

SC-03-06.3.2 (10)

3<sup>rd</sup> Meeting of the Southern Indian Ocean Fisheries Agreement (SIOFA) Scientific  
Committee  
20-24 March 2017, Saint Denis, La Reunion

Proposal for designation of the 'MIDDLE OF WHAT (MOW)' fishery  
closure for the purpose of the protection of its bioregional  
representativeness

*Relates to agenda item: 6.3.2*

Working paper  Info paper

## Delegation of Australia

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### Abstract

The purpose of this paper is to propose that the Middle of What (MOW) feature meets the following criteria under the SIOFA Standard protocol for protected areas designation (see Annex H of SC2 report):

2b. Bioregional representation – Area is known to contain unique, rare or distinct, habitats or ecosystems that bottom fishing operations will disturb.

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## Recommendations *(working papers only)*

It is recommended that the SC:

- **Note** that the proposed Middle of What (MOW) feature meets the following criteria in the protocol: 2b. Bioregional representation – Area is known to contain unique, rare or distinct, habitats or ecosystems that bottom fishing operations will disturb.
  - **Recall** Article 4(c) of the Agreement which obliges Contracting Parties to apply the precautionary approach in accordance with the FAO Code of Conduct for Responsible Fisheries and the 1995 UN Fish Stocks Agreement, whereby the absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.
  - **Recommend** to the Meeting of the Parties that, in line with the precautionary approach, the Middle of What (MOW) feature be designated as a fishery closure for the purpose of the protection of its bioregional representativeness, with a prohibition on all fishing to be reviewed after a period of at least 10 years.
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**Proposal for designation of the 'MIDDLE OF WHAT (MOW)' fishery closure for the purpose of the protection of its bioregional representativeness**

Australia

**Acknowledgement**

Australia have prepared this proposal in consultation with the Cook Islands, SIODFA, Ms Lynda Goldsworthy AM, and an informal steering committee of SIOFA SC members who met to advise Australia on its review of the SIOFA Standard protocol for future protected areas designation.

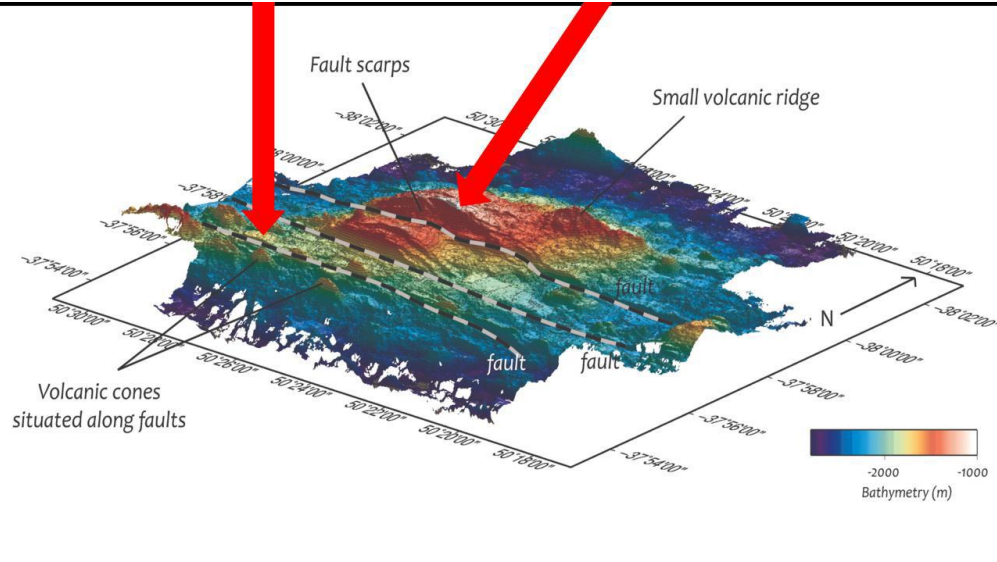
**Purpose and rationale**

The purpose of this paper is to propose that the Middle of What (MOW) feature meets the following criteria under the SIOFA Standard protocol for protected areas designation (see Annex H of SC2 report):

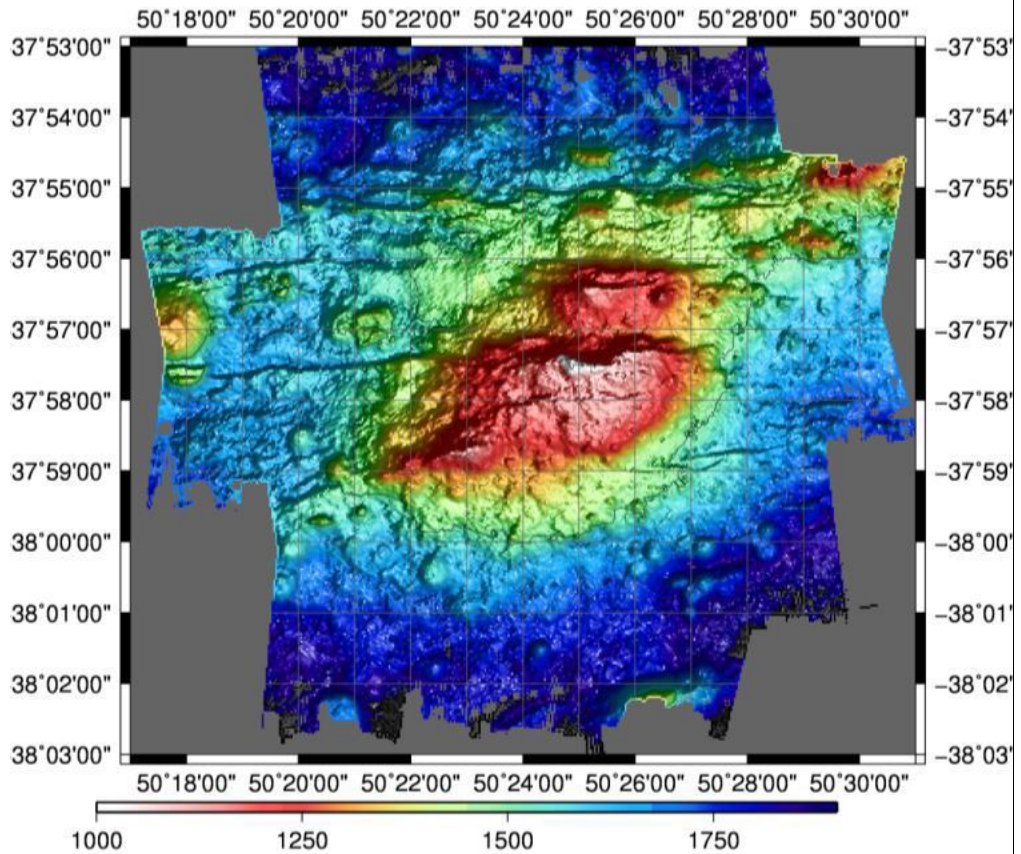
- 2b. Bioregional representation – Area is known to contain unique, rare or distinct, habitats or ecosystems that bottom fishing operations will disturb.

**Background**

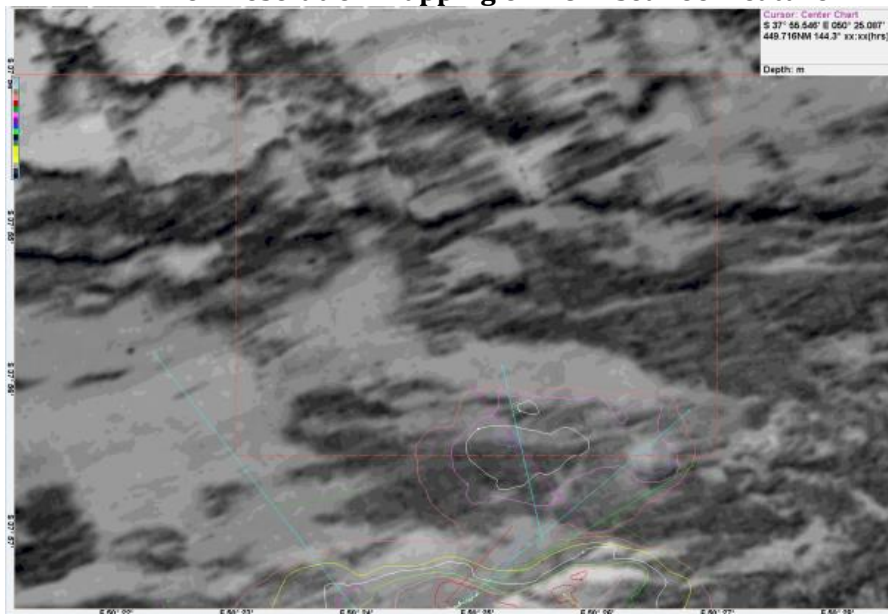
At the 4<sup>th</sup> Meeting of the Parties in 2017, Australia signalled its intention to review the SIODFA 'benthic protected areas' against the protocol for protected area designation. The proposal follows a template suggested at the intersessional meeting of the informal SIOFA steering committee in November 2017.

<p><b>Name</b></p>	<p>Middle of What (MOW)</p>
<p><b>Proponent /s</b></p>	<p>Australia, Cook Islands (SIOFA Contracting Parties)  <i>Prepared in collaboration with the Southern Indian Ocean Deepsea Fishers Association (SIOFA Observer)</i></p>
<p><b>Geographic description</b></p>	<p><b>Coordinates:</b> Latitude 37° 54' S, 50° 23' E and 37° 56.5' S and 50° 27' E.  <b>Area:</b> 6084 km<sup>2</sup></p> <p style="text-align: center;"><b>Figure 1</b>  <b>General bathymetry of the MOW seafloor feature</b></p> 

**Figure 2**  
**The small volcanic ridge to the side of the main MOW seafloor feature**



**Figure 3**  
**Low resolution mapping of MOW seafloor feature**



**Objectives**

The objective for this area is the protection of its bioregional representativeness.

**Criteria that the**

The proposed area meets the following criteria:  
 2b. Bioregional representation – Area is known to contain unique, rare or distinct, habitats or ecosystems that bottom fishing operations will disturb.

<b>protected area meets</b>	<p><u>Feature description</u></p> <p>The location of the MOW seafloor feature is towards the southern end of the South Indian Ridge in waters forming a dynamic boundary region between sub-Antarctic and sub-tropical waters and has a deep summit (~900-1000m depth). Strong currents sweep over the seamount. It is a spreading centre with seamounts and ridges with depths from 4500 m to 180 m. This area was surveyed by the R.V. James Cook during November - December 2011 and by RV <i>Dr Fridtjof Nansen</i> in 2009 (Rogers et al. 2009).</p> <p>Read and Pollard (2017) provide details of the physical oceanography of the MoW feature. Pollard and Read (2017) provide details of the circulation and stratification on and around the feature.</p> <p><u>Bioregional and biodiversity representation</u></p> <p>The area has been proposed as an Ecologically and Biologically Significant Area (EBSA) for consideration by the Convention on Biological Diversity (Rogers n.d.). The proposal notes that this is the only known example of a seamount with cold-water coral reef habitat lying in the boundary region of sub-Antarctic and sub-tropical water masses in the Southern Indian Ocean. The water mass overlying the seamount hosts pelagic communities typical of sub-tropical waters. The benthic fauna varies depending on depth on the seamount and also the substratum slope and composition. Cold water coral reef is located on the peak of the seamount at ~1,000m depth.</p> <p>The proposal notes that the main framework building species appears to be <i>Solenosmilia variabilis</i>. The framework is largely comprised of dead coral and is highly degraded probably as a result of trawling damage. However, more intact stony coral reef is present on parasitic sub-cones located on the Southern flanks of the seamount. Very broken ground around these sub-cones also host coral garden habitat with large (2m tall) bamboo corals and stylasterids particularly notable. Lantern sharks are very abundant around Middle of What Seamount, especially around the sub-cones, but note this is from a single set of observations. Live colonies of the framework-building species are also present. The coral reef hosts high densities of a range of other coral species, particularly octocorals and sponges. Glass sponges also occur at high density.</p> <p>The proposal notes evidence of fishing on the seamount in the form of highly degraded and damaged coral habitat on the summit of the main feature of the seamount to the extent that this area could be viewed as compromised as an area for conservation. However, the parasitic cones located on the southern flanks of the seamount host intact cold-water coral reef and rough ground to the south and also the northeastern part of the seamount host extensive coral garden habitat. High numbers of sharks were observed in the southern area.</p> <p>The benthic habitats documented on this seamount includes a very high diversity of species, especially corals and coral associates. Rogers (n.d) noted that this diversity is currently being analysed in various laboratories in the UK, France, Australia and the USA. Preliminary results for, for example, ophiuroids, indicate 50% of the species are new to science.</p> <p>The EBSA proposal notes the area as meeting the following EBSA criteria:</p> <ul style="list-style-type: none"> <li>• Uniqueness or rarity (High ranking)</li> </ul>
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	<ul style="list-style-type: none"> <li>• Special importance for the life-history stages of species (Medium ranking)</li> <li>• Importance for threatened, endangered or declining species and/or habitats (High ranking)</li> <li>• Vulnerability, fragility, sensitivity, or slow recovery (High ranking)</li> <li>• Biological productivity (High ranking)</li> <li>• Biological diversity (High ranking)</li> <li>• Naturalness (Medium ranking).</li> </ul> <p><u>Scientific interest</u> The MoW feature has been the subject of a number of research cruises, cited herein.</p> <p><u>Fishing history</u> This general area tends to be an area of much past fishing activity (SIODFA 2016). This fishing ground was one targeted by inexperienced vessels during the 'race for fish' which occurred in the period of 2000-2001, but there has been limited fishing since then (SIODFA 2016).</p> <p><u>Other information to support designation</u> Industry members from Australia, the Cook Islands and Japan support the designation of the MOW feature. No trawling by SIODFA vessels is permitted.</p>
<b>Social, cultural and economic interests</b>	Historical fishing data may assist with understanding any social, cultural and/or economic costs associated with designating this as a protected area. It is possible that designation could have adverse social, cultural or economic impacts in terms of forgone opportunity for fishing.
<b>Proposed activities to be restricted or prohibited</b>	Fishing within this proposed area with all gears could detrimentally impact the representativeness of this area. The MoP should consider closure to all fishing.
<b>Review periods</b>	The proposal documents and provides information to support a closure. It is recommended that this designation be reviewed at least every 10 years, or more frequently if new information becomes available that enhances or degrades the justification for its protection.
<b>Outline of monitoring and/or research needed</b>	A desk-top compilation of publications from research undertaken within this area would assist with future reviews of the designation.
<b>Compliance</b>	Compliance-related issues are outside of the remit of the SIOFA SC.

## References

Pollard, R & Read, J 2017. Circulation, stratification and seamounts in the Southwest Indian Ocean, *Deep-Sea Research II* 136 (2017) 36–43

Read, J & Pollard, R 2017. An introduction to the physