseline		National Contribution Plan 2025		Phase 1		Phase 2		Notes
	Target	Reporting	To improve	New	To improve	New	To improve	New	
Surface AWS	7	0	1	6	7	0	0	0	Seychelles International Airport (Mahe), Aldabra, Desroches, Farquhar, La Digue, Praslin, Coetivy
Upper-air	2	1	1	1	1	0	0	1	Phase 1: Seychelles International Airport (Mahe) Phase 2: Aldabra
Marine	When applicable	When applicable			Not applicable	Not applicable	When applicable	When applicable	When applicable

Note: The National Contribution Plan 2025 considered 6 new stations to replace existing stations. Noting that the WIGOS Station Identifiers of these existing stations remain the same, these stations are considered as improvements in this IFR.

Table 2. Seychelles GBON Stations – Priority Actions to Close Data Gaps. *Source: Adapted from the GBON National Contribution Plan of the Seychelles (2025)*

Station Name / Location	Type	Current Status	GBON Action Required	Proposed Intervention	Notes
Seychelles International Airport	Surface (AWS)	Operational / Partially compliant	Rehabilitate and upgrade AWS	Upgrade existing station	Phase 1; keep WIGOS ID
Aldabra Island	Surface (AWS)	Silent / Degraded	Replace and reactivate	Replace and reactivate station.	Phase 1; keep WIGOS ID
Desroches Island	Surface (AWS)	Non-reporting	Replace and reactivate	Replace and reactivate station	Phase 1; keep WIGOS ID
Farquhar Island	Surface (AWS)	Non-reporting	Replace and reactivate	Replace and reactivate station	Phase 1; keep WIGOS ID
La Digue	Surface (AWS)	Non-reporting	Replace and reactivate	Replace and reactivate station	Phase 1; keep WIGOS ID
Praslin Island	Surface (AWS)	Non-reporting	Replace and reactivate	Replace and reactivate station	Phase 1; keep WIGOS ID

Coetivy Island	Surface (AWS)	Disactivated	Replace and reactivate	Replace and reactivate station	Phase 1; keep WIGOS ID
Seychelles International Airport	Upper-air (radiosonde)	Operational / Partially compliant / Manual	Rehabilitate and upgrade existing upper-air station	Upgrade station (to automatic)	Phase 1; keep WIGOS ID
Aldabra Island	Upper-air (radiosonde)*	Planned / New	Add new GBON upper-air station (Phase 2)	Conduct environmental assessment and stakeholder consultation for installation on UNESCO World Heritage Site. Install new station.	Phase 2; new WIGOS ID

*Note: *The upper-air target for Seychelles remains two stations. The first IFR covers the existing Seychelles International Airport (Mahe) upper-air station. The proposed Aldabra upper-air station will be addressed only in Phase 2, subject to environmental safeguards, logistical feasibility and stakeholder consultation.*

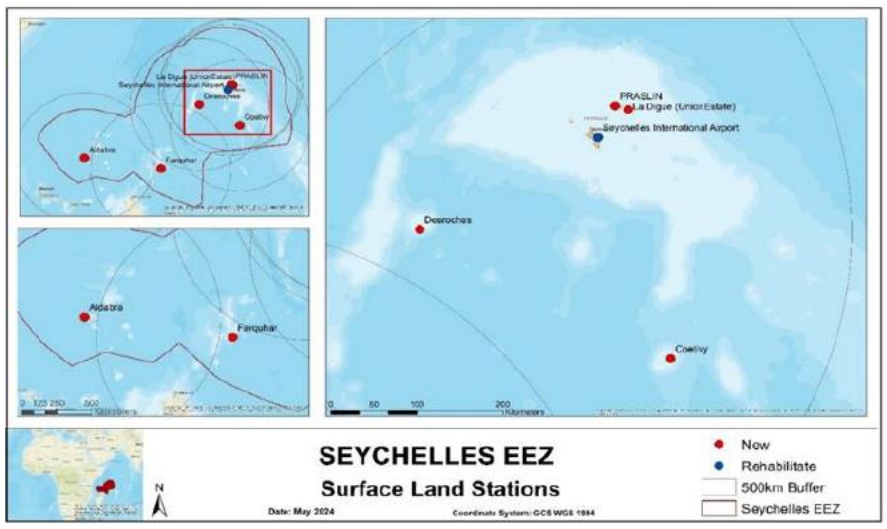


Figure 1. Map of existing and proposed surface and upper-air stations. *Source: GBON National Contribution Plan of the Seychelles (2025)*

The implementation of Phase 1 activities will enable Seychelles to close its most critical near-term data gaps and progressively advance towards full GBON compliance. The modernized surface network and improved Mahe upper-air station—supported by robust data management systems, strengthened human capacity, and regional collaboration outlined in Modules 2 and 4—will enhance national resilience to climate hazards, improve marine and aviation safety, and strengthen Seychelles' contribution to global weather and climate monitoring.

Target easy fixes

In addition to addressing the major observational gaps, the Seychelles SOFF investment phase will target a set of easy fixes that can rapidly improve the performance, reliability, and data availability of the existing observing network. These interventions are technically straightforward, low-cost, and capable of producing immediate benefits. They are designed to optimize existing infrastructure, enhance communication links, and strengthen SMA's capacity to sustain observations while progressing toward GBON compliance through rehabilitation and replacement of existing stations.

The technical assessment undertaken in the GBON National Contribution Plan identified that several existing stations already have partial functionality but suffer from issues such as degraded sensors, intermittent power supply, outdated firmware, and poor data transmission. Minor rehabilitation of these sites—combined with field verification, network reconfiguration, and small-scale equipment upgrades—can quickly bring them back online. These actions will significantly raise the national data availability rate from below 20 percent to well above the 80 percent GBON requirement.

At the institutional level, these quick-impact activities will be accompanied by refresher training for technical personnel in preventive maintenance, field verification, and basic fault diagnostics as detailed in Module 4. Strengthening of on-site maintenance capabilities and the establishment of a consistent 90-day preventive maintenance schedule will ensure that the easy fixes remain sustainable. Integration of all reactivated stations into the SMAONE-WIS 2.0 data flow will guarantee that restored observations are automatically shared through the WIS and monitored through the WIGOS Data Quality Monitoring System (WDQMS).

Table 3. Seychelles GBON Stations – Targeted "Easy Fixes". *Source: Adapted from the GBON National Contribution Plan of the Seychelles (2025)*

Station Name / Location	Type	Identified Issue	Proposed Easy Fix	Expected Outcome
Seychelles International Airport	Surface (AWS)	Outdated data logger and partial compliance with MQTT/SFTP protocol.	Replace logger and reconfigure data transmission; recalibrate wind and temperature sensors.	Full compliance with GBON data transfer frequency and improved reliability of surface data.
Aldabra Island	Surface (AWS)	Silent due to communication and power system failure.	Install new modem, solar regulator, and cabling; reactivate telemetry and data upload.	Station reactivated with consistent hourly reporting to SMAONE and WIS 2.0.
Desroches Island	Surface (AWS)	Communication failure and sensor deterioration.	Replace SIM card, recalibrate sensors, and link to SMAONE via 4G LTE.	Near-real-time data restored and improved data quality monitoring.
Farquhar Island	Surface (AWS)	Power reliability issue from degraded solar panels and batteries.	Replace solar array, batteries, and regulator; test lightning protection.	Continuous power supply and 24-hour data reporting.
Praslin Island	Surface (AWS)	Non-reporting due to outdated firmware and logger.	Update firmware, integrate station into SMAONE and WIS 2.0, and verify metadata.	Station reactivated and incorporated into global data exchange network.
La Digue	Surface (AWS)	Limited communication coverage causing data loss.	Install low-bandwidth satellite backup link and update transmission protocol.	Continuous data availability with redundancy against local network outages.

	Seychelles International Airport	Upper-air (radiosonde)	Hydrogen generation system aging and limited spare parts.	Upgrade its facilities, hydrogen system, ICT/ground equipment, consumables, and safety arrangements	Reliable daily ascents with improved data integrity and GBON verification.

Implementation of these easy fixes will enable the Seychelles Meteorological Authority to quickly improve its operational efficiency and increase the percentage of reporting stations within the first year of the investment phase. The actions are directly linked to the preventive maintenance and field verification plans described in Module 3 (Sections 3.1 and 3.2) and supported by the capacity-development activities in Module 4.

These rapid interventions will not only enhance data transmission and equipment reliability but also build technical confidence within SMA's engineering and observation teams. By consolidating existing assets and ensuring their interoperability with SMAONE and WIS 2.0, Seychelles will achieve measurable short-term gains on the path toward full GBON compliance while replacement of the stations will be carried out to establish the institutional foundation for long-term sustainability.

Create leverage

The Systematic Observations Financing Facility (SOFF) investment in Seychelles complements and amplifies ongoing national and regional efforts to strengthen climate resilience, improve early warning systems, and modernize meteorological services. By financing upgrades to the Seychelles Meteorological Authority's (SMA) observational infrastructure and ensuring full compliance with the Global Basic Observing Network (GBON) standard, SOFF provides the essential data foundation for more accurate forecasting, risk modelling, and climate-informed decision-making.

SOFF investments are strategically aligned with and build upon complementary operations supported by the World Bank, the Green Climate Fund (GCF), Agence Française de Développement (AFD), the European Union (EU), the Climate Risk and Early Warning Systems (CREWS) initiative, the World Meteorological Organization (WMO), and the Weather and Climate Information Services for Africa (WISER) programme. These complementarities are upstream/downstream: SOFF finances the GBON observation backbone and international data exchange, while these initiatives create a coherent framework for achieving the objectives of the Early Warnings for All (EW4All) roadmap and the Seychelles GBON National Contribution Plan, while directly contributing to the institutional goals of the SMA Strategic Plan (2025–2029). This division prevents duplication and ensures that prior capacity strengthening efforts can be converted into sustainable GBON-compliant operations.

Alignment with World Bank Engagement in Seychelles

The World Bank serves as the SOFF Implementing Entity in Seychelles and maintains an active portfolio of projects that enhance environmental sustainability and climate resilience.

The Seychelles Solid Waste Management Project (SSWMP) (P181243), approved in 2024, aims to improve the financial and environmental performance of the national waste management system and promote a circular economy. Implemented by the Ministry of Environment, Climate, Energy and Natural Resources, this project strengthens environmental monitoring and resilience planning. The improved meteorological and climate data generated under SOFF will inform infrastructure design, pollution control, and risk management strategies in climate-exposed sectors.

The World Bank, alongside with the WMO and the United Nations Office for Disaster Risk Reduction (UNDRR), also acts as an implementing partner in the Climate Risk and Early Warning Systems South-West Indian Ocean (CREWS-SWIO) initiative, supporting the development of national early warning and emergency preparedness systems. In Seychelles, Bank-led activities have included establishing a technical working group on early warning, drafting secondary legislation to operationalize the multi-hazard early warning framework, and improving coordination between SMA and disaster management authorities. WMO supported institutional strengthening, legal framework and capacity building activities.

At the regional level, the World Bank has harmonized its Regional Climate Resilience Programme (RCRP) with the GCF/AFD/EU Hydromet Project (FP161) to ensure consistency in hydromet modernization and climate service delivery across Indian Ocean Commission (IOC) member countries. This alignment supports efficient data exchange and interoperability across regional and global systems — outcomes that SOFF will directly reinforce through GBON-compliant observation and data-sharing infrastructure.

Complementarity with Regional and International Initiatives

The GCF FP161 project – "Building Regional Resilience through Strengthened Meteorological, Hydrological and Climate Services in the Indian Ocean Commission (IOC) Member Countries" (USD 71.4 million, co-financed by GCF, AFD, and the EU) is a flagship regional initiative implemented by the IOC. It supports climate and hydromet infrastructure across IOC member states, including Seychelles. SOFF will complement this program by providing the high-quality GBON observations required to sustain the regional Hydromet network and enhance forecast accuracy.

