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Draft Checklist for SIOFA Bottom Fishing Impact Assessment (BFIA) evaluation according to the SIOFA BFIA Standard

The SIOFA Secretariat

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Abstract	<p>Based on SIOFA regulations, parties must prepare a Bottom Fishing Impact Assessment (BFIA) for all proposed bottom fishing and submit a new one if substantial changes to the fishery occur. These BFIA's are submitted to the Scientific Committee (SC) for evaluation against international standards and the SIOFA BFIA Standards (BFIA's).</p> <p>Following a proposal at a Meeting of the Parties, the SIOFA Secretariat was tasked with developing a standardized checklist. The specific objective of this checklist is to help the SC consistently verify that each BFIA contains and adequately addresses all required components, noting any gaps. The checklist, derived directly from the BFIA's document, also serves as guidance for parties preparing a BFIA to ensure they cover all necessary aspects.</p>

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² Documents available only to members invited to closed sessions.

Recommendations

The Secretariat recommends that the SC revise as needed and adopt the Checklist for SIOFA Bottom Fishing Impact Assessment (BFIA) evaluation according to the SIOFA BFIA Standard.

The Secretariat also recommends that the SC considers the opportunity to revise the BFIA Standard to update it in respect to the current development stage of the RFMO work (e.g., Annex A and B).

Draft Checklist for SIOFA Bottom Fishing Impact Assessment (BFIA) evaluation according to the SIOFA BFIA Standard

Introduction

SIOFA parties are required to prepare a Bottom Fishing Impact Assessment (BFIA) for all proposed bottom fishing activities in the SIOFA Area, irrespective of the proposed scale, area or previous history of such fishing activities. They are also required to prepare a new BFIA if a substantial change in the fishery has occurred, such that it is likely that the risk or impacts of the fishery may have changed. Changes that might trigger a re-assessment would include: expansion in fishing effort or catch, changes in intended fishing areas, management measures or the use of new gear.

These BFIA's have to be submitted to the Scientific Committee (SC) prior to their annual meeting, and the SC is required to evaluate all BFIA's received and provide written advice on:

- The likely cumulative impacts of bottom fishing activity from vessels flying the flag of a participant in the Agreement Area; and
- Whether each BFIA meets an appropriate standard in light of international standards and the SIOFA BFIA's.

As recorded in paragraph 369 of the report of the 12th annual Meeting of the Parties (MoP) of SIOFA, *“Based on the recommendations of SC10 (SC10 Report, para 156), it was proposed that a checklist be developed to assess any BFIA in the future. Mauritius requested that this checklist should be developed.”*

Following this, the SC Chair requested the Secretariat to prepare a draft checklist for the SC to work on and endorse for their use when assessing the BFIA's presented to it in future meetings.

The Secretariat understands that the specific objective of such checklist is for the SC to assess whether a BFIA submitted to an annual meeting adheres to the [SIOFA Bottom Fisheries Impact Assessment Standard](#) (BFIA's). The specific use of this checklist would be for the SC to verify the presence and adequacy of each required component, while noting any gaps or inadequacies. Finally, this checklist can also be used by parties preparing a BFIA proposal as a guidance to ensure that they covered all required aspects.

Methods

This work was conducted through an analysis of the current text of the BFIA's, extracting the requirements from the description of each Section within the document (and providing a reference to it as much as possible).

When preparing the checklist, a paraphrase and shortening of the wording contained in the BFIA's was necessary, and this is always potentially fraught with risks of oversimplifying the requirements. Particular care was thus exercised in summarizing without losing the breadth of the requirement.

Finally, a structure was given to requirements that could help reviewers and proponents alike to progress through the review process with rigour, noting that the BFIA's contains both procedural and scientific requirements.

Results

The following tables detail the requirements outlined in the BFIA in the form of a checklist.

Due to the lack of more structured chapters or paragraphs in the BFIAS, references are made to Sections (§) and pages numbers (p.), and a progressive hierarchical number (#) is added to aid the review process..

Part 1: Foundational & Procedural Requirements				
BFIAS Ref	#	Checklist Item	Scientific Committee evaluation (YES/NO/PARTIAL)	Notes
§4, p.7	1.1	BFIA submitted for all proposed bottom fishing in the SIOFA Area — regardless of scale, history, or gear type.		
§4, p.7	1.2	Submitted ≥30 days prior to SC meeting (or as soon as possible for legacy fisheries).		
§4, p.7	1.3	For new fisheries: BFIA submitted before fishing commences.		
Annex A	1.4	Terms used consistently with Annex A definitions (e.g., VME, New Fishery, Bottom Fishing).		
§2, SIOFA Art. 4(c); §5.3 p.11	1.5	Assessment explicitly applies the precautionary approach (esp. under data limitation).		
§2, p.6; FAO Guidelines (2008)	1.6	Overarching objectives stated: (a) Prevent Significant Adverse Impacts on VMEs; (b) Ensure long-term sustainability of deep-sea stocks.		

Part 2: Core Content — 2.1 Description of Proposed Fishing Activities				
BFIAS Ref	#	Checklist Item	Scientific Committee evaluation (YES/NO/PARTIAL)	Notes
§5.1, p.9	2.1.1	Vessel details provided per SIOFA Data Standards; vessel confirmed on SIOFA record of authorized vessels.		
§5.1, p.9	2.1.2	Full gear description: type, net/bottom line dimensions, door size/weight, footrope, ground gear (bobbins, etc.), fishing height, selectivity factors.		
§5.1, p.9	2.1.3	Seabed depth range, target & bycatch species, intended period/duration specified.		If yes, ensure Part 6 differences are applied.
§5.1, p.9	2.1.4	Quantified effort: # vessels, # tows/sets, estimated duration/distance.		
§5.1, p.9	2.1.5	Estimated total catch & discards (by species).		

Part 2: Core Content — 2.2 Mapping & Description of Proposed Fishing Areas				
BFIAS Ref	#	Checklist Item	Scientific Committee evaluation (YES/NO/PARTIAL)	Notes
§5.2, p.10	2.2.1	Maps at appropriate resolution showing proposed fishing areas.		
§5.2, p.10	2.2.2	Maps overlay: historically fished areas, known/predicted VMEs, bathymetry, seamounts/canyons/etc.		
§5.2, p.10	2.2.3	Baseline description includes seabed type, past fishing, topographic features, VME evidence.		

§5.2, p.10	2.2.4	GIS files provided to Secretariat in compatible format (where possible).		
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Part 2: Core Content — 2.3 Impact Assessment				
BFIAS Ref	#	Checklist Item	Scientific Committee evaluation (YES/NO/PARTIAL)	Notes
§5.3, p.10	2.3.1	Scoping identifies hazards (e.g., gear impact, gear loss/ghost fishing) per UNGA/FAO.		
§5.3, p.11	2.3.2	Risk assessment method for combining criteria is transparent and documented.		
§5.3, p.11	2.3.3	Four risk criteria evaluated: (1) Intensity, (2) Duration, (3) Spatial Extent, (4) Cumulative Impact.		
§5.3, p.11	2.3.4	Intensity defined per BFIAS: None / Low / Medium / High (p.11).		
§5.3, p.11–12	2.3.5	Overall risk level assigned (Low/Medium/High) with operational definitions applied (p.11–12).		
Annex A.7, p.23–24	2.3.6	Gear impact evaluated using Hierarchy of Bottom Fishing Impacts (Annex A.7, Table A1): footprint × effort × likelihood × degree of impact.		
§5.3, p.12–13	2.3.7	VME interactions addressed: likelihood, extent, intensity, habitat vulnerability, biodiversity loss, spatial/duration/cumulative impacts, ghost fishing.		
§5.3, p.11, 23	2.3.8	All assumptions (esp. data gaps) clearly documented.		

Part 2: Core Content — 2.4 Status of Deep-Sea Stocks				
BFIAS Ref	#	Checklist Item	Scientific Committee evaluation (YES/NO/PARTIAL)	Notes
§5.4, p.14	2.4.1	List of target & likely bycatch species provided.		
§5.4, p.14	2.4.2	Tables/figures of historic catches & CPUE trends (nominal or standardised).		
§5.4, p.14	2.4.3	Results of surveys or stock assessments (if available).		
Annex A.3, p.18	2.4.4	Discussion of stock vulnerability (e.g., slow growth, late maturity, low fecundity — per Annex A.3).		

