



9th Annual Meeting of the Scientific Committee (SC9)

Bangkok, Thailand, 18–27 March 2024

SC-09-INFO-27

Implementing Area Protection in SIOFA

Deep Sea Conservation Coalition

Document type	working paper <input type="checkbox"/> information paper <input checked="" type="checkbox"/>
Distribution	Public <input checked="" type="checkbox"/> Restricted ¹ <input type="checkbox"/> Closed session document ² <input type="checkbox"/>
Abstract	
<p>The DSCC welcomes the inclusion of ‘Marine protected areas’ on the SC-09 Agenda, including the proposed consideration of the outputs of project PAE2022-MPA1. DSCC notes the considerable progress made on mechanisms to identify and manage protection of VMES. Significant advances have also been made in other international fora relating to the identification and implementation of marine area protection, including for reasons beyond the protection of vulnerable marine ecosystems from significant adverse impacts. DSCC reminds representatives of the considerable earlier work undertaken by the SC to develop a Standard Protocol for future protected areas designation but notes the continued interim status of that Standard Protocol for future protected areas designation, and five declared benthic protected areas developed against the Protocol by the MoP. In the context of its own VME work and other international discussions of relevance, the DSCC believes that SIOFA SC-09 is in a good position to provide substantive advice to MoP11.</p> <p>The paper includes several proposals:</p> <ul style="list-style-type: none">● Revise the Interim Standard Protocol for future protected areas designation, to reflect improved understandings of the criteria listed.● Review the research and management plans of the interim Benthic Protected Areas (BPAs) to update as needed based on latest research.● Review other BPA proposals for new information.	

¹ Restricted documents may contain confidential information. Please do not distribute restricted documents in any form without the explicit permission of the SIOFA Secretariat and the data owner(s)/provider(s).

² Documents available only to members invited to closed sessions.

- In the absence of the PAEWG, establish an intersessional process to consider MPA proposals for each of the criteria identified in the Protocol, including research and monitoring plans for consideration at SC-10.
- **Inform MoP11** that its work on VMEs is sufficiently advanced to be integrated with progress of MPA designation and of its intention to provide specific proposals at MoP12.
- **Advise the MoP11 to**
 - ADOPT the revised Standard Protocol for future protected areas designation.
 - ADOPT the five interim Benthic Protected Areas.
 - Formally recognise seamounts as VMEs.
 - ADOPT all Ecologically or Biologically Significant Areas found fully or partly within SIOFA area as protected areas, including Saya del Malha Bank.
 - ADOPT all Important Marine Mammal Areas (IMMAs) found within SIOFA area as protected areas.

Implementing Area Protection in SIOFA

Introduction

The DSCC welcomes the inclusion of Agenda Item 10: Marine protected areas, and the proposed consideration of the outputs of project PAE2022-MPA1. DSCC notes the considerable progress and recommendations relating to mechanisms to identify and manage protection of VMES, including bioregionalisation of VMEs, systematic planning options using Marxan, biodiversity modelling based on VME indicator taxa, criteria for identifying significant adverse impacts, and an assessment of significant adverse impacts from fishing activities in SIOFA.

This work will aid the SC to refine and revise its Standard Protocol for future protected areas designation (the Protocol). The Protocol lists seven criteria upon which to evaluate proposed areas, in no particular ranking of importance, including but not limited to closure of areas where VMEs were known to occur or where VME indicator thresholds were triggered indicating potential presence of VMEs, including bioregional representation, biodiversity representation, protection of unique and special ecosystems and protection of areas important in the life history stages of threatened or vulnerable species.

DSCC notes the continued interim status of both the Protocol and the five agreed five benthic protected areas. It also recalls the existence of other proposed benthic protected areas, currently being voluntarily applied by SIOFA Members. In addition, substantive discussions and decisions are being made in other international fora concerning the identification and implementation of marine area protection, many of which directly relate to the SIOFA area. DSCC believes SIOFA is in a good position to substantively advance this issue itself.

DSCC proposes that the SIOFA SC

- Revise the Interim Standard Protocol for future protected areas designation, to reflect improved understandings of the criteria listed
- Ensure seamounts are included within VME definition and applies to relevant criteria
- Review the research and management plans of the interim Benthic Protected Areas (BPAs) to update as needed based on latest research
- Review other BPA proposals for new information
- In the absence of the PAEWG, establish an intersessional process to consider MPA proposals for each of the criteria identified in the Protocol, including research and monitoring plans for consideration at SC-10
- **Inform MoP11** that its work on VMEs is sufficiently advanced to be integrated with progress of MPA designation and of its intention to provide specific proposals at MoP12
- **Recommend that MoP11**
 - ADOPT the revised Standard Protocol for future protected areas designation
 - ADOPT the five interim Benthic Protected Areas
 - Recognise seamounts as VMEs
 - ADOPT all Ecologically or Biologically Significant Areas found fully or partly within SIOFA area as protected areas, including Saya de Malha Bank.
 - ADOPT all Important Marine Mammal Areas (IMMAs) found within SIOFA area as protected areas

Actions taken thus far

(Interim) Standard Protocol for Future Protected Area Designation

In the context of work necessary to progress the protection of vulnerable marine ecosystems (VMEs), the first meeting of the SIOFA Scientific Committee (2016) initiated work to develop standards for the identification of future protected areas designation, drawing from guidelines from IUCN, FAO, the Convention on Biological Diversity (CBD) and the academic literature related to the identification of criteria for determining area designation. The MoP4 (2017) adopted the SC-02 proposed standard protocol for future protected area designation (the Protocol). This was further refined and revised by SC-03 In 2018 (SIOFA SC-03 Report. Annex H). The Protocol included criteria for evaluating protected area proposals, including biodiversity, geomorphological and bioregional representation, areas of significance for threatened or important species or ecosystem properties, and consideration of the scientific importance of the area for “understanding ecosystem, biological, geological and biodiversity processes in the SIOFA region”. The Protocol also required the use of best verifiable or substantiated scientific information available, a precautionary approach in the absence of full scientific certainty, an evaluation of adverse impacts on existing users and consideration of other benefits such as education or eco-tourism, and elements useful for the development of a management and research plan.

At MoP5 some Members expressed concerns around the clarity of application of the criteria, how the criteria should be used, which criteria may trigger closure, and the need for further elaboration of information that could support the development of management measures. MoP5 agreed to the adoption of an interim protocol while the Scientific Committee undertook further work, including a ranking and key for use of criteria (MoP5 Report para 40).

SC-04 (2019) updated the Interim Protocol to include environmental indices and a description of the ecological context, determined that the criteria have no particular ranking of importance, and recommended that the MoP adopt the revised protocol (SC-04 Annex L). However, differing views on the scope of the protocol meant MoP6 was unable to formally adopt the revision and the Protocol remained interim.

For the past 4 years, the SC has focused on undertaking research to better understand various elements of identification and protection of VMEs. This has culminated in a collation of reports being presented to SC-09. These include an attempted bioregionalisation of the SIOFA area, consideration of the applicability of the Marxan systematic planning tool and habitat suitability modelling to predict distribution of VMEs from which to develop a network of reserves, a review of possible management measures to prevent significant adverse impacts on vulnerable marine ecosystems, and an assessment of existing significant adverse impacts from fishing activities. No further work has been done to progress the Protocol or adopt new protected areas.

Adoption of Interim Benthic Protected Areas (IPAs)

The first meeting of the SIOFA Scientific Committee (2016) also considered a network of benthic protected areas (BPAs) voluntarily closed to deepwater trawling by the Southern Indian Ocean Deepwater Fishers Association (SIODFA) and recommended that the MoP3 close these areas to fishing as a precautionary measure. There is no indication in the MoP report that this proposal was discussed.

SIOFA-SC undertook further work to consider each of these areas against the standard protocol for protected area designation. At the time, the absence of a common definition of VMES in the SIOFA context made it difficult to apply these proposals against the VME Criterion (VME are known to occur and/or triggering of VME indicator thresholds) but it was noted that evidence of VMES had been provided. The SC-03 (2018) recommended the MoP5 adopt the proposed research and management plans for five of the proposed benthic protected areas: 'Walters Shoal', 'Atlantis' 'Coral', 'Fools Flat', and 'Middle of What.

The MoP agreed to 'interim' protection, but requested the Scientific Committee provide additional advice on research and management plans for each area by 2019. The MoP also agreed to review the full list of BPAs when a new protocol for protected area designation was adopted.

However, despite clear recommendations from SC-04 and inclusion of detailed research and management plans, MoP6 was again unable to agree to the full adoption of the BPAs. No further work or discussion has been undertaken on this or on the other proposed BPAs since 2019.

Progress of VME research

The DSCC has submitted a separate information paper describing the research and action taken by SIOFA thus far to avoid significant adverse impacts on VMES and identifying gaps in the management of protection of VMES. While acknowledging the significant work undertaken thus far, it identifies advice yet to be developed by the Scientific Committee, including further work necessary to support that advice. The paper contains several recommendations, including the increased application precautionary approach and the ecosystem approach in the protection of vulnerable marine ecosystems (VMES) and the full application of UNGA resolutions and consideration of relevant actions taken by other international fora.

Relevant recommendations for action by the SC in relation to the advance of MPA designation within the SIOFA region include:

- consideration of identified bioregions and development of MPAs in each to meet 'bioregional representation' criterion listed in the Protocol.
- review of the usefulness of biodiversity models to identify and evaluate biodiversity hotspots.
- consideration of the use of the 'fishing intensity impact index' as a standard tool in assessing impact.
- review of other potential indicator taxa be reviewed, including rhodoliths, to reflect the different depths and taxa that make up Saya De Malha Bank.
- Provide recommendations to the MoP to
 - provide MPA protection for all EBSAs located fully or partly within the SIOFA Area.
 - consider spatial closures as the primary mechanism to manage impacts on benthic habitats.
 - establish a VME registry.
 - recognise seamounts as VMES and closed these to bottom trawling.
 - add seagrasses to the list of VME indicator species in Annex 1 of CMM 2020/01.

Review of global initiatives of relevance

Kunming – Montreal Global Biodiversity Framework

The 2022 Conference of the Parties to the Convention on Biological Diversity (CBD) adopted decision 15/14 Global Biodiversity Framework, to halt and reverse biodiversity loss by 2030. The CBD currently defines a protected area as: “a geographically defined area which is designated or regulated and managed to achieve specific conservation objectives.” The protocol includes twenty-three 2030 targets and four longer-term global goals to preserve biodiversity for current and future generations. The targets include measures to reduce biodiversity loss, including in oceans, restore at least 30% of all degraded ecosystems, conserve 30% of marine areas, halt species extinction, and build resilience to the impacts of climate change.

Ecologically or Biologically Significant Areas (EBSAs)

The 2008 Conference of the Parties to the Convention on Biological Diversity (CBD) adopted scientific criteria for the identification and development of Ecological or Biologically Significant Areas (EBSAs) ([decision IX/20](#)), defined as ecologically or biologically significant marine areas in need of protection in open-ocean waters and deep-sea habitats. The criteria included uniqueness or rarity; special importance for life history stages of species; importance for threatened, endangered or declining species. The BFIA standard should be reviewed every five years to ensure that it reflects best practice for habitats; vulnerability, fragility, sensitivity, or slow recovery; biological productivity; biological diversity; and naturalness³. The following year, regional workshops, open to States, FAO, regional seas conventions and RFMOs, were organised to ‘facilitate the description of EBSA’s. A workshop focusing on the Southern Indian Ocean was held in Mauritius in July-August 2012 and identified 39 EBSAs⁴ of which eleven fall within the SIOFA area. These are Agulhas Front; Walters Shoal; Prince Edwards Islands, Del Caño Rise and Crozet Islands; Saya de Malha Bank; Rusky; East Broken Guyot; Mozambique Channel; Coral seamount and fracture zone feature; Atlantis Seamount; Central Indian Basin; Fools Flat.

BBNJ High Seas Treaty

The BBNJ Agreement enables the establishment of marine protected areas on the high seas. Article 1(9) of the agreement sets out a definition of marine protected areas and Part III of the Agreement sets out the assessment and decision-making process and measures for establishing marine protected areas including in emergency situations, and the monitoring and review provisions. This includes provisions for engagement with RFMOs. Annex 1 of the Agreement sets out Indicative Criteria for Identification of Areas - this includes Uniqueness, Rarity, Vulnerability, including climate change and ocean acidification, and fragility. Protection of VMEs could meet the criteria in Annex 1 of the Agreement for a marine protected area.

³ For more details on the EBSA criteria, please see: www.cbd.int/doc/meetings/mar/epsaws-2014-01/other/epsaws-2014-01-azores-brochure-en.pdf

⁴ <https://www.cbd.int/epsa/>

IUCN guidelines for protected areas

IUCN defines a marine protected area as “A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values”, and provides additional guidance on marine protected areas. The CBD has recognised this as equivalent to their definition.

In 2012 the IUCN developed internationally recognised guidelines for applying IUCN protected area categories to marine protected areas. These were revised in 2019 (Day et al 2019). The IUCN categories are recognised as equivalent to the CBD definition (Dudley et al 2022). The IUCN guidelines note that “temporary or permanent fishing closures that are established primarily to help build up and maintain reserves stocks for fishing in the future and have no wider conservation aims or achievements are not considered MPAs”. The protection of VMEs which have a wider conservation aim could meet the IUCN criteria for an MPA.