The Flash Flood Guidance System (FFGS) and Early Warning System for Floods (regional, USD 3.5 million) enhance flood forecasting and hydrological risk management across the region. By ensuring continuous and reliable rainfall and surface observations, SOFF will improve the precision of flood predictions and warning lead times.

The ClimSA (Climate Services for Africa) programme provides continental-scale capacity building in climate services. SOFF will ensure Seychelles' real-time observational data is fully integrated into ClimSA's regional climate monitoring systems, strengthening both local and regional service delivery.

The WISER (Weather and Climate Information Services for Africa) programme—supported by the UK Foreign, Commonwealth and Development Office (FCDO) and implemented by the UK Met Office—is another key complementary initiative. Through WISER's ActionFirst and Predicting African Climate Conditions at Seasonal to Sub-Seasonal Scales (PASS) programmes, SMA is advancing impact-based forecasting, multi-hazard early warning systems, and sub-seasonal to seasonal prediction capabilities. SOFF will reinforce these efforts by providing the high-quality observation data and real-time data exchange systems needed to operationalize WISER's advanced forecasting tools. Seychelles will also host regional WISER events and training under these programmes, further aligning SOFF outcomes with broader regional resilience objectives.

Integration with National Strategies and Frameworks

The CREWS ASW – Seychelles project (USD 0.25 million), implemented by WMO and SMA, strengthens the national multi-hazard early warning system by improving institutional coordination and outreach. SOFF investments will provide the GBON-compliant data streams required to sustain CREWS activities and support operational decision-making.

The SOFF Investment Phase is fully embedded in Seychelles' Early Warnings for All (EW4All) national roadmap, which outlines four pillars for universal early warning coverage: risk knowledge, observations and forecasting, warning dissemination, and preparedness. SOFF supports the second pillar, "Observations and Forecasting," by modernizing and automating SMA's surface and upper-air observation network and ensuring sustained real-time data sharing through WIS 2.0.

SOFF also supports the implementation of the SMA Strategic Plan (2025–2029) by advancing its strategic goals of improving data quality, strengthening partnerships, leveraging science and technology, and enhancing operational sustainability. By integrating SOFF investments with existing international partnerships and national institutional frameworks, the project will ensure that investments made during the SOFF Investment Phase are efficient, durable, and fully aligned with Seychelles' long-term vision for meteorological modernization and resilience.

Table 4. Complementary and Leveraged Climate and Resilience Projects – Seychelles

Funding Source / Partner	Project Title	Implementing / Executing Entity	Status	Financing (USD or GBP)	Complementarity with this SOFF IFR
World Bank	Seychelles Solid Waste Management Project (P181243)	Ministry of Environment, Climate, Energy and Natural Resources	Ongoing	5 million USD	SOFF enhances data for climate-sensitive infrastructure planning and environmental resilience. This project supports implementation arrangements,

						procurement readiness, safeguards and reporting. There is no duplication as this project doesn't support hydromet observations; it leverages the World Bank implementation platform and country frameworks.
	World Bank / WMO / UNDRR	CREWS South-West Indian Ocean (CREWS-SWIO)	WMO / World Bank / IOC / Seychelles Meteorological Authority	Ongoing	3.2 million USD (regional) / 0.2 million USD allocated to Seychelles	SOFF provides observation data for regional multi-hazard early warning and forecasting systems. This project uses GBON observations to strengthen forecasting and early warnings. There is no duplication as this project doesn't support hydromet observing systems.
	WMO / SMA	CREWS ASW – Seychelles	WMO / Seychelles Meteorological Authority	Ongoing	0.25 million USD	SOFF supplies continuous GBON data supporting national early warning operations. This project uses GBON observations to strengthen forecasting and early warnings. There is no duplication as this project doesn't support hydromet observing systems.
	GCF / AFD / EU	FP161 – Building Regional Resilience through Strengthened Meteorological, Hydrological and Climate Services in IOC Member Countries	Indian Ocean Commission (IOC)	Ongoing	71.4 million USD (regional) / 16 million USD allocated to Seychelles	SOFF provides the high-quality GBON observations required to sustain the regional Hydromet network. This project supports broader hydromet modernization with a main focus on weather radar, rainfall gauges, hydrological and oceanographic observations, and forecasting systems. There is no duplication as this project supports other types of observing systems for different purposes and in other locations.
	WMO / SMA	Flash Flood Guidance System (FFGS) and Early Warning for Floods	WMO / Seychelles Meteorological Authority	Ongoing	3.5 million USD (regional) / no specific allocation for Seychelles	SOFF provides the high-quality GBON observations required to improve rainfall and surface data accuracy for flood prediction. This project focuses on flood forecasting and hydrological risk management tools requiring reliable rainfall observations. There is no duplication as this project doesn't support hydromet observing systems.
	WMO / Partners	ClimSA – Climate Services for Africa Programme	WMO / Seychelles Meteorological Authority	Ongoing	10 million USD (regional) / no specific allocation for Seychelles	SOFF enables real-time data integration into continental climate service platforms. This project focuses on climate services and regional climate products. There is no duplication as this project doesn't support hydromet observing systems.
	UK Met Office / FCDO	WISER (ActionFirst and PASS Programmes)	UK Met Office / Seychelles Meteorological Authority	Ongoing	80 thousand GBP allocated to Seychelles	SOFF strengthens the observation base that underpins this project's impact-based forecasting and seasonal prediction systems. There is no duplication as this project doesn't support hydromet observing systems.
	Through these complementarities, past and ongoing initiatives provide an implementation framework and coordination mechanisms that will support efficient SOFF delivery in Seychelles, including stakeholder coordination, early warning governance, hydromet modernization platforms, regional training arrangements, institutional strengthening and climate-service partnerships. SOFF will not duplicate these initiatives; rather, it will fill the foundational observation gap by rehabilitating GBON stations, strengthening data quality management and ensuring reliable WIS 2.0 reporting. The resulting high-quality, internationally shared observations will be used by complementary projects and national and regional partners to improve forecasts and warnings and to develop targeted climate services for priority sectors and stakeholders.					
Maximize delivery capacity	**Implementing Entity: The World Bank** The World Bank has extensive experience managing and delivering hydrometeorological and resilience-related investments globally and regionally, including in Small Island Developing States (SIDS) and the Southwest Indian Ocean. The Bank's fiduciary, procurement, and environmental and social safeguard systems are internationally recognized and are governed by the Environmental and Social Framework (ESF) and Procurement Regulations for Investment Project Financing Borrowers (September 2023). These policies ensure compliance with environmental, social, and fiduciary standards, and guarantee transparent financial management and procurement processes. The World Bank has a long-standing presence in Seychelles through projects focused on environmental sustainability, disaster preparedness, and climate resilience — including the Seychelles Solid Waste Management Project (P181243), the Catastrophe Deferred Drawdown Option (CAT DDO), Regional Emergency Preparedness and Access to Inclusive Recovery Program (REPAIR, P508319), etc. — which have supported institutional strengthening in early warning systems. Under the Climate Risk and Early Warning Systems (CREWS) South-West Indian Ocean (CREWS-SWIO) initiative, the Bank has helped Seychelles to enhance multi-hazard early warning and emergency preparedness systems, develop secondary legislation for early warning governance, and build the capacity of the national technical working group. WB will be the Implementing Entity for the Project and will be responsible for supporting the implementation, financial management, evaluation, reporting and closure of the activities under the Project. WB will monitor and supervise the execution of the Project and					

	ensure the proper management and application of SOFF Grant Proceeds. WB will ensure that the Grant Proceeds are utilised in accordance with the general terms of this Funding Request and applicable WB policies. WB will leverage global technical specialists with experience in hydrometeorological and early warning services to provide project implementation support. In addition, fiduciary and safeguards specialists based in the Southwest Indian Ocean region will also provide implementation support. The WB proposes SOFF Investment in Seychelles to be a Recipient-Executed Trust Fund (RETF) attached to an existing investment in Seychelles as co-financing to cover all SOFF activities. This approach would help ensure that global investments under SOFF and other national-level investments requested by the Government of Seychelles are integrated seamlessly. A Bank-Executed Trust Fund (BETF) is proposed to channel the project management and supervision costs of the Implementing Entity. Therefore, the SOFF Investment Phase will use a lean, country-anchored implementation structure. The World Bank remains accountable to SOFF as the Implementing Entity. Fiduciary management, procurement processing, safeguards coordination, financial management and consolidated reporting will be carried out through the existing recipient-based Project Management Unit (PMU) associated with the World Bank-financed Seychelles Solid Waste Management (SSWMP) Project, housed in the Ministry of Environment, Climate, Energy and Natural Resources in Seychelles. **Executing Entity: Seychelles Meteorological Authority (SMA)** The Seychelles Meteorological Authority (SMA) is the national institution legally mandated to provide meteorological and climate services under the Meteorological Act (2015) and serves as the country's National Meteorological and Hydrological Service (NMHS). The SMA has a clear statutory responsibility for the operation, maintenance, and modernization of the national observation network, data management systems, and service delivery functions. SMA operates a network of 24 surface land stations and one upper-air radiosonde station, with technical and engineering teams based at the Seychelles International Airport. The agency has a strong foundation in operational meteorology, data management, and forecasting and has been recognized for its adherence to international standards, including ISO 9001:2015 certification for aviation meteorological services. In preparation for SOFF implementation, the SMA has undergone a Country Hydromet Diagnostic (CHD) and developed a GBON National Contribution Plan, both validated by the World Meteorological Organization (WMO)and South African Weather Service (SAWS). These assessments confirm that SMA has the technical and administrative capacity to manage the national GBON network, supported by planned institutional strengthening measures under SOFF — including targeted recruitment, technical training, and systems integration. One suitably qualified SMA staff member will be designated as the SMA Technical Coordinator and embedded within the PMU as the single institutional and technical interface with SMA. The embedded coordinator will organize day-to-day technical inputs and field implementation through SMA's technical personnel, including engineers, meteorologists, and ICT officers, who will be responsible for the rehabilitation and installation of GBON-compliant stations, the integration of the SMAONE Data Management System with WIS 2.0, and the quality control and field verification of meteorological sensors. Verification will be implemented using field equipment and mobile toolkits for routine instrument verification,, complemented by scheduled overseas verification/calibration in accordance with SMA's maintenance schedule. **Peer Advisor: South African Weather Service (SAWS)** The South African Weather Service (SAWS) has been designated as the SOFF Peer Advisor for Seychelles. SAWS brings extensive regional and technical expertise in GBON implementation, and data quality management, and has successfully supported other SADC and Indian Ocean island states in the development of GBON-compliant systems. Under the Country Hydromet Diagnostic (2025), SAWS conducted a peer review of SMA's operational, institutional, and technical capacities and provided recommendations that directly informed the Seychelles GBON National Contribution Plan. SAWS will provide ongoing advisory services throughout the SOFF Investment Phase, including: • Technical support for station siting, equipment specification, and installation supervision; • Guidance on implementing the WMO Integrated Global Observing System (WIGOS), WIS 2.0, and WIGOS Data Quality Monitoring System (WDQMS); • Assistance in developing SMA's standard operating procedures (SOPs) for maintenance, and quality assurance; • Training on GBON-compliant data management and WMO reporting practices; and • Annual peer review missions to assess progress, verify compliance, and provide technical recommendations. SAWS' role as Peer Advisor ensures technical oversight, quality assurance, and adherence to WMO standards throughout project implementation, with specialized backstopping from the WMO Technical Authority when required.. The collaboration between SMA and SAWS also leverages South-South cooperation within the WMO Regional Association I (Africa) and supports broader SADC–Indian Ocean Commission (IOC) regional harmonization on systematic observations. SAWS advisory inputs in this IFR are limited to the approved Peer Advisor functions (as per the Terms of Reference in Annex), including technical review of specifications, advice on WIGOS/WIS 2.0 and WDQMS, O&M guidance, and commissioning support. **Integrated Delivery and Coordination** The reporting chain will be explicit in the Project Operations Manual and roles matrix. The SMA Technical Coordinator, embedded within the recipient-based PMU, will coordinate and validate technical, site, safeguards and station-performance inputs from SMA's existing units, while remaining technically accountable to the SMA Chief Executive Officer. The PMU will consolidate procurement, financial, safeguards, M&E, technical and implementation information and submit it to the World Bank. The World Bank, as Implementing Entity, will report to the SOFF Secretariat and remain accountable for project delivery and results. SAWS will share technical review findings with SMA, the PMU and the World Bank, while the WMO Technical Authority will provide specialised backstopping and final GBON data-sharing verification. Quarterly coordination will be largely virtual, complemented by annual in-country technical and implementation-support missions. Through this collaborative approach, Seychelles will maximize delivery capacity for SOFF investments — ensuring high-quality, sustainable, and GBON-compliant meteorological observations that directly support national climate resilience, the Early Warnings for All (EW4All) roadmap, and the implementation of the SMA Strategic Plan (2025–2029).
Sub-regional gains	The SOFF Investment Phase in Seychelles will generate important sub-regional benefits by strengthening cooperation among the meteorological services of the South-West Indian Ocean (SWIO) region. As a member of the Indian Ocean Commission (IOC) and the Southern African Development Community (SADC), Seychelles plays a pivotal role in advancing systematic observations, forecasting, and multi-hazard early-warning capabilities. Through SOFF, Seychelles will help consolidate a coherent regional network of GBON-compliant stations that enhances data sharing, forecasting accuracy, and service delivery across the SWIO region. **Regional cooperation and integration** Seychelles is actively engaged in the regional frameworks coordinated by the IOC, the SADC Climate Services Centre (CSC), and the Regional Specialized Meteorological Centre (RSMC) La Réunion for tropical-cyclone forecasting. These bodies provide technical, operational, and governance platforms for harmonized meteorological services among island and coastal states. Under the GCF/AFD/EU Hydromet Project (FP161) and the CREWS South-West Indian Ocean (CREWS-SWIO) initiative, Seychelles and its neighbors are aligning observation standards and data-exchange protocols. The upgraded GBON network supported by SOFF will feed higher-quality data into the regional numerical-weather-prediction systems used by RSMC La Réunion, improving tropical-cyclone monitoring, track prediction, and warning lead times for all member states. Seychelles will also maintain operational cooperation with RSMC Pretoria and the SADC CSC, ensuring that its enhanced data streams contribute directly to multi-hazard early-warning products and regional climate outlooks. **Shared procurement and maintenance efficiencies** The small-island states of the SWIO—Seychelles, Mauritius, Comoros, and Madagascar—share similar environmental conditions and technical requirements for meteorological equipment. This creates clear opportunities for joint procurement and shared maintenance

