

30 March 2023

Decision item 4.2

SOFF Risk Management Framework

Fourth Steering Committee meeting

Systematic Observations
Financing Facility

**Weather
and climate
data for
resilience**



Decision item 4.2: Adoption of the SOFF risk management framework

The Steering Committee:

Adopts the SOFF risk management framework as submitted to the Steering Committee on 24 March 2023

Requests beneficiary countries, peer advisors, Implementing Entities, WMO Technical Authority and SOFF Secretariat to use this Risk Management Framework to guide their activities related to SOFF

Requests the SOFF Secretariat:

- To monitor the risk management framework drawing on information from beneficiary countries, peer advisors, Implementing Entities and WMO Technical Authority
- To provide regular progress updates at Steering Committee meetings

SOFF Risk Management Framework

1. Introduction

This risk framework identifies 16 most important risks that SOFF may face at the contextual, institutional and programmatic level during the first implementation period (July 2022 – July 2025). For each risk, it identifies mitigation measures and reviews the significance of its residual risk. Finally, it proposes monitoring and reporting arrangements at different levels – from the country to the governance level – to monitor, review, and decide on additional actions should specific risks materialize.

The framework is expected to be reviewed after the third year of SOFF implementation. The review will be informed by the lessons learnt captured in the independent external evaluation, expected to take place in the third year of SOFF operation.

2. Risk Management Framework structure

The risk framework considers risks at three levels:

- **Contextual risks** – risks related to the SOFF UN Multi-Partner Trust Fund (UN MPTF), the global and country contexts, and other high-level risks
- **Institutional risks** – risks related to the SOFF governance, compliance with UN standards and other institutional arrangements
- **Programmatic risks** – risks related to individual country operations and common risks to multi-country operations or the portfolio at large

For each risk, the risk framework includes the following:

- **Description:** Identification and description of the risk and specific circumstances when it may materialize
- **Risk level:** Low, Medium, High, Very high
- **Likelihood:** Rare, Unlikely, Possible, Likely, Very likely
- **Impact:** Insignificant, Minor, Moderate, Major, Extreme
- **Risk mitigation measures:** Description of the planned measures to prevent identified risks from materializing and responding to risks when they occur
- **Residual risk after mitigation measures:** Description of potential instances when risks materialize and the context under which they may occur, generally related to issues or circumstances outside the SOFF control
- **Significance of residual risk:** Low, medium, or high

The risk categories and scale follow the Multi-Partner Trust Fund Office (MPTFO) guidance on [Establishing, Managing and Closing Multi-Donor Trust Funds](#). Table 1 below shows the risk matrix which underpins the assessment of the risks identified for the first SOFF implementation period (Figure 1). The assessment was done based on extensive consultations, including feedback from the WMO Technical Authority, MPTFO and other SOFF Steering Committee members.

Table 1: UN MPTFO risk matrix

		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)