The IUCN has also established Marine Mammal Protected Areas (IMMAs), defined as “discrete portions of habitat, important to marine mammal species, that have the potential to be delineated and managed for conservation” and consisting “of areas that may merit place-based protection and/or monitoring.”⁵ The IUCN has approved several areas in the Indian Ocean, including waters surrounding the Mascarene Islands of Reunion and Mauritius as well as the underwater seamount of La Perouse and Saint-Brandon bank.

FAO Marine Protected Areas Guidelines

The FAO issued technical guidelines for the development of marine protected areas in 2011, noting that MPAs are just one category of spatial-temporal closures often applied by fisheries managers. These guidelines provide suggestions on MPA definitions, the ecosystem approach to fisheries management, the biological and ecological relevance of MPAs in the fisheries context, social and economic factors, MPA planning, including legal, institutional and policy frameworks, information required to support MPA planning, and possible future directions. The FAO guidelines on the management of deep-sea fisheries in the high seas, their summary of actions taken by RFMOs and CCAMLR to protect VMES, and their Strategy on Climate Change also provide guidance of relevance to SIOFA.

Conclusions

DSCC notes the significant progress in understanding identification and prediction of distribution of VMEs within SIOFA but notes little effort has been spent on the Interim Standard Protocol for future protected areas designation over the past years. In view of advances in other international fora, DSCC believes that SIOFA-SC should revise and recommend the adoption of the Protocol as soon as possible and establish an intersessional process to consider MPA proposals for each of the criteria identified in the Protocol. Advice to MoP should include the explicit inclusion of seamounts within the VME definition, the full adoption of Interim Benthic Protected Areas (BPAs), immediate adoption of any EBSAs and IMMAs within the SIOFA area, including Saya de Malha bank.

Acknowledgments

This paper acknowledges the contribution of Barry Weeber, Duncan Currie, Bronwen Golder, and consultancy advice provided by Dr Lyn Goldsworthy AM

⁵ <https://www.marinemammalhabitat.org/immas/>

References

Agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, UN Doc A/CONF.232/2023/4* (19 June 2023) (BBNJ Agreement).

Day, J., Dudley, N., Hockings, M., Holmes, G., Laffoley, D., Stolton, S., Wells, S. and Wenzel, L. (2019). Guidelines for Applying the IUCN Protected Area Management Categories to Marine Protected Areas, 2nd Edition. Gland, Switzerland: IUCN.

Dudley, N., Furuta, N., Natori, Y. and Okano, N. 2022. Nature-based Solutions and protected and conserved areas: An introduction for protected and conserved area practitioners. Gland, Switzerland, IUCN and Tokyo, Japan, Ministry of the Environment, Government of Japan.

FAO. 2009. International Guidelines for the Management of Deep-sea Fisheries in the High Seas. Directives internationales sur la gestion de la pêche profonde en haute mer. Directrices Internacionales para la Ordenación de las Pesquerías de Aguas Profundas en Alta Mar. Rome/Roma, FAO. 2009. 73p.

FAO.2011. Fisheries management. 4. Marine protected areas and fisheries. FAO Technical Guidelines for Responsible Fisheries. No. 4, Suppl. 4. Rome, FAO. 198p. ISSN 1020-529

FAO. 2022. FAO Strategy on Climate Change 2022-2031. Food and Agriculture Organization of the United Nations Rome, 2022. <https://www.fao.org/3/cc2274en/cc2274en.pdf>

Lothian, S. 2023. The BBNJ Agreement: Through the Prism of Deep-Sea Vulnerable Marine Ecosystems, *Ocean Development & International Law*, 54:4, 469-499, DOI: [10.1080/00908320.2023.2296400](https://doi.org/10.1080/00908320.2023.2296400)

Saccomanno, S. 2016. "Seamounts are Vulnerable Marine Ecosystems" (30 August 2016, National Geographic Ocean Views Blog) available at: <https://highseasalliance.org/2016/08/30/seamounts-are-vulnerable-marine-ecosystems> (accessed 2 December 2023).

Secretariat of the Convention on Biological Diversity. 2016. Ecologically or Biologically Significant Marine Areas (EBSAs). Special places in the world's oceans. Volume 3: Southern Indian Ocean. 128 pages.

Watling, L. 2016. Seamounts ARE Vulnerable Marine Ecosystems, *Marine Conservation Institute*. available at: <https://marine-conservation.org/on-the-tide/vme> (accessed 1 August 2023).

Watling, L. & Peter J. Auster. 2017. Seamounts on the High Seas Should Be Managed as Vulnerable Marine Ecosystems. *Frontiers in Marine Science*. 14, 2.