Part 2: Core Content — 2.5 Monitoring, Management & Mitigation				
BFIAS Ref	#	Checklist Item	Scientific Committee evaluation (YES/NO/PARTIAL)	Notes
§5.5, p.14	2.5.1	Measures explicitly linked to risks identified in §2.3.		
§5.5, p.15	2.5.2	VMS details: reporting frequency, accuracy, compliance with SIOFA Data Standards.		
§5.5, p.15	2.5.3	Catch/effort/bycatch reporting systems described and compliant with SIOFA standards — including discards & VME encounter reporting.		
§5.5, p.15	2.5.4	Observer coverage: level, design, data collection per SIOFA Observer Data Standard.		
Annex B, p.25–27; CMM 01	2.5.5	VME encounter protocol aligns with Annex B: (a) indicator taxa list (e.g., scleractinians, antipatharians, stylasterids, crinoids); (b) quantitative thresholds; (c) move-on rules (2nm for		

Part 2: Core Content — 2.5 Monitoring, Management & Mitigation				
BFIAS Ref	#	Checklist Item	Scientific Committee evaluation (YES/NO/PARTIAL)	Notes
		trawls, 1nm for longlines); (d) reporting procedure.		
§5.5, p.15	2.5.6	Effectiveness of mitigation measures evaluated (e.g., risk reduction modelling, per Penney & Guinotte 2013).		

Part 3: New Fisheries (Apply only if 1.6 = YES)				
BFIAS Ref	#	Checklist Item	Scientific Committee evaluation (YES/NO/PARTIAL)	Notes
§6.1, p.15	3.1	Expected (not historical) effort, catch, duration, etc., provided; commitment to update with actual data post-fishing.		
§6.2, p.15	3.2	Predictive approaches used for VME risk (e.g., habitat models); all assumptions documented.		
§6.3, p.16	3.3	Stock status inferred from comparable fisheries or proxy data.		
§6.4, p.16; FAO ¶165	3.4	Precautionary measures include: (a) effort/catch limits; (b) spatial closures/move-on; (c) trigger for reassessment; (d) regular stock review.		

Part 4: Reviewer Considerations (SC Use Only)				
BFIAS Ref	#	Checklist Item	Scientific Committee evaluation (YES/NO/PARTIAL)	Notes
§4.2(a), p.7	4.1	Cumulative impacts of participant's vessels in Agreement Area assessed.		
§4.2(b), p.7	4.2	BFIA meets international standards (e.g., FAO, UNGA) and BFIAS.		

Part 4: Reviewer Considerations (SC Use Only)				
BFIAS Ref	#	Checklist Item	Scientific Committee evaluation (YES/NO/PARTIAL)	Notes
§5.3, p.11, 23	4.3	All data sources, methods, assumptions, and knowledge gaps clearly documented.		

Discussion

Parties can use this as a guide when writing the BFIA, to ensure no required section is missed.

The Scientific Committee can use this as a guide to go through each item systematically. The "Notes" column is crucial for providing specific, actionable feedback to the flag state if the BFIA is inadequate.

There are multiple ways to prepare such a checklist, which can provide either more simplified (e.g., one-page version for high-level overview) or specific (e.g., such as the detailed criteria for "Significant Adverse Impacts" or the hierarchy of gear impacts) versions of these tables.

A good example of the latter could be the specific evidence and protocols for VME encounters from Annex B, which could be expanded into its own table if required.

Incidentally, the Secretariat noted that the BFIAS Annexes could benefit from a revision of their content to align them with the progress of the SIOFA Conservation and Management Measures that occurred after SC2 (when the BFIAS was last reviewed).

Conclusions

References

SIOFA Bottom Fishing Impact Assessment Standard (2017) 29 pp. SC2 Report, Annex I
<https://siofa.org/sites/default/files/files/SIOFA%20Bottom%20Fishing%20Impact%20Assessment%20Standard%20%28BFIAS%29.pdf>