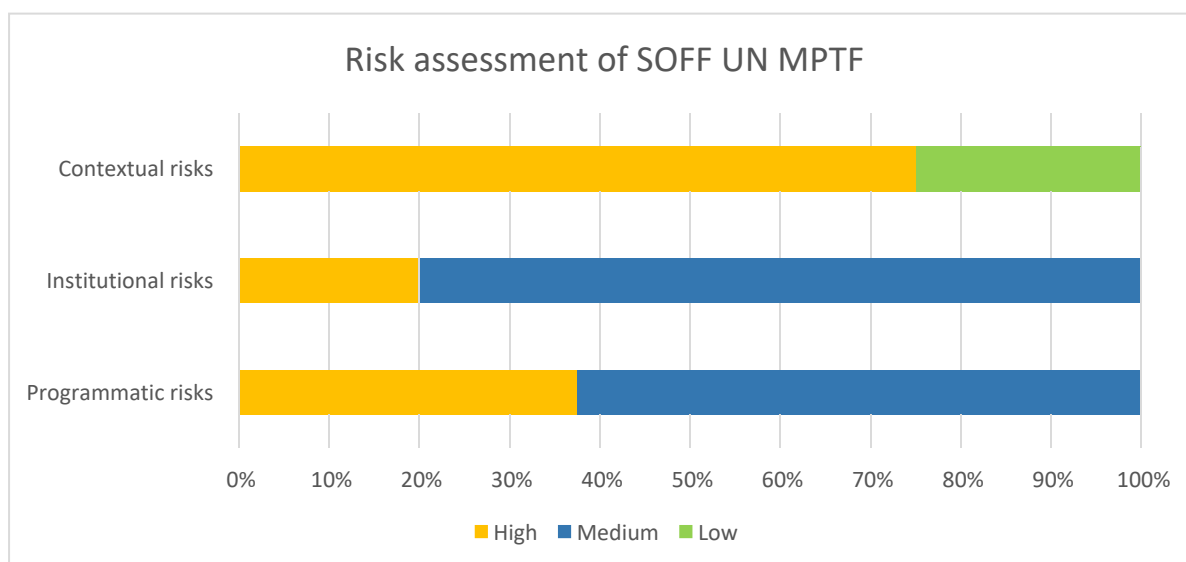


Figure 1: Assessment of the risks identified for the first SOFF implementation period

The assessment of identified contextual, institutional and programmatic risks shows that the SOFF UN MPTF operates within overall high contextual risks. Several contextual risks are rated as high due to the global and country contexts, and other high-level factors which are outside of SOFF control. Institutional and programmatic are generally rated as medium, with few high risks associated to the implementation in countries with challenging socio-economic contexts, such as Fragile Conflict-afflicted States (FCS).

3. SOFF Risk Management Framework

1. Contextual risks		
Risk	Risk Mitigation Measures	Residual risk after mitigation measures
<p>1.1 Insufficient institutional capacity and/or political commitment in recipient countries to ensure successful implementation of SOFF</p> <p>Risk level: High</p> <p>Likelihood: Possible</p> <p>Impact: Moderate</p> <p>Significance of residual risk: Medium</p>	<ul style="list-style-type: none"> • SOFF programming approach responds only to country demand and a specific request from the head of the National Meteorological and Hydrological Service (NMHS). It considers the capacity to deliver support in the country and its capacity to absorb SOFF support. • During the Readiness phase the peer advisors conduct an in-depth assessment of the country's capacity and challenges. Based on this assessment, and in dialogue with the country, they recommend feasible activities in light of the expected institutional and political constraints. • The peer advisors and Implementing Entities regularly communicate with national counterparts to build effective engagement and political support. • SOFF long-term, open-ended results-based payments significantly incentivize countries to prioritize the operation and maintenance of SOFF investments. 	<ul style="list-style-type: none"> • Capacity constraints in LDCs and SIDS are likely to persist despite risk mitigation measures. • Governments change regularly, which may lead to a shift in political priorities and de-prioritization of SOFF country activities. • Trained counterpart staff may leave agencies leading to loss of built institutional capacity.
<p>1.2 Programmatic targets cannot be reached because of conflict and/or political insecurity negatively</p>	<ul style="list-style-type: none"> • The SOFF Secretariat works with the Implementing Entities (incl. those with experience in fragile and conflict-affected states) to assess the situation in countries and explore the most appropriate approaches to provide SOFF support. 	<p>Implementation of SOFF activities might need to be halted (or not even started) in a very few countries if the security situation deteriorates, despite the risk mitigation measures and proactive engagement.</p>

1. Contextual risks

Risk	Risk Mitigation Measures	Residual risk after mitigation measures
<p>affecting SOFF implementation</p> <p>Risk level: High</p> <p>Likelihood: Possible</p> <p>Impact: Major</p> <p>Significance of residual risk: Medium</p>	<ul style="list-style-type: none"> • During the preparation and implementation of the Readiness phase peers and countries are expected to communicate to the Secretariat if they encounter early difficulties and potential institutional and political risks that need to be monitored. • For each SOFF-supported country, a risk management framework is developed during the Readiness and Investment Phase. This includes a high-level risk country/regional assessment and mitigation measures for political risks with a focus on possible conflict or instability in cooperation with the Implementing Entities. • SOFF favours a regional programmatic approach. If a country is affected by insecurity/conflict, the operations in the neighbouring countries can provide some helpful observations coverage. 	
<p>1.3 Multi-country or single-country SOFF operations may not appeal to all Implementing Entities</p> <p>Risk level: Low</p> <p>Likelihood: Unlikely</p>	<ul style="list-style-type: none"> • SOFF programming is the result of consultations with the Implementing Entities and the peer advisors where their interest in working with either single or multi-country operations is explored and expectations clarified. • The SOFF Secretariat facilitates the matching between countries, peers, and implementing entities based on expressions of interest by the three 	<p>Despite the consultation, some Implementing Entities and peers are unwilling to support specific operations. The Secretariat identifies alternative peers and Implementing Entities to lead those specific operations.</p>