	services under SOFF and parallel IOC programmes. Coordinated procurement of Automatic Weather Stations, radiosonde systems, and communication components will reduce costs through bulk purchasing, ensure standardized specifications, and simplify training and maintenance logistics. The World Bank, as Implementing Entity, will work with other Implementing Entities active in the region, especially UNDP as the SOFF Implementing Entity for Madagascar, to explore framework agreements and shared service contracts that leverage these economies of scale. Regional capacity development and knowledge exchange Beyond benefiting from regional initiatives, the Seychelles Meteorological Authority (SMA) is now positioned to lead selected regional capacity-building activities and act as a knowledge hub for the SWIO. Through new international partnerships, SMA has secured access to tools, data, and training platforms that can be shared across the region: • With the European Centre for Medium-Range Weather Forecasts (ECMWF): SMA has gained access to the WMO support dataset and will participate in ECMWF's "Forecast in a Box" initiative, a cloud-based environment for localized numerical-weather-prediction analysis and visualization. SMA will train staff in neighboring NMHSs to use these tools, supporting a common regional approach to model interpretation and impact-based forecasting. • With the University of Reading: a five-year Memorandum of Understanding enables joint research, staff exchanges, and curriculum development for meteorological education in small-island contexts. SMA will coordinate regional fellowships and workshops in partnership with Reading and the University of Seychelles, creating a sustainable pipeline of skilled meteorologists for the region. • With the UK Met Office: collaboration under the Voluntary Cooperation Programme (VCP) and WISER initiatives will strengthen SMA's expertise in impact-based and sub-seasonal-to-seasonal forecasting. • SMA will co-host regional training events on these topics in Mahé, including the planned WISER PASS Kick-Off Meeting (2026), enabling forecasters from other island states to build applied skills using Seychelles' operational platforms. Through these initiatives, Seychelles will move from being primarily a recipient of regional support to becoming a regional provider of technical assistance, training, and peer-to-peer learning, fostering South–South cooperation and enhancing collective resilience in the SWIO. **Role of the SOFF Secretariat and coordination during implementation** To fully capture these sub-regional benefits, structured coordination among Implementing Entities, Peer Advisors, and NMHSs in the SWIO region will be essential. During the Investment Phase, Seychelles will participate in SOFF regional workshops organized in collaboration with the IOC, WMO Regional Office for Africa, and RSMC La Réunion to harmonize technical standards, share lessons learned, and coordinate capacity-building schedules. Through these collaborative mechanisms, the SOFF Investment Phase in Seychelles will deliver strong sub-regional gains by lowering costs, standardizing technologies, expanding access to advanced forecasting tools, and positioning Seychelles as a regional hub for training, research, and innovation in meteorology and climate services across the Southwest Indian Ocean.
SOFF Beneficiary Country Capacity Assessment	The Seychelles Meteorological Authority (SMA) is the legally mandated National Meteorological and Hydrological Service (NMHS) of the Republic of Seychelles, established under the Meteorological Act of 2015. The SMA operates as an autonomous public authority under the Ministry of Environment, Climate, Energy and Natural Resources and serves as the single recognized national provider of meteorological, climatological, and related services. The Authority has the statutory mandate to collect, manage, and exchange meteorological data; issue forecasts and warnings; and fulfil international obligations as a member of the World Meteorological Organization (WMO). The GBON National Contribution Plan (2025) and the Country Hydromet Diagnostic (2025) confirm that Seychelles has an established institutional, technical, and administrative foundation to implement the SOFF Investment Phase effectively. The SMA demonstrates strong governance and financial accountability, supported by an operational legal framework, a functioning Board of Directors, and defined reporting lines to the Ministry. Its corporate structure integrates the core functions of forecasting, observations, ICT and data management, climate services, and administrative operations, with a total staff complement of 29 professionals. SMA's services are guided by its Strategic Plan (2025–2029), which sets clear objectives for modernization, operational excellence, data quality, and regional leadership in climate and weather services. **Technical and Operational Capacity** The SMA operates and maintains a network of 24 surface land stations and one upper-air station, with six surface and one upper-air site identified for rehabilitation or replacement to achieve full GBON compliance. The SMA's upper-air station at Seychelles International Airport performs daily radiosonde launches, supported by experienced technicians trained in hydrogen generation and upper-air observation operations. The Authority has implemented a 90-day preventive maintenance schedule and five-day corrective response protocol to ensure network availability, using field verification equipment and mobile toolkits for routine instrument verification, complemented by scheduled overseas verification/calibration in accordance with the maintenance schedule. The SMA's ICT and data management systems are well developed. The Authority manages a secure server environment with multiple platforms, including SMAONE, CLIMSOFT, and PUMA, which support real-time data monitoring and exchange. SMAONE is fully interoperable with the WMO Information System (WIS 2.0), allowing seamless transmission of observational data in BUFR format to the WIS. SMA staff are trained in WIGOS metadata management, OSCAR/Surface registration, and data quality monitoring through the WIGOS Data Quality Monitoring System (WDQMS), ensuring consistent adherence to WMO standards. The SMA also delivers continuous operational forecasting and early-warning services, including aviation meteorology under ISO 9001:2015 certification. It maintains strong technical collaboration with RSMC La Réunion for tropical cyclone forecasting and with RSMC Pretoria and the SADC Climate Services Centre for regional guidance on severe weather and climate outlooks. **Management and Administrative Capacity** Institutionally, the SMA demonstrates robust governance and financial management capabilities. It has a mixed financing model combining public budget allocations (approximately 60% of total funding) with cost-recovery revenue from aviation and specialized data services (approximately 40%). The Authority has been successfully implementing donor-financed operations, including the GCF/AFD/EU Hydromet Project (FP161), CREWS-SWIO, and EWS for Floods, meeting international fiduciary and procurement standards. SMA's procurement procedures align with national legislation and recognize international donor regulations, ensuring full compliance with World Bank and SOFF financial management requirements. SMA's leadership and technical staff have experience in project coordination, reporting, and monitoring under multi-partner frameworks. The Authority's Board-approved Quality Management System (QMS) supports standardized operational procedures, internal audits, and continuous improvement practices, creating a strong institutional environment for SOFF implementation. **Human Capacity and Partnerships** The SMA has qualified meteorologists, engineers, and ICT specialists, though technical staffing is limited relative to the geographic dispersion of Seychelles' islands. Targeted training under SOFF will strengthen competencies in instrument verification, AWS operation, WIS 2.0 data management, and GBON maintenance. The Authority is also enhancing gender inclusivity by promoting the recruitment and advancement of women in technical and leadership positions, in alignment with national gender policies. Seychelles benefits from extensive national and international partnerships that enhance its technical and institutional capacity. The SMA collaborates closely with the Island Development Company (IDC), and Seychelles Islands Foundation (SIF) for observation network logistics and data sharing. Regionally, it participates in IOC, SADC, and CREWS-SWIO frameworks, which provide platforms for joint procurement, training, and data exchange. Internationally, SMA's partnerships with ECMWF, the University of Reading, and the UK Met Office provide access to advanced forecasting tools, scientific research, and training opportunities, positioning Seychelles as an emerging hub for meteorological excellence in the Southwest Indian Ocean. **Overall Readiness** Based on the Country Hydromet Diagnostic and the GBON National Contribution Plan, Seychelles demonstrates moderate to strong

	institutional and technical readiness to execute the SOFF Investment Phase. SMA's systems, governance, and operational maturity are sufficient to deliver and sustain GBON investments, with targeted support required in verification, maintenance, and technical staffing. The combination of strong leadership, existing project management experience, and active regional cooperation provides a robust foundation for achieving and maintaining GBON compliance. The SMA's demonstrated commitment to modernization, quality assurance, and regional collaboration ensures that the SOFF Investment Phase will be efficiently executed and sustained, delivering lasting benefits for Seychelles and the wider Southwest Indian Ocean region.
Investment Phase Alignment with the GBON National Contribution Plan	This Investment Phase proposal for Seychelles covers the Phase 1 activities from the GBON National Contribution Plan (NCP, January 2025) that can be implemented swiftly and with manageable safeguards: rehabilitation/improvement of the surface AWS network, and upgrade and automation of the Seychelles International Airport (Mahe) upper-air station. The NCP remains the reference for the full GBON target, but the Aldabra upper-air station is moved to Phase 2 under a separate investment request.. WIS2.0/WIS2Box is already operational in Seychelles, however there is a need to connect SMAONE with WIS2Box and ensure sustained interoperability; support is therefore requested from SOFF for automated BUFR formatting, metadata verification, QA/QC workflows, WIS2.0 transmission monitoring, troubleshooting and staff training. As a consensus-based decision among the SOFF tripartite consortium—the World Bank (Implementing Entity), SMA (Executing Entity), and SAWS (Peer Advisor)—the following refinements have been incorporated into the Investment Phase to ensure effective implementation, environmental responsibility, and long-term sustainability. 1. Phased implementation of GBON infrastructure (surface and upper-air). In alignment with the NCP, Seychelles' GBON configuration comprises seven surface land stations and two upper-air stations. However, this SOFF Investment Phase will only deliver activities under Phase 1, which will focus on the rehabilitation, replacement and operationalization of existing surface and upper-air observation infrastructure, including the modernization of the existing AWS and upper-air station at Seychelles International Airport, and the replacement of Automatic Weather Stations in Aldabra, Desroches, Farquhar, La Digue, Praslin, and Coetivy Islands. 2. Strengthening data management, verification, and maintenance systems. The Investment Phase expands upon the NCP's baseline activities by strengthening SMA's supporting systems for sustained network operations. It will: • fully integrate the SMAONE Data Management System with WIS 2.0 for automated, real-time data sharing and global interoperability – this includes complete and sustain SMAONE-WIS2Box interoperability for automated, real-time WIS 2.0 data sharing, including BUFR formatting, metadata validation, QA/QC, WDQMS monitoring and troubleshooting support; • provide field verification equipment, including mobile toolkits, for routine instrument verification, complemented by three scheduled overseas verification/calibrations in line with SMA's maintenance schedule; and • operationalize a preventive-maintenance schedule and rapid-response system for all GBON sites to maintain network performance at or above GBON standards. These measures will ensure that Seychelles can sustain high-quality data generation and international data exchange beyond the Investment Phase. 3. Operationalization of the GBON Business Model (Module 2). The NCP includes a comprehensive business model framework under Module 2 – GBON Business Model and Institutional Development, which sets out financial, partnership, and governance mechanisms for sustainable GBON operations. The Investment Phase will translate this framework into practice by supporting SMA to: • review its existing funding structure and identify the full lifecycle costs of GBON network operations and maintenance; • develop and implement a sustainable SMA business model that diversifies revenue sources through cost-recovery mechanisms and partnerships with the private sector, including the Island Development Company (IDC), the Seychelles Islands Foundation (SIF), and the Public Utilities Corporation (PUC); and • integrate civil society and community participation into network sustainability. SMA will establish collaborative arrangements with civil society organizations and island management entities to assist with routine maintenance, first-line inspections, and local reporting for outer-island AWS stations. Leveraging these existing community and institutional networks will reduce logistics costs, increase ownership, and improve the long-term reliability of GBON operations across Seychelles' geographically dispersed islands. Additionally, targeted capacity-building activities and financial planning workshops will equip SMA management and technical staff with the skills needed to implement the business model, manage partnerships, and ensure sustained financing of maintenance, verification, and consumables beyond the Investment Phase. 4. Capacity development for sustained GBON operations. Complementary training and institutional-strengthening activities will build SMA's human capacity to maintain GBON operations independently. Technical staff will be trained in maintenance, including field verification and traceability; the operation and maintenance of the upper-air observing system, including radiosonde operations, ground system operation, data quality, troubleshooting and hydrogen-safety; and WIS 2.0 data management. Management staff will receive training in project oversight, procurement, partnership management, and business-model execution. The SOFF Investment Phase is therefore fully aligned with the GBON National Contribution Plan and incorporates all identified infrastructure, institutional, and capacity-development priorities. The inclusion of community and civil society participation in the maintenance of outer-island stations operationalizes the NCP's partnership framework, while the two-phase approach for the upper-air network ensures environmental compliance and technical readiness. Through these integrated activities, Seychelles will substantially advance toward GBON compliance and establish the institutional, technical, and financial foundations needed to sustain the observing network in the long term—contributing to stronger national, regional, and global climate and weather monitoring systems.
Execution model and implementation arrangements	The execution model is designed as a lean, recipient-executed and country-anchored arrangement. It uses the existing Seychelles-based PMU associated with the SSWMP Project rather than creating a new offshore management structure, while preserving the World Bank's accountability to SOFF as Implementing Entity. Roles and reporting: the recipient-based PMU will lead procurement processing, financial management, safeguards coordination and consolidated reporting and, through one SMA Technical Coordinator embedded within the PMU, coordinate day-to-day technical execution, site activities, data integration and O&M follow-up using SMA's existing technical sections. SAWS will provide the primary external technical advisory and quality-assurance function, and the WMO Technical Authority will provide specialised backstopping and final data-sharing verification. **Implementing Entity – World Bank** The World Bank will act as the SOFF Implementing Entity, providing overall fiduciary oversight, technical supervision, and guidance on environmental and social safeguards. The Bank will ensure that all SOFF investments adhere to its Environmental and Social Framework (ESF) and Procurement Regulations for Investment Project Financing Borrowers, and other fiduciary guidelines, guaranteeing accountability and transparency throughout implementation. To streamline project management and maximize efficiency, the Investment Phase will leverage the existing Project Management Unit (PMU) established under the World Bank's Seychelles Solid Waste Management Project (P181243), housed within the Ministry of Environment, Climate, Energy and Natural Resources. This PMU has extensive experience in managing Bank-financed operations, including procurement, disbursement, monitoring, and evaluation. Under SOFF, the PMU will handle fiduciary responsibilities such as procurement and financial reporting, ensuring adherence to World Bank and national procedures. The World Bank's task team leaders, supported by procurement and environment and social safeguard specialists in the region, will supervise project progress and compliance with SOFF operational procedures, providing technical assistance and ensuring timely disbursement of funds and achievement of GBON compliance milestones. **Executing Entity – Seychelles Meteorological Authority (SMA)**

	The Seychelles Meteorological Authority (SMA) will serve as the Executing Entity responsible for the technical and operational implementation of all SOFF-funded activities. SMA will manage the rehabilitation, installation, and commissioning of surface and upper-air stations; integration of observing systems into the WMO Information System (WIS 2.0); and the operationalization of the GBON business model for long-term sustainability. SMA will designate one suitably qualified staff member as Technical Coordinator and embed that person within the recipient-based PMU. The coordinator will work operationally with the PMU Project Manager/Coordinator and remain technically accountable to the SMA Chief Executive Officer. Working with SMA's existing engineering, observation and ICT units and the two newly recruited GBON Operations and Maintenance Technicians, the coordinator will prepare technical specifications and acceptance criteria, coordinate sites and outer-island logistics, monitor station performance, organize data integration and O&M follow-up, and provide technical and site-level safeguards inputs within the PMU's consolidated implementation and reporting processes. SMA will also coordinate with national stakeholders with whom it has Memorandum of Understanding (MoUs), including the Island Development Company (IDC), and civil society organizations involved in the maintenance of outer-island AWS stations. **Peer Advisor – South African Weather Service (SAWS)** The South African Weather Service (SAWS) will act as the SOFF Peer Advisor, providing technical guidance, oversight, and quality assurance throughout the Investment Phase. SAWS will support SMA in equipment specification, installation, verification, and certification, ensuring all observation systems meet WMO's GBON, WIGOS, and WIS 2.0 standards. SAWS will also assist SMA in developing and implementing standard operating procedures (SOPs) for preventive maintenance, verification, and data quality control. Regular peer-review missions and on-site technical assistance will help verify progress and compliance. In addition, SAWS will provide targeted training and capacity development for SMA staff, including hands-on workshops in station maintenance, hydrogen-safety management, and data verification. **Coordination and Governance** Project oversight will be provided by a Project Steering Committee (PSC) chaired by the Chief Executive Officer (CEO) of the Seychelles Meteorological Authority (SMA), ensuring national ownership and alignment with SMA's mandate. The PSC will include members of the PMU, representatives from the Ministry of Environment, Climate, Energy and Natural Resources, the Ministry of Finance, National Planning and Trade, the World Bank, and SAWS. The Committee will meet quarterly to review implementation progress, financial performance, risk management, and alignment with GBON targets. Operational management will follow a clear reporting sequence within one integrated PMU structure. The SMA Technical Coordinator embedded in the PMU will obtain, validate and consolidate technical, site-readiness, safeguards and station-performance inputs from SMA's existing units, maintain technical accountability to the SMA Chief Executive Officer, and work operationally with the PMU Project Manager/Coordinator. The PMU will lead procurement, finance, contract administration, safeguards coordination, M&E and consolidated reporting, and will submit implementation information to the World Bank. This arrangement will be documented in the Project Operations Manual and a RACI/roles matrix. Quarterly coordination meetings will be held mainly through virtual or hybrid arrangements. The recipient-based PMU will consolidate quarterly implementation information, including inputs coordinated by the embedded SMA Technical Coordinator, and submit it to the World Bank. The World Bank will provide the required quarterly updates and annual and final reports to the SOFF Secretariat and remains accountable for project delivery and results. SAWS will provide technical review findings, and the WMO Technical Authority will provide specialized backstopping and final verification. This execution model ensures efficient and accountable delivery of SOFF investments through established national systems and international standards. By combining the World Bank's fiduciary expertise, SMA's operational leadership, and SAWS's technical mentorship, Seychelles will implement a coordinated and results-driven Investment Phase—achieving GBON compliance, strengthening institutional capacity, and ensuring sustainable meteorological observation and data-sharing systems across the archipelago.
Private sector involvement	Private sector engagement is a core element of the Seychelles SOFF Investment Phase and is embedded in both the GBON National Contribution Plan (NCP, January 2025) and the Seychelles Meteorological Authority (SMA) Strategic Plan 2025–2029, which identify public–private partnerships (PPP) as a key instrument for achieving operational efficiency and financial sustainability. The private sector will play a significant role in supporting the installation, operation, and maintenance of GBON infrastructure and in leveraging innovation and resources to strengthen the resilience and long-term sustainability of Seychelles' meteorological services. **Strategic rationale** Seychelles' small-island geography, dispersed over a vast 1.37 million km² Exclusive Economic Zone (EEZ), poses significant logistical and financial challenges for operating and maintaining its meteorological observing network. To address these challenges, the NCP and SMA Strategic Plan call for collaborative partnerships with private and semi-private entities active across the islands. This PPP approach aligns with the SOFF Operational Manual's business-model framework, emphasizing partnerships that enhance sustainability, efficiency, and innovation in GBON operations. **Anticipated roles of the private sector** The Seychelles Meteorological Authority (SMA) will formalize collaboration with private and semi-private entities through Memoranda of Understanding (MoUs), service-level agreements, and public–private partnership frameworks established under the SMA Strategic Plan. Anticipated roles include: 1. Operations and maintenance support for outer-island AWS stations Private operators and civil society organizations with established presence and logistical capacity on outer islands will assist SMA with routine inspection, minor maintenance, and security of AWS installations. Entities such as the Island Development Company (IDC) and the Seychelles Islands Foundation (SIF)—which manage several of the islands hosting GBON sites—will integrate site monitoring into their regular operational schedules. This collaboration, grounded in the NCP's Module 2 on institutional partnerships, will reduce logistical costs, improve network uptime, and strengthen local ownership of observation infrastructure. 2. Shared logistics and infrastructure utilization SMA will collaborate with private companies and parastatal entities, such as IDC, SIF, and the Public Utilities Corporation (PUC), to share transport, power, and communication infrastructure. These arrangements will include joint use of vessels, aircraft, solar energy systems, and satellite communications to maintain GBON stations efficiently across the archipelago. 3. Data services, innovation, and technology collaboration The Investment Phase will also promote private-sector participation in data transmission, cloud-based data management, and the co-development of tailored meteorological information services. Partnerships with telecommunications and technology companies will strengthen network connectivity and support the development of value-added services while maintaining adherence to WMO's principles of free and open data exchange for GBON observations. 4. Corporate Social Responsibility (CSR) and sponsorship initiatives Businesses operating in key sectors such as tourism, fisheries, and insurance will be invited to contribute to GBON network sustainability under Corporate Social Responsibility (CSR) frameworks. Potential contributions include sponsoring AWS equipment, co-financing maintenance operations, or supporting awareness campaigns that highlight the socioeconomic benefits of weather and climate data. **Stakeholder engagement and coordination** Structured stakeholder engagement processes will ensure transparent and inclusive private-sector participation. SMA, under its Strategic Plan and business-model implementation, will: • organize consultations and partnership meetings with key entities such as IDC, SIF, PUC, and telecommunications providers to define clear roles, resource-sharing arrangements, and co-financing opportunities; • establish MoUs or partnership agreements defining responsibilities, performance standards, and data-management protocols consistent with GBON and SOFF requirements; • include private-sector representatives in relevant Project Steering Committee discussions to ensure coordination between

	public and private partners; and • collaborate with civil society organizations (CSOs) for awareness and outreach to strengthen community participation and protection of observation sites. All private-sector partnerships will be governed by transparent agreements that ensure quality assurance, compliance with WMO and national standards, and accountability to the SMA. **Sustainability through partnership** Integrating the private sector into the operation and sustainability of the GBON network directly supports the SMA Strategic Plan's goals of financial diversification, innovation, and enhanced public service delivery. This partnership model reflects the SOFF Operational Manual's guidance on leveraging private-sector efficiency, technology, and financing to complement public-sector leadership. Through these arrangements, the SOFF Investment Phase will strengthen the sustainability and resilience of Seychelles' observing network by reducing operational costs, improving logistical reach, and fostering innovation. This collaborative approach will ensure that Seychelles' GBON operations are not only nationally owned but also supported by a robust, inclusive ecosystem of private and community partners—laying the foundation for long-term meteorological excellence and regional cooperation across the Southwest Indian Ocean.
Civil society participation	The participation of civil society organizations (CSOs) is a cornerstone of the Seychelles SOFF Investment Phase and aligns with both the GBON National Contribution Plan (NCP, January 2025) and the Seychelles Meteorological Authority (SMA) Strategic Plan 2025–2029. Civil society engagement will help build local ownership, ensure equitable access to meteorological information, and enhance the sustainability of the GBON network, particularly across the outer islands where community involvement and awareness are essential. **Strategic rationale** Seychelles' population is geographically dispersed across a vast archipelago, making local partnerships critical to the effective operation and safeguarding of observation infrastructure. The NCP (Module 4) emphasizes the importance of involving civil society in awareness raising, site protection, and the promotion of gender-responsive and inclusive climate services. By engaging CSOs, local communities, and NGOs, SMA aims to strengthen public understanding of the value of systematic observations for disaster preparedness, food security, and environmental protection. Civil society engagement under SOFF will also reinforce national efforts to localize the Early Warnings for All (EW4All) initiative and support the SMA's gender and inclusion commitments, ensuring that vulnerable and underrepresented groups have equal opportunities to benefit from, and contribute to, climate and weather services. **Anticipated roles of civil society organizations** Under the SOFF Investment Phase, CSOs will participate in several key areas of implementation and outreach, working in close collaboration with SMA and local authorities. Their anticipated roles include: 1. Awareness raising and community outreach CSOs will support SMA in organizing outreach campaigns and community workshops to raise awareness of the importance of meteorological observations and early-warning systems. These activities will promote understanding of how local weather data contributes to national and global climate resilience and will encourage community stewardship of meteorological sites. The Seychelles Islands Foundation (SIF) and environmental NGOs such as the Island Conservation Society (ICS) will play leading roles in this outreach, using their established community networks to reach schools, youth groups, and coastal communities. 2. Support for the maintenance and protection of observation infrastructure In collaboration with the Island Development Company (IDC) and other local partners, CSOs will assist in first-line maintenance, routine inspection, and site protection of AWS installations on outer islands. This local participation will help prevent vandalism, facilitate reporting of technical issues, and enhance sustainability by reducing travel and logistical costs for SMA. These arrangements will be formalized through Memoranda of Understanding between SMA and participating organizations, ensuring clarity on roles, responsibilities, and reporting processes. 3. Gender equality and inclusion In line with the NCP's gender and CSO strategy, SMA will collaborate with organizations such as the Gender and Media Plus Association of Seychelles (GEM Plus) to ensure gender-sensitive service delivery and equal participation in training, outreach, and employment opportunities under SOFF. This includes integrating gender perspectives into local engagement activities and empowering women and youth to participate in STEM fields related to meteorology and climate services. 4. Feedback and citizen engagement CSOs will serve as intermediaries between SMA and the public, facilitating two-way communication on community needs, challenges, and service satisfaction. This participatory approach will strengthen the relevance and uptake of SMA's products and services, supporting improved feedback mechanisms for impact-based forecasting and early-warning dissemination. **Stakeholder engagement and coordination** To ensure structured and inclusive participation, SMA will establish a Civil Society Engagement Framework within its SOFF implementation plan. This will include: • Stakeholder mapping to identify local NGOs, community-based organizations, and advocacy groups active in environmental protection, education, and social development; • Consultative workshops at the national and island levels to co-design outreach and awareness activities; • Formal agreements and reporting mechanisms to ensure CSO contributions are aligned with GBON and SOFF operational standards; and • Regular consultations with CSO representatives through the Project Steering Committee, which will provide updates on implementation progress and opportunities for collaboration. **Sustainability and social impact** Civil society participation will strengthen the long-term sustainability of the GBON network by embedding community responsibility in site management and data stewardship. It will also foster social inclusion by ensuring that women, youth, and vulnerable populations are active participants in climate resilience and early-warning systems. This aligns with the SMA Strategic Plan's objectives of building community partnerships, promoting inclusive climate action, and enhancing public understanding of meteorological services. Through this integrated approach, SOFF investments will extend beyond infrastructure to create a community-based support system that safeguards Seychelles' observing network, improves data availability, and enhances societal resilience to weather and climate risks.
Fiduciary systems	Fiduciary arrangements are recipient-executed and country-anchored. Procurement, financial management, contract administration, reporting and audit will be carried out through the Seychelles-based PMU associated with the SSWMP Project, under World Bank Investment Project Financing procedures and oversight. **Procurement** Procurement of all SOFF-funded activities, including goods, consulting services, non-consulting services, and civil works, will be carried out in accordance with the World Bank Procurement Regulations for Investment Project Financing Borrowers, dated September 2023. A Project Procurement Strategy for Development (PPSD) will be prepared to outline the procurement approach, risks, and market analysis, accompanied by a detailed Procurement Plan covering the first 18 months of implementation. All procurement activities will use the World Bank's Systematic Tracking of Exchanges in Procurement (STEP) system, which is mandatory for all World Bank-financed projects. STEP will serve as the platform for recording, tracking, and monitoring procurement processes and contract implementation to ensure real-time transparency and oversight. Procurement oversight and fiduciary responsibilities will be centralized within the Project Management Unit (PMU) established under the

	Seychelles Solid Waste Management Project (P181243), housed within the Ministry of Environment, Climate, Energy and Natural Resources. This PMU has demonstrated strong procurement capacity under World Bank-financed projects and will be responsible for ensuring compliance with procurement guidelines, reviewing bid evaluations, and managing contract documentation. The Seychelles Meteorological Authority (SMA) will prepare technical specifications and terms of reference for procurement packages and contribute to the technical evaluation of the bids, while the PMU will manage bidding, overall evaluation, and contract award processes in collaboration with the World Bank's regional procurement team. **Financial Management** Financial Management (FM) of all SOFF activities will be carried out in accordance with the World Bank Directive: Investment Project Financing and related FM policies and procedures. The FM system will ensure that project funds are used for their intended purposes efficiently and in compliance with applicable regulations. FM responsibilities will also be managed through the PMU at the Ministry, which already provides fiduciary support for World Bank-financed operations in Seychelles. The PMU will coordinate closely with the SMA's Finance Unit to ensure accurate and timely financial recording, accounting, and reporting. The PMU's existing financial management staff—experienced in World Bank operations—will maintain all SOFF-related financial records, process disbursements, and oversee financial reporting. A dedicated Designated Account for SOFF funds will be opened and managed by the Ministry of Finance, National Planning and Trade, following World Bank disbursement guidelines. All payments, reimbursements, and advances will be processed in accordance with the approved Disbursement and Financial Information Letter (DFIL). Detailed financial management procedures, including flow of funds, authorization controls, and reporting formats, will be described in the Project Operations Manual (POM), which will be finalized prior to project effectiveness. The POM will also include clear instructions for segregation of duties between SMA (technical execution) and the PMU (fiduciary management). **Financial Reporting** The PMU will prepare Unaudited Interim Financial Reports (IFRs) on a semester (six-monthly) basis, consolidated from SMA's financial records. These IFRs will include an analysis of expenditures for the reporting period, cumulative spending to date, outstanding commitments, and comparison with the overall project budget. The IFRs will be submitted to the World Bank within 45 days after the end of each calendar semester through the World Bank's Client Connection system. In addition, the PMU will prepare annual project financial statements, incorporating all SOFF components and expenditures, within six months after the end of each fiscal year (June 30). The statements will be submitted to the World Bank and made publicly available in accordance with the Government of Seychelles' transparency and accountability policies. **Audit** The Office of the Auditor General (OAG) of Seychelles will be responsible for auditing all project accounts. The OAG is the constitutionally mandated authority for auditing public assets, liabilities, equity, and financial statements of public bodies and agencies. Annual audit reports and management letters will be submitted to the World Bank within six months after the end of each fiscal year. Audit findings and recommendations will be reviewed jointly by the PMU, SMA, and the World Bank to ensure timely implementation of corrective actions and continuous improvement of fiduciary performance. **Capacity building and ongoing support** To maintain high fiduciary standards, the World Bank will provide training and technical assistance to PMU and SMA staff on financial management, procurement, and reporting systems. Periodic supervision missions, procurement post-reviews, and financial management assessments will be conducted to ensure ongoing compliance with the World Bank's fiduciary policies. Through these arrangements, the SOFF Investment Phase will operate within an established fiduciary framework that ensures transparency, accountability, and effective use of funds. Leveraging the existing World Bank Project Management Unit at the Ministry will allow Seychelles to build on proven institutional mechanisms, enabling the Seychelles Meteorological Authority to focus on technical implementation while maintaining the highest standards of financial management and procurement oversight.
Social and environmental safeguards	The SOFF Investment Phase in Seychelles will be implemented in accordance with national environmental and social laws and the World Bank Environmental and Social Framework (ESF, 2018), which establishes the mandatory requirements for projects supported through Investment Project Financing. The ESF ensures that activities are designed and executed in an environmentally and socially sustainable manner, and that potential risks and impacts are identified and managed appropriately. Given the limited scale and scope of the proposed SOFF activities—primarily involving the rehabilitation and replacement of existing surface observation infrastructure, and improvement and automation of the existing upper-air station on government-owned land or managed sites—the overall environmental and social risk is assessed as low. The proposed interventions are not expected to cause significant or irreversible impacts on people or the environment. **Applicable Environmental and Social Standards** Projects supported through SOFF are required to meet the following Environmental and Social Standards (ESSs) under the ESF: • ESS1: Assessment and Management of Environmental and Social Risks and Impacts • ESS2: Labor and Working Conditions • ESS3: Resource Efficiency and Pollution Prevention and Management • ESS4: Community Health and Safety • ESS5: Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement • ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources • ESS8: Cultural Heritage • ESS10: Stakeholder Engagement and Information Disclosure **Environmental Safeguards** Environmental risks under the SOFF Investment Phase are low. All civil works will take place at existing or previously disturbed sites managed by the Seychelles Meteorological Authority (SMA), and no large-scale construction or land clearance will occur. Activities will involve installation or rehabilitation of meteorological and upper-air equipment with minimal environmental footprint. Environmental management will follow the Environment Protection Act (1996, amended 2016) and relevant implementing regulations, which govern environmental impact assessment, pollution control, and waste management. The Ministry of Environment, Climate, Energy and Natural Resources serves as the national authority for environmental oversight, ensuring compliance with both national and World Bank safeguards. Potential minor risks—such as small quantities of waste generated from packaging or equipment replacement, noise, or limited emissions during installation—will be mitigated through the preparation of appropriate Environmental and Social Risk Management Plan instruments. Contractors will comply with the World Bank Group Environmental, Health, and Safety (EHS) Guidelines to manage waste, emissions, and occupational safety. **Social Safeguards and Gender Inclusion** Social risks are also assessed as low, as SOFF activities will not involve land acquisition, physical resettlement, or adverse impacts on livelihoods. All GBON stations will be installed on government-owned land, and no sensitive communities will be affected. Community health and safety risks—such as those related to equipment transport or minor construction works—will be mitigated through clear health and safety protocols, communication with local communities, and contractor adherence to site safety measures. The Seychelles Meteorological Authority has a proven record of stakeholder engagement and operates within a framework of transparency and inclusivity. In line with ESS10, the SMA will implement a Stakeholder Engagement Plan (SEP) to ensure ongoing consultation and information sharing with national institutions, local communities, civil society organizations, and outer-island management entities. A simple and accessible Grievance Redress Mechanism (GRM) will be established to address any concerns from stakeholders during implementation.

	Gender equality is a national priority and a guiding principle of the SMA Strategic Plan 2025–2029 and the GBON National Contribution Plan (2025). SOFF implementation will promote gender-responsive approaches by: • ensuring balanced participation of women and men in training, technical roles, and decision-making positions; • supporting outreach programs that encourage women and youth to pursue careers in meteorology and climate services; and • tracking gender-disaggregated indicators to monitor equitable participation and benefits. All project personnel and contractors will adhere to a Code of Conduct addressing labor conditions and Sexual Exploitation, Abuse, and Harassment (SEA/SH) prevention, in line with ESS2. Labor Management Procedures (LMP) will ensure fair employment practices, safe working environments, and effective grievance channels for workers. **Cultural and Community Considerations** Seychelles has no Indigenous Peoples as defined under ESS7, and all GBON sites are located on state-owned land. However, ESS8 (Cultural Heritage) will be applied through a "chance find" procedure included in all civil works contracts, ensuring that any discovery of cultural or historical artifacts is handled in accordance with national laws. Stakeholder engagement will continue throughout the Investment Phase, ensuring transparency, inclusivity, and the participation of community representatives, civil society organizations, and private partners in discussions related to installation, maintenance, and data sharing. **Oversight and Compliance** The World Bank, as the Implementing Entity, will oversee compliance with the ESF and provide technical supervision through its environmental and social specialists. The Project Management Unit (PMU) under the Ministry, which manages World Bank–financed projects such as the Solid Waste Management Project (P181243), will provide fiduciary and safeguards support for SOFF. All safeguards instruments—including ESMPs, Labor Management Procedures (LMP), and the Stakeholder Engagement Plan (SEP)—will be prepared and disclosed in accordance with World Bank requirements. In summary, the environmental and social risks associated with the SOFF Investment Phase in Seychelles are low and readily manageable through existing institutional systems and World Bank safeguards procedures. By applying sound environmental management, stakeholder engagement, and gender-responsive practices, the project will ensure that all SOFF activities are implemented in a safe, inclusive, and sustainable manner consistent with Seychelles' national standards and international best practices.
Dispute resolution mechanism	The SOFF Secretariat will be promptly informed in case of urgent matters, otherwise through regular reporting requirements. A transparent and accessible Grievance Redress Mechanism (GRM) will be established for the SOFF Investment Phase in Seychelles to ensure that any concerns or complaints arising during project preparation or implementation are addressed promptly, fairly, and effectively. The GRM will operate at two levels: a project-level mechanism managed by the Seychelles Meteorological Authority (SMA) and the Project Management Unit (PMU) under the Ministry of Environment, Climate, Energy and Natural Resources, and the World Bank's corporate mechanisms for grievance redress and independent inspection. **Project-level Grievance Redress Mechanism** The SMA will establish and operate a dedicated Grievance Redress Mechanism (GRM) as part of the project's stakeholder engagement and safeguards management framework. The GRM will be open to all project stakeholders, including local communities, contractors, employees, and partner institutions, and will provide clear, accessible channels for submitting complaints or feedback related to environmental, social, or operational issues. Complaints may be submitted verbally, in writing, or electronically through designated contact points at SMA headquarters, field offices, and community liaison representatives. The mechanism will ensure confidentiality, maintain a grievance register, and apply transparent timelines for acknowledgment, investigation, and resolution of grievances. The GRM will be managed by the Environmental and Social Focal Point within the recipient-based PMU. The SMA Technical Coordinator embedded in the PMU will facilitate site-level intake, follow-up and coordination with SMA and island partners, while the SMA Chief Executive Officer will retain institutional oversight for matters falling within SMA's mandate. Quarterly reports summarizing grievances received, actions taken and outcomes achieved will be consolidated by the PMU and shared with the World Bank as part of project monitoring and reporting. **World Bank Grievance Redress Service (GRS)** Communities and individuals who believe that they are adversely affected by a World Bank–supported project may also submit complaints directly to the World Bank's Grievance Redress Service (GRS). The GRS ensures that complaints are promptly reviewed to address project-related concerns and that complainants receive timely responses. Complaints to the GRS may be submitted at any time after concerns have first been raised with the project's implementing agencies and an opportunity has been provided for resolution at the local level. Submissions can be made by email, letter, or through the GRS online form. Information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS) is available at: http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service. **World Bank Inspection Panel** In addition to the GRS, project-affected communities and individuals may contact the World Bank's independent Inspection Panel, which determines whether harm has occurred or could occur as a result of the World Bank's non-compliance with its operational policies and procedures. Complaints may be submitted to the Inspection Panel at any stage after concerns have been raised with World Bank Management and a reasonable opportunity for resolution has been provided. Information on how to submit complaints to the World Bank Inspection Panel is available at: www.inspectionpanel.org. This multi-tiered dispute resolution framework—combining a local project-level GRM and World Bank corporate accountability mechanisms—ensures that communities, individuals, and other stakeholders have safe, accessible, and transparent avenues to raise concerns, seek redress, and participate constructively in the implementation of the SOFF Investment Phase in Seychelles.
Additional relevant policies and procedures	The World Bank, as the Implementing Entity for the SOFF Investment Phase in Seychelles, will apply its established institutional policies, standards, and procedures governing fiduciary management, procurement, environmental and social safeguards, and corporate accountability. These policies ensure that all project activities are implemented with transparency, efficiency, and sustainability in line with international best practices. The World Bank is an accredited Implementing Entity of the Green Climate Fund (GCF) since 2015 (with accreditation renewed in 2021) and one of the founding Implementing Agencies of the Global Environment Facility (GEF) since its creation in 1991. Through these roles, the Bank supports developing countries in delivering climate change adaptation, mitigation, and environmental sustainability initiatives. It also serves as the Trustee of the Climate Investment Funds (CIF) and as a global partner of the Early Warnings for All (EW4All) initiative and the Risk-Informed Early Action Partnership (REAP), both of which directly complement the objectives of SOFF in strengthening climate resilience and early warning systems. All SOFF-funded activities in Seychelles will therefore adhere to the Systematic Observations Financing Facility (SOFF) Operational Manual, as well as the following World Bank corporate frameworks and policies: • The World Bank Environmental and Social Framework (ESF, 2018), which defines the environmental and social standards for all Investment Project Financing operations; • The World Bank Procurement Regulations for Investment Project Financing Borrowers (September 2023), ensuring fairness, economy, and transparency in all procurement activities; • The World Bank Directive: Investment Project Financing, governing financial management, disbursement, and oversight; • The World Bank Access to Information Policy, which guarantees transparency and disclosure of project-related information; and

	• The World Bank Anti-Corruption Guidelines (2011, revised 2016), ensuring integrity, accountability, and zero tolerance for fraud or corruption in project implementation. The World Bank also applies specialized Good Practice Notes and corporate guidance on areas such as labor management, gender-based violence (GBV) risk mitigation, occupational health and safety, and stakeholder engagement, which will guide the design and execution of all SOFF-related activities. Furthermore, as a global leader in climate resilience and data-driven adaptation, the World Bank will ensure that SOFF implementation in Seychelles is coordinated with regional and international programs under its broader climate and resilience portfolio—particularly the GCF/AFD/EU Hydromet Project (FP161) and the CREWS South-West Indian Ocean (CREWS-SWIO) initiative—promoting synergies across national and regional early warning and observation systems. All World Bank policies and procedures—including project supervision, reporting, fiduciary management, and safeguards compliance—will apply to SOFF activities in Seychelles. These institutional systems will ensure that implementation meets the highest standards of quality, transparency, and sustainability while supporting the Government of Seychelles and the Seychelles Meteorological Authority (SMA) in delivering on the objectives of the GBON National Contribution Plan (2025) and the SMA Strategic Plan 2025–2029.

SDG Targets

Target	Description
Main Goals	
Goal 13. Take urgent action to combat climate change and its impacts2	
TARGET_13.1	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
TARGET_13.2	13.2 Integrate climate change measures into national policies, strategies and planning
TARGET_13.3	13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
TARGET_13.b	13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
Secondary Goals	
Goal 5. Achieve gender equality and empower all women and girls	
TARGET_5.5	5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision- making in political, economic and public life

SDG Indicators

Indicator Code	Description
C130b01	13.b.1 Number of least developed countries and small island developing States that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for effective climate c

Contribution to SDGs

Participating Organization	% TARGET_5.5	% TARGET_13.1	% TARGET_13.2	% TARGET_13.3	% TARGET_13.b	% Total
WMO	10%	30%	10%	30%	20%	100
WB	10%	30%	10%	30%	20%	100

Project Results / Indicators / Work Plan

Note: Costing in Seychelles is high because transport to the outer islands is irregular and expensive. SMA will negotiate with the Island Development Company and other partners to reduce logistics costs. Procurement is recipient-executed through the Seychelles-based PMU associated with the WASTE Project, and SMA is not tax-exempt. The budget therefore includes a conservative ceiling for import duties, VAT and customs charges. The PMU and SMA will first pursue and document all available exemptions, waivers, refunds or other relief; only unrecoverable charges will be financed, and any savings will be reallocated with the required approvals.

Outcome	Output
1. GBON institutional and human capacity developed	1.1 National Consultations conducted

Title	Description	Lead Participating Organization	Participating Organization	Other Organizations	Indicator Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Total Target Value	Target Completion Year	Annual Targets				
																Y1	Y2	Y3	Y4	Y5
Conduct district consultation workshops for CSO participation (7 GBON surface stations' rehabilitation; and 1 upper-air), specifically with a focus on women's empowerment		World Bank	WMO		Number of consultation workshops		Annual or semi-annual progress updates	Capacity	At closure	Country	Number	0	2026	7	2027	7				
		World Bank	WMO		Women participants in consultations (# and %)	Percentage and absolute number of female participants in consultation workshops; absolute number to be reported for each event	Annual or semi-annual progress updates	Capacity	At closure	Country	Number and Percentage	0	2026	At least 30% and absolute # reported	2027	30				
		World Bank	WMO		Number of CSOs consulted		Annual or semi-annual progress updates	Capacity	At closure	Country	Number	0	2026	7	2027	7				
Launch an awareness-raising campaign (national event + outreach materials) on the use and value of GBON infrastructure linked to sensitization on the use of climate services for community - led (anticipatory)		World Bank	WMO		Number of national events		Annual or semi-annual progress updates	Capacity	At closure	Country	Number	0	2026	1	2027	1				
		World Bank	WMO		Women participants in national event (# and %)	Percentage and absolute number of female participants in the national event	Annual or semi-annual progress updates	Capacity	At closure	Country	Number and Percentage	0	2026	At least 30% and absolute # reported	2028	30				
		World Bank	WMO		Number of outreach materials developed and distributed		Annual or semi-annual progress updates	Capacity	At closure	Country	Number	0	2026	2	2028		2			

	action					at schools (#)														
	Organize SOFF Project Steering Committee meetings with relevant government entities, using hybrid/virtual arrangements where practical		World Bank	WMO	SAWS	Number of Steering Committee meetings	Number of Steering Committee meetings held and documented.	Annual or semi-annual progress updates	Policy	Twice a year	Country	Number	0	2026	10	2031	2	2	2	2	2
	Semi-annual in-country Peer Advisor review missions and participation in Steering Committee meetings		WMO	World Bank	SAWS	Women participants in PSC meetings (# and %)	Percentage and absolute number of women participants in Steering Committee meetings.	Annual or semi-annual progress updates	Policy	Twice a year	Country	Number and percentage	0	2026	At least 50% and absolute # reported	2031	20	30	40	50	50

1.2 NMHS institutional capacity developed

Title	Description	Lead Participating Organization	Participating Organization	Other Organizations	Indicator Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Total Target Value	Target Completion Year	Annual Targets				
																Y1	Y2	Y3	Y4	Y5
Develop SOPs for monitoring, maintenance, and verification/ calibration of GBON network for SMA linked to a 5-year GBON Network sustainability plan (incl. financial sustainability plan) - aligned with Quality Management Systems (QMS)		WMO	World Bank	SAWS	Number of GBON O&M SOPs and sustainability plan developed (#)		Annual or semi-annual progress updates	Capacity	At closure	Country	Number	0	2026	1	2029			1		
Develop and operationalize an SMA		World Bank	WMO		Number of SMA business		Annual or semi-annual	Policy	At closure	Country	Number	0	2026	1	2029			1		

	business model linked to the GBON Network sustainability plan					models developed (#)		progress updates												
	Configure and validate SMAONE-WIS2.0Box interoperability (technical configuration, mission/travel support and troubleshooting)		WMO	World Bank	SAWS	Number of logs	Develop maintenance, verification and metadata logs technical configuration/validation support and related mission/travel costs where required, not routine software licensing	Annual or semi-annual progress updates	Capacity	At closure	Country	Number	0	2026	3	2029	0	1	3		
	Develop Environmental and Social Impact Assessments for 7 AWS sites and 1 Upper-air site		World Bank	WMO		Number of Environmental and Social Impact Assessments / screenings completed		Annual or semi-annual progress updates	Policy	At closure	Country	Number	7	2026	7	2027	7				
	Develop a Gender Equity and Social Inclusion (GESI) plan within the framework of GBON implementation, including SMA and other institutions that will be involved at local level		World Bank	WMO		Number of GESI plan developed (#)		Annual or semi-annual progress updates	Policy	At closure	Country	Yes/No	0	2026	1	2028	No	Yes			

	PMU established with roles and responsibilities matrix, including a gender focal point	Establish PMU arrangements and approve a roles matrix clarifying World Bank/PMU fiduciary functions, SMA technical execution, and SAWS PA advisory/QA support. Assign a gender focal point and ensure PMU reporting captures gender-disaggregated participation and training data.	World Bank	WMO	SAWS	PMU established and roles matrix approved (Yes/No) Gender focal point appointed and gender-disaggregated reporting used (Yes/No)	Includes named fiduciary, technical, M&E, safeguards and gender responsibilities.	Annual or semi-annual progress updates	Capacity	At start-up	Country	Yes/No	No	2026	Yes	2027	Yes				
	Enhance visibility of country-specific SOFF investments through communication materials and specialized support		World Bank	WMO		Commination materials developed		Annual or semi-annual progress updates	Capacity	At closure	Country	Yes/No	No	2026	Yes	2026	Yes	Yes	Yes	Yes	Yes
	Strengthen the capacity of SMA Management on strategic partnership management, and creating shared value partnerships, with an emphasis on PPP		WMO	World Bank	SAWS	SMA staff trained	Number of training reports (#)	Annual or semi-annual progress updates	Capacity	At closure	Country	Number	0	2026	1	2028	0	1			
	1.3 NMHS human capacity developed																				

	Title	Description	Lead Participating Organization	Participating Organization	Other Organizations	Indicator Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Total Target Value	Target Completion Year	Annual Targets				
																	Y1	Y2	Y3	Y4	Y5
	Strengthen the capacity of SMA staff on operation and maintenance of GBON stations		WMO	World Bank	SAWS	SMA staff trained on operation and maintenance of GBON stations (# and % women)	Number of SMA staff trained, sex-disaggregated; percentage of women trained to be reported.	Annual or semi-annual progress updates	Capacity	At closure	Country	Number	0	2026	5	2028		5			
	Strengthen the capacity of SMA staff on Conducting an Upper Air ascent and interpretation of Upper Air Data		WMO	World Bank	SAWS	SMA staff trained on upper-air operations (# and % women)	Number of SMA staff trained on upper-air ascent and data interpretation, sex-disaggregated; percentage of women trained to be reported.	Annual or semi-annual progress updates	Capacity	At closure	Country	Number	0	2026	5	2029			5		
	Train local CSOs and IDC (Island development Company) on preventive maintenance of AWS /routine inspection and site protection)		World Bank	WMO		Number of local CSOs trained		Annual or semi-annual progress updates	Capacity	At closure	Country	Number	0	2026	12	2031	0	0	6	0	6

Outcome	Output	Description
2. GBON infrastructure in place	2.1 New land-based stations in place	New land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place

Activities (add rows as needed)

Title	Description	Lead Participating Organization	Participating Organization	Other Organizations	Indicator Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Total Target Value	Target Completion Year	Annual Targets				
																Y1	Y2	Y3	Y4	Y5

2.2 Improved land-based stations in place	Improved land-based stations and related equipment, ICT systems, data management systems and standard operating practices in place

Activities

Title	Description	Lead Participating Organization	Participating Organization	Other Organizations	Indicator Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Total Target Value	Target Completion Year	Annual Targets				
																Y1	Y2	Y3	Y4	Y5
Rehabilitation/replacement of 7 land-based AWS stations	Rehabilitate/upgrade the Seychelles International Airport AWS and replace/reactivate AWSs on Aldabra, Desroches, Farquhar, La Digue, Praslin and Coetivy. Activities include site works, power/communications, telemetry, data ingestion into SMAONE	World Bank	WMO	SAWS (technical advice)	Number of land-based AWS stations improved/ rehabilitated/ replaced	Number of stations as defined in the National Contribution Plan	Annual or semi-annual progress updates	Investment	At closure	Country	Number	0	2026	7	2029	0	0	7		
Field verification equipment, including mobile toolkits	It includes two complete sets of field verification equipment, including the necessary toolkits	World Bank	WMO		Number of kits for equipment verification	Number as defined in the National Contribution Plan	Annual or semi-annual progress updates	Investment	At closure	Country	Number	0	2026	1	2028	0	0	1		
ICT infrastructure for SMAONE – WIS2Box interoperability in order to improve automation of data collection	It includes: server virtualization, raised floor + windows, fire detection and suppression, 2xMHS servers + SLA, 3 laptops, networking equip, storage backup,	World Bank	WMO		Fully interoperability between SMAONE-WIS2Box		Annual or semi-annual progress updates	Investment	At closure	Country	Yes/No	No	2026	Yes	2028			Yes		

	, quality control, WIS 2.0 exchange and monitoring	connectivity, service support																			
	Support to the development of the technical specifications, ensuring that they are aligned with applicable WMO standards, and that the installation and configuration are carried out correctly so that the observations are properly represented as compliant (green) in WDQMS and meet GBON compliance requirements		WMO	World Bank	SAWS	Number of reports		Annual or semi-annual progress updates	Investment	At closure	Country	Number	0	2026	2	2029	1		1			

2.3 New upper-air stations in place	New upper-air stations and related equipment, ICT systems, data management systems and standard operating practices in place

Activities

Title	Description	Lead Participating Organization	Participating Organization	Other Organizations	Indicator Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Total Target Value	Target Completion Year	Annual Targets				
																Y1	Y2	Y3	Y4	Y5

2.4 Improved upper-air stations in place	Improved upper-air stations and related equipment, ICT systems, data management systems and standard operating practices in place

Activities

	Title	Description	Lead Participating Organization	Participating Organization	Other Organizations	Indicator Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Total Target Value	Target Completion Year	Annual Targets					
																	Y1	Y2	Y3	Y4	Y5	
	Improvement of existing upper-air stations	Rehabilitate the Seychelles International Airport upper-air station, including ground receiving system, antennas, computer, software, ballon room repair and static-proofing; upgrading hydrogen generation and purification systems; installing UPS backup, improved lighting and safety signage; and procuring radiosondes, ballons, hydrogen storage and consumables	World Bank	WMO	SAWS (technical advice)	Number of upper-air stations improved	Number of stations as defined in the National Contribution Plan	Annual or semi-annual progress updates	Investment	At closure	Country	Number	0	2026	1	2029	0	0	1			
	Support to the development of the technical specifications, ensuring that they are aligned with applicable WMO standards, and that the installation and configuration are carried out correctly so that		WMO	World Bank	SAWS	Number of reports		Annual or semi-annual progress updates	Investment	At closure	Country	Number	0	2026	1	2029			1			

	the observations are properly represented as compliant (green) in WDQMS and meet GBON compliance requirements																				

Outcome	Output	Description
3. Sustained compliance with GBON	3.1 GBON land-based stations commissioning period completed	GBON land-based stations' commissioning period completed, country- specific standard cost for operations and maintenance established, and data sharing verified by WMO Technical Authority

Activities

Title	Description	Lead Participating Organization	Participating Organization	Other Organizations	Indicator Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Total Target Value	Target Completion Year	Annual Targets				
																Y1	Y2	Y3	Y4	Y5
Commissioning of 7 improved land-based AWS stations and transition to Compliance phase	Commission 7 rehabilitated/replaced land-based AWS stations. It includes the provision of spare parts for 3 years, preventive and corrective maintenance, including visits to the stations twice per year; and field verification. Calibration will be outsourced in accordance with the O&M plan, taking into account the specified calibration intervals and the field verification results for each instrument at	World Bank	WMO		GBON land-based AWS stations' commissioned	Number of stations as defined in the National Contribution Plan	Annual or semi-annual progress updates SOFF Compliance tool	Other	At closure	Country	Number	0	2026	7	2031				7	7

	the international airport station.																			
Support and advice on O&M and commissioning period, as well as transition to the Compliance Phase, to ensure that observations remain GBON compliance		WMO	World Bank	SAWS	Number of reports		Annual or semi-annual progress updates	Investment	At closure	Country	Number	0	2026	6	2031			2	2	2	

3.2 GBON upper air stations' commissioning period completed	GBON upper air stations' commissioning period completed, country- specific standard cost for operations and maintenance established, and data sharing verified by WMO Technical Authority

Activities (add rows as needed)

Title	Description	Lead Participating Organization	Participating Organization	Other Organizations	Indicator Title	Description	Means of Verification	Category	Cycle	Scope	Value Type	Baseline Value	Baseline Year	Total Target Value	Target Completion Year	Annual Targets				
																Y1	Y2	Y3	Y4	Y5
Commissioning of improved upper-air stations and transition to Compliance phase	Commission the improved Seychelles International Airport (Mahé) upper-air station, verify data sharing, O&M and safety arrangements, and support transition to the SOFF Compliance Phase. In includes: Consumables (including radiosonde+ balloon+ hydrogen gen) to maintain consistent	World Bank	WMO		GBON upper air stations' commissioned	Number of stations as defined in the National Contribution Plan	Annual or semi-annual progress updates SOFF Compliance tool	Other	At closure	Country	Number	0	2026	1	2031				1	1

		operation of upper-air stations with 2 launches per day in 2 years																			
	Support and advice on O&M and commissioning period, as well as transition to the Compliance Phase, to ensure that observations remain GBON compliance		WMO	World Bank	SAWS	Number of reports		Annual or semi-annual progress updates	Investment	At closure	Country	Number	0	2026	4	2031				2	2	

The World Bank will 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 applicable) 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.

[4]

Risks

The Investment Phase Risk Management Framework follows the SOFF Risk Management Framework and the methodology established by the Multi-Partner Trust Fund Office (MPTFO), incorporating relevant programmatic risks, country-specific risks, mitigation measures, responsible parties, likelihood, impact and monitoring arrangements. Risks will be reviewed through quarterly updates and annual UNMPTF narrative reporting

		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)

Event	Category	Level	Likelihood	Impact	Mitigating Measures	Risk Owner
Challenges in Cooperation, Joint coordination and mis- alignment of goals and processes.	Organizational	Medium	Unlikely	Major	A clear governance structure will be defined through the Financing Agreement between the Government of Seychelles and the World Bank. A detailed Project Operations Manual (POM) will outline roles, responsibilities, and communication protocols. A Project Steering Committee (PSC) chaired by the SMA CEO will meet quarterly to ensure coordination between the SMA, the Ministry of Environment, Climate, Energy and Natural Resources, the World Bank, and SAWS. Regular joint progress reviews and reporting will prevent misalignment.	SMA / World Bank / SAWS
Non-compliance with fiduciary and procurement standards in some SOFF activities	Financial	Medium	Rare	Major	The World Bank will conduct a fiduciary and procurement capacity assessment for the Project Management Unit (PMU) under the Ministry. Continuous training and supervision will ensure adherence to the World Bank Procurement Regulations (Sept 2023) and the Investment Project Financing Directive. The Systematic Tracking of Exchanges in Procurement (STEP) system will track all procurement actions to ensure transparency.	World Bank / PMU (Ministry of Environment, Climate, Energy and Natural Resources)
SOFF-funded investments cause environmental or social impacts	Social and Environmental	Medium	Unlikely	Moderate	Environmental and social risks are expected to be minimal. Prior to installation or rehabilitation of Phase 1 stations, Environmental and Social Management Plans (ESMPs) will be prepared under the World Bank Environmental and Social Framework (ESF 2018).	SMA / PMU (Ministry of Environment, Climate, Energy and Natural Resources)
Delays in procurement, shipping, and installation of equipment due to logistical challenges across outer islands	Operational	High	Possible	Major	SMA will coordinate closely with the Island Development Company (IDC)for transport and site logistics. Procurement contracts will include flexible delivery schedules and a logistics contingency budget. Regular monitoring of supply chains and advance customs clearance will minimize delays.	SMA / PMU (Ministry of Environment, Climate, Energy and Natural Resources)
Insufficient human capacity or technical skills to install and maintain GBON infrastructure and ICT systems	Operational	High	Possible	Major	The SOFF Investment Phase funds recruitment of a Technical Officer and targeted training for SMA engineers and observers on AWS installation, verification/calibration, hydrogen safety, and WIS 2.0. Continuous mentorship will be provided by SAWS. Workforce planning under the SMA Strategic	SMA / SAWS

Event	Category	Level	Likelihood	Impact	Mitigating Measures	Risk Owner
					Plan (2025–2029) will reinforce sustainability.	
NMHS staff depart after being trained	Organizational	High	Possible	Major	To minimize turnover, SMA will implement staff retention measures including professional development opportunities, recognition incentives, and career progression under the SMA Strategic Plan (2025–2029). Training multiple staff in each technical specialty will ensure redundancy.	SMA
Operational efficiency risk, causing low implementation and delays in procurement, installation and capacity building activities, resulting in failure of the project	Operational	High	Possible	Major	The SMA will work closely with the World Bank and SAWS to monitor progress through quarterly implementation reviews. The PMU at the Ministry will provide dedicated procurement and financial management support. A logistics contingency budget and framework contracts with suppliers will reduce implementation delays.	SMA / PMU (Ministry of Environment, Climate, Energy and Natural Resources) / World Bank
Insufficient funding for maintenance and consumables (e.g., radiosondes, hydrogen, travel)	Financial	High	Possible	Major	The Investment Phase will operationalize the GBON Business Model (Module 2) to diversify funding and secure co-financing through the national budget, cost-recovery from aviation and specialized services, and partnerships with IDC, SIF, and PUC. SOFF Compliance Phase support will sustain operations.	SMA / Ministry of Environment, Climate, Energy and Natural Resources / Ministry of Finance
Equipment damage, theft, or vandalism (particularly on outer islands)	Operational	Medium	Unlikely	Major	All AWS sites will be fenced and secured; partnerships with IDC, SIF, and local CSOs will provide local monitoring and maintenance. SMA will procure insurance and maintain a reserve of spare parts.	SMA / IDC / SIF
Data transmission failure or unreliable communications networks	Technical	Medium	Unlikely	Moderate	SMA will upgrade data links to 4G/5G LTE with satellite redundancy at remote sites. Real-time monitoring dashboards in SMAONE will alert technicians to outages. ICT staff will receive advanced training on troubleshooting and WIS 2.0 protocols.	SMA / ICT Division
Loss of data due to server failure or power interruptions	Technical	Medium	Unlikely	Moderate	The project will finance server virtualization, backup power (UPS + generator), and cloud-based replication. A disaster-recovery plan will be developed under the SMA Quality Management System (QMS).	SMA / PMU (Ministry of Environment, Climate, Energy and Natural Resources)
Limited gender inclusion or weak engagement with local communities and civil society	Social	Low	Unlikely	Minor	Implementation of the Stakeholder Engagement Plan (SEP) and Gender Action Plan will ensure inclusive participation. Collaboration with Gender and Media Plus (GEM Plus) and local NGOs will promote gender balance and community awareness.	SMA / PMU (Ministry of Environment, Climate, Energy and Natural Resources)
After the conclusion of the Investment phase, GBON data are not collected or shared or are shared of insufficient quality	Operational	Medium	Rare	Major	The Investment Phase will fund a transition plan to ensure sustained operations and high-quality data exchange. The SMAONE system will be fully integrated with WIS 2.0, and training will be provided for continuous data management and quality control. SOFF Compliance Phase support will ensure data sharing verification by the WMO Technical Authority.	SMA / World Bank / SAWS
Destruction or theft of SOFF- financed equipment and infrastructure	Operational	Medium	Unlikely	Major	All AWS and upper-air sites will be fenced, secured, and monitored through local partnerships with IDC, SIF, and community organizations. Preventive maintenance visits will occur quarterly. SMA will maintain a contingency stock of spare parts and insure high-value equipment.	SMA / IDC / SIF
Countries cannot make optimal use of data, including accessing or using improved forecasts products from the Global Producing Centers throughout the	Operational	Medium	Unlikely	Moderate	The project includes comprehensive capacity building for SMA staff in data processing, quality assurance, and use of global Numerical	SMA / SAWS / WMO / ECMWF

Event	Category	Level	Likelihood	Impact	Mitigating Measures	Risk Owner
hydromet value chain					Weather Prediction (NWP) products. SAWS and WMO will provide technical mentoring to ensure the effective use of GBON data across the hydromet value chain. A partnership has been established between SMA and the European Centre for Medium-range Weather Forecasts (ECMWF) to ensure capacity building and effective use of ECMWF data and products.	
Political instability and regulatory risks which will impact the successful completion of the Investment Phase	Political	Medium	Rare	Major	Political risks in Seychelles are low due to a stable governance environment. The Investment Phase will maintain flexibility in scheduling and financing to adapt to unforeseen administrative changes. All activities are aligned with government priorities under the SMA Strategic Plan (2025–2029), ensuring policy continuity.	SMA / Ministry of Environment, Climate, Energy and Natural Resources / World Bank
Capacity gaps in technical skills after completion of the investment phase	Organizational	High	Possible	Major	The project includes a detailed capacity transfer plan with ongoing training by SAWS and WMO. SMA will institutionalize training programs in hydrogen generation, AWS maintenance, and data management. A dedicated Technical Officer position will be retained for long-term operations under the GBON business model.	SMA / SAWS
Disasters due to natural hazards (cyclones, flooding, or transport disruptions)	Operational	High	Possible	Major	Station design and procurement specifications will explicitly incorporate resilience requirements, ensuring that all observation stations can operate under extreme conditions such as tropical cyclones. Equipment foundations will be reinforced, towers elevated, and solar systems protected against wind and salt corrosion. Procurement contracts will include provisions for post-disaster replacement or repair. SMA will maintain emergency response SOPs, redundancy in data storage, and offsite backups to minimize downtime.	SMA / IDC / PMU (Ministry of Environment, Climate, Energy and Natural Resources)

Budget by UNSDG Categories: Over all

Budget Lines	Description	World Bank	WMO	Total
1. Staff and other personnel	PMU and project-based technical support for coordination, procurement/finance liaison, M&E, safeguards/gender, technical oversight and reporting. Personnel costs are limited to Phase 1 implementation.	$ 119'200.00	$ 0.00	$ 119'200.00
2. Supplies, Commodities, Materials	Surface AWS and Mahé upper-air consumables/spares, radiosondes/balloons, sensors, batteries, communications parts, workshop materials and safety consumables required for Phase 1 operations. Knowledge exchange and capacity building.	$ 782'300.00	$ 0.00	$ 782'300.00
3. Equipment, Vehicles, and Furniture, incl. Depreciation	Equipment for 7 surface AWS rehabilitation/replacement packages and the existing Mahé upper-air upgrade only.	$ 1'195'000.00	$ 0.00	$ 1'195'000.00
4. Contractual services	Contractual services for technical configuration, maintenance support, WIS2Box/SMAONE integration, safeguards/ESMP support and PA advisory services. WMO amount reflects PA/WMO support costs.	$ 27'100.00	$ 236'600.00	$ 263'700.00
5. Travel	Travel and logistics for Phase 1 site supervision, outer-island surface station rehabilitation, training.	$ 105'400.00	$ 0.00	$ 105'400.00
6. Transfers and Grants to Counterparts	Small transfers/grants for counterpart engagement, CSO participation and local awareness activities linked to Phase 1 GBON rehabilitation.	$ 35'000.00	$ 0.00	$ 35'000.00
7. General Operating and other Direct Costs	General operating, local logistics, installation support, civil works, site preparation, communications and	$ 591'899.81	$ 0.00	$ 591'899.81

	operational support for Phase 1 only.			
Project Costs Sub Total		**$ 2'855'899.81**	**$ 236'600.00**	**$ 3'092'499.81**
8. Indirect Support Costs		$199'912.99	$ 16'562.00	$ 216'474.99
Total		**$ 3'055'812.80**	**$ 253'162.00**	**$ 3'308'974.80**

Performance-based Tranches Breakdown

Tranche			Total
Tranche 1	WB (70%)	$ 2'139'068.96	$ 2'223'447.85
	WMO (33.33%)	$ 84'378.89	
Tranche 2	WB (30%)	$ 916'743.84	$ 1'001'122.73
	WMO (33.33%)	$ 84'378.89	
Tranche 3	WB (0%)	$0.00	$ 84'404.21
	WMO (33.34%)	$ 84'404.21	
			$ 3'308'974.80

Results based budget

Outcome *	Output *	Agency *	Budget (USD) *
1. GBON institutional and human capacity developed		Sub Total	$ 943'799.81
	1.1 National Consultations conducted	WB	$ 143'800.00
		WMO	$ 69'000.00
	1.2 NMHS institutional capacity developed	WB	$ 558'999.81
		WMO	$ 62'200.00
	1.3 NMHS human capacity developed	WB	$ 81'600.00
		WMO	$ 28'200.00
2. GBON infrastructure in place		Sub Total	$ 1'074'400.00
	2.1 New land- based stations in place	WB	$ 0.00
		WMO	$ 0.00
	2.2 Improved land-based stations in place	WB	$ 599'200.00
		WMO	$ 34'000.00
	2.3 New upper-air stations in place	WB	$ 0.00
		WMO	$ 0.00
	2.4 Improved upper-air stations in place	WB	$ 430'000.00
		WMO	$ 11'200.00
3. Sustained compliance with GBON		Sub Total	$ 1'074'300.00
	3.1 GBON land-based stations commissioning period completed.	WB	$ 531'300.00
	3.1 GBON land-based stations commissioning period completed.	WMO	$ 24'000.00
	3.2 GBON upper air stations' commissioning period completed.	WB	$ 511'000.00
	3.2 GBON upper air stations' commissioning period completed.	WMO	$ 8'000.00
Total			$ 3'092'499.81