1. Contextual risks

Risk	Risk Mitigation Measures	Residual risk after mitigation measures
<p>Impact: Minor</p> <p>Significance of residual risk: Low</p>	<p>partners and their indication of capacity and long-term commitment to deliver SOFF support.</p>	
<p>1.4 SOFF is not able to mobilize sufficient resources to reach the funding targets necessary to meet the operational targets</p> <p>Risk level: High</p> <p>Likelihood: Possible</p> <p>Impact: Major (depending on the size of the gap)</p> <p>Significance of residual risk: Medium</p>	<ul style="list-style-type: none"> • Active resource mobilization continues during SOFF implementation, with the support of UNDP, UNEP, and WMO leadership. SOFF as foundational element of the UN Early Warning for All initiative is expected to facilitate fundraising. • The Steering Committee members actively reach out to additional potential funding partners to promote SOFF and help to mobilize resources to reach the funding targets. • The SOFF Communication Strategy developed in collaboration with the Steering Committee members identifies opportunities for outreach and fundraising. • The SOFF Secretariat and the MPTFO monitor and regularly report to the Steering Committee the status of funds and alert them of potential critical financial gaps ahead of financial decisions. • The SOFF Secretariat works with WMO, World Bank and other partners in advancing the understanding on and advocacy of the socio-economic value of GBON 	<p>The implementation of the investment phase is delayed. Fewer countries can be supported and SOFF is not able to meet the programmatic targets. The programmatic targets need to be adjusted in line with the available resources.</p>

1. Contextual risks

Risk	Risk Mitigation Measures	Residual risk after mitigation measures
	observations and the importance of financing a global public good.	

2. Institutional Risks

Risk	Risk Mitigation Measures	Residual risk after mitigation measures
<p>2.1 SOFF Secretariat capacity is insufficient to manage SOFF operations</p> <p>Risk level: Medium Likelihood: Unlikely Impact: Moderate Significance of residual risk: Low</p>	<ul style="list-style-type: none"> • The SOFF Steering Committee assesses the performance of the SOFF Secretariat and ensures the Secretariat is appropriately staffed and resourced. • The SOFF Secretariat informs the Steering Committee of any capacity constraints before it starts affecting its functioning. 	<p>The workload increases exponentially during SOFF implementation and the Secretariat staff resources do not grow as quickly. The Secretariat will work closely with its partners to hire staff and mobilize secondments and young professionals as needed.</p>
<p>2.2 WMO Secretariat capacity is insufficient to carry out its duties as SOFF Technical Authority effectively</p> <p>Risk level: Medium Likelihood: Unlikely Impact: Moderate Significance of residual risk: Low</p>	<ul style="list-style-type: none"> • The WMO Technical Authority in collaboration with the SOFF Secretariat and based on the SOFF Operational Manual has defined terms of reference, and annual projections of expected workload and the required human resources to efficiently carry out their duties are developed. • The SOFF Secretariat maintains a regular engagement and coordination with the WMO Technical Authority to ensure smooth delivery of its functions, including informing WMO of changes to the expected workload and technical support demands. • The SOFF Secretariat regularly monitors the operations and facilitates the communication between the peer advisors, beneficiary countries and the WMO Technical Authority. 	<p>Despite careful planning, potential peaks of workload might occur and might affect the capacity of the Technical Authority to provide just-in time support, hence slowing down the implementation of SOFF operations in the beneficiary countries.</p>

2. Institutional Risks

Risk	Risk Mitigation Measures	Residual risk after mitigation measures
<p>2.3 SOFF Trust Fund is mismanaged, compromising its operations and causing reputational damage</p> <p>Risk level: Medium Likelihood: Unlikely Impact: Moderate Significance of residual risk: Low</p>	<ul style="list-style-type: none"> • As a UN-MPTF, SOFF is governed by UNDP policies including UNDP Procurement ethics, Fraud and Corrupt Practices Policy and other relevant policies. • The governance structure is designed to ensure appropriate policies are developed, implemented and monitored, ensuring full oversight, reporting, transparency, and accountability functions 	<p>External circumstances outside of SOFF control may affect its operations and reputation.</p>
<p>2.4 Some peer advisory services are of insufficient quality to support SOFF implementation</p> <p>Risk level: High Likelihood: Possible Impact: Moderate Significance of residual risk: Medium</p>	<ul style="list-style-type: none"> • Early and proactive engagement with the peer advisors to ensure an adequate understanding of SOFF technical requirements and quality control. • Through the SOFF Operational Guidance Handbook the peer advisors receive detailed technical guidance including templates and as needed technical support from WMO Technical Authority. • The peer advisory services can be provided in tandem by two NMHSs, allowing peers to strengthen their capacity jointly. • SOFF Secretariat promotes and facilitates a strong network among peers with constant review of lessons learned and knowledge sharing. 	<p>A very small number of peer advisors may not be capable of providing high-quality products in new geographies and in challenging contexts.</p>

2. Institutional Risks		
Risk	Risk Mitigation Measures	Residual risk after mitigation measures
	<ul style="list-style-type: none"> • Continuous feedback from beneficiary countries and Implementing Entities on the work of the peer advisor is collected and reviewed by the SOFF Secretariat. 	
<p>2.5 The SOFF Co-creators, Steering Committee and Advisory Board do not agree on the trajectory of SOFF scope and operations</p> <p>Risk level: Medium</p> <p>Likelihood: Rare</p> <p>Impact: Moderate</p> <p>Significance of residual risk: Low</p>	<ul style="list-style-type: none"> • Highly participatory decision processes, strong commitment by the co-founders, the Steering Committee and the Advisory Board members are essential to ensure successful implementation. • The SOFF Operational Manual adopted by the Steering Committee clearly defines the SOFF decision-making processes. 	<p>A small number of stakeholders may not agree with the overall SOFF trajectory.</p>

3. Programmatic Risks		
Risk	Risk Mitigation Measures	Residual risk after mitigation measures
<p>3.1 Non-compliance with fiduciary and procurement standards in some SOFF activities</p> <p>Risk level: Medium Likelihood: Unlikely Impact: Major Significance of residual risk: Medium</p>	<ul style="list-style-type: none"> • SOFF relies on the Implementing Entities' fiduciary and procurement standards during the Investment phase, as per MPTFO standard practice. The Implementing Entities need to sign an agreement with MPTFO before receiving funds that includes fiduciary and procurement standards. • WMO Technical Authority guidance. Peer advisors and Implementing Entities are provided with extensive WMO guidance on standards and good practices for implementing GBON. • Through the annual reports of the Implementing Entities and regular monitoring of the activities, the SOFF Secretariat is informed of any possible risks of actual non-compliance situations and the corrective actions that the Implementing Entities are planning to take. 	<p>Even with strong fiduciary and procurement standards, procedures, and oversight in place, there is a residual risk of non-compliance in weak governance environments.</p>
<p>3.2 NMHS staff depart after being trained</p> <p>Risk level: High Likelihood: Possible Impact: Major Significance of residual risk: Medium</p>	<ul style="list-style-type: none"> • During the SOFF Readiness phase the country capacity needs are assessed, including human resources. The Investment phase provides support to build human and institutional capacity in the country. The Compliance phase provides O&M support, which includes staff-costs. These measures are expected to help to hire/retain staff when this was due to financial constraints. 	<p>Even with SOFF support, trained staff might decide to leave for other reasons, leaving a capacity gap in the NMHS.</p> <p>Countries that opt for a fully public business model may have challenges providing competitive salaries.</p>

3. Programmatic Risks		
Risk	Risk Mitigation Measures	Residual risk after mitigation measures
	<ul style="list-style-type: none"> • SOFF requests countries to explore public-private partnerships to achieve a cost-effective and efficient implementation of the GBON National Contribution Plan. Through a partnership with the private sector the country could potentially access intermediate financial resources and employ trained personal under private sector conditions in cases where public sector salaries are not adequate to keep this type of personal. 	
<p>3.3 SOFF-funded investments cause environmental or social impacts</p> <p>Risk level: Medium Likelihood: Unlikely Impact: Major Significance of residual risk: Low</p>	<ul style="list-style-type: none"> • SOFF relies on the environmental and social standards, guidelines, and procedures of the Implementing Entities, as per MPTFO standard practice. • The grievance and control mechanisms of SOFF Implementing Entities' are applied, as per MPTFO standard practice. • The large majority of investments to be financed by SOFF are expected to have modest environmental and social impacts that can be appropriately handled with clear mitigation measures. 	<p>Even with strong environmental and social standards, procedures, and oversight in place, there is some residual risk of non-compliance.</p>

3. Programmatic Risks

Risk	Risk Mitigation Measures	Residual risk after mitigation measures
<p>3.4 Slow implementation and delays in procurement, installation and capacity building activities</p> <p>Risk level: High</p> <p>Likelihood: Likely</p> <p>Impact: Moderate</p> <p>Significance of residual risk: Medium</p>	<ul style="list-style-type: none"> • SOFF programming criteria ensure that in the beneficiary countries, Implementing Entities and peer advisors have delivery capacities. It also focuses on balancing the SOFF portfolio between countries with challenging contexts and countries with opportunities for "easy fixes"¹. • SOFF peer advisors provide technical advice to the Implementing Entities of the countries they are supporting when facing technical difficulties. • The funding requests are the result of multiple consultation processes with the countries, the peer advisors and the Implementing Entities where foreseeable issues related to procurement and installation are discussed and potential solutions identified. • The SOFF Secretariat closely monitors implementation and facilitate troubleshooting among SOFF partners to find solutions or corrective measures. • The WMO Technical Authority provides additional ad hoc technical guidance on GBON implementation to peer advisors and Implementing Entities. 	<p>Even with strong risk mitigation measures, situations where factors outside SOFF control delay the implementation may arise (from economic crises to conflict).</p>
<p>3.5 After the conclusion of the Investment phase, GBON data are not collected or</p>	<ul style="list-style-type: none"> • SOFF support is strictly conditioned to GBON requirements. Investment decisions are grounded on the 	<p>Even with the innovative payment mechanism, there may be some cases where the country is not able to make the</p>

¹ These are countries where through relatively small interventions, stations and related infrastructure can be fixed to start quickly delivering the data into the global system as per GBON regulations.

3. Programmatic Risks

Risk	Risk Mitigation Measures	Residual risk after mitigation measures
<p>shared or are shared of insufficient quality or do not improve forecast skills/climate services</p> <p>Risk level: Medium to High</p> <p>Likelihood: Unlikely to likely (depending on country)</p> <p>Impact: Major</p> <p>Significance of residual risk: Medium to high</p>	<p>data sharing commitment. Only countries committed to GBON data sharing are supported by SOFF.</p> <ul style="list-style-type: none"> • SOFF contributes to O&M expenses through result-based finance provided upon sharing of data by the beneficiary country. The SOFF Investment Phase includes upfront O&M funding for the GBON network during the first year after the GBON infrastructure has been installed to ensure countries can share the data before the first annual results-based payments kick in. • WMO Technical Authority provides extensive guidance to peer advisors and Implementing Entities on standards and good practices for implementing GBON. • SOFF implementation includes specific capacity-building activities and institutional enhancement measures to ensure the data is collected and shared with the GBON quality requirements. • SOFF Secretariat and WMO Technical Authority monitor progress toward GBON compliance, as part of the SOFF Compliance Framework, including data quality and provide quarterly feedback to countries and their peers. Peers provide on demand support to countries when facing technical difficulties in sharing the data. 	<p>required minimum contribution to O&M (to be complemented by SOFF result-based finance), or security and political conditions interfere with the operation of observation facilities or with the sharing of data.</p>

3. Programmatic Risks

Risk	Risk Mitigation Measures	Residual risk after mitigation measures
	<ul style="list-style-type: none"> • SOFF Secretariat facilitates actions of the SOFF operational partners to support countries when challenges related to O&M are encountered. • Countries are requested to explore options for private-public partnerships in collaboration with the peers and the Implementing Entities. In some countries such partnerships are essential for a cost-effective and efficient implementation of the GBON National Contribution Plan and to ensure sustained GBON compliance. Four basic business models ranging from full public ownership to full private ownership have been developed. 	
<p>3.6 Destruction or theft of SOFF-financed equipment and infrastructure</p> <p>Risk level: High</p> <p>Likelihood: Possible</p> <p>Impact: Major</p> <p>Significance of residual risk: Low</p>	<ul style="list-style-type: none"> • The GBON National Contribution Plan includes measures and considerations for resilient, safeguarded infrastructure. • During the Investment phase a risk management framework is developed which identifies specific risk mitigation measures to address this risk within the specific country context. • Additional financial resources can be requested for the Steering Committee’s decision in cases where the GBON stations are affected by exceptional circumstances (e.g., extreme events, security crisis etc.). the country is allowed to submit a request for an additional investment. • Civil society organizations are involved in building community ownership of SOFF-supported infrastructure 	<p>Even with strong security measures and engagement of the local community, this risk may materialize in very rare situations in very few countries</p>

3. Programmatic Risks

Risk	Risk Mitigation Measures	Residual risk after mitigation measures
	<p>and awareness of their value, potentially identifying a role for the community in protecting the infrastructure and ultimately reducing the risk of theft or vandalism.</p> <ul style="list-style-type: none"> • The SOFF Secretariat closely monitors those countries where such risk is the highest e.g., conflict-affected countries. 	
<p>3.7 Countries cannot make optimal use of data, including accessing or using improved forecasts products from the Global Producing Centers throughout the hydromet value chain</p> <p>Risk level: High Likelihood: Possible Impact: Major Significance of residual risk: Medium</p>	<ul style="list-style-type: none"> • SOFF is working closely with WMO, the peer advisors, and the Global Producing Centers to ensure that SOFF-supported countries can access and use the improved forecast products in their daily operations. • Through intensive coordination efforts with the SOFF Implementing Entities, the major climate and environment funds, CREWS and the peer advisors, SOFF strives to ensure that beneficiary countries receive further support and have the capacity to use the improved forecast products. • The Country Hydromet Diagnostics identifies specific capacity and institutional needs across the value chain to ensure that hydromet investments in the country are better targeted, particularly in areas related to the use of data, forecasts, and products made available by the Global Producing Centres. • The SOFF Secretariat is working closely with the major climate and environment funds, namely the Green 	<p>Despite receiving SOFF support, some countries may still not have adequate capacity to make optimal use of the freely accessible and improved forecast products. These countries might also encounter difficulties in accessing additional funding to build such capacity.</p>

3. Programmatic Risks

Risk	Risk Mitigation Measures	Residual risk after mitigation measures
	<p>Climate Fund, the Adaptation Fund, the Climate Investment Funds and the Global Environment Facility to develop collaboration modalities which will allow the SOFF beneficiary countries to receive complementary support in other areas of the hydrometeorological value chain, including strengthening the capacity to use the data.</p>	

4. Risk Monitoring and Reporting

The monitoring of the risk framework will be done at two levels:

- **Trust fund level monitoring**, including contextual and institutional risks. Reporting of will be done through:
 - SOFF annual reports
 - MPTFO financial reports
 - SOFF implementation progress updates to the Steering Committee
- **Country-level monitoring**, including programmatic risks and overall portfolio risks based on
 - Country risk management framework (Readiness and Investment phase, by the peer advisors and the Implementing Entities respectively)
 - Regular monitoring of the portfolio through output-based reporting of the operations by the operational partners
 - WMO Technical Authority annual GBON compliance reports

The SOFF Secretariat monitors the risk management framework drawing on information from beneficiary countries, peer advisors, Implementing Entities, and WMO Technical Authority. The annual report will provide an overview of the contextual, institutional and programmatic risks, including aggregated information on the country-level risks, trends and mitigation measures underway. In addition, the SOFF Secretariat will provide regular progress updates at Steering Committee meetings. Finally, the independent evaluation will have a critical role in assessing if proper risk management practices are implemented and adapted over time, and in proposing further improvement to the SOFF risk management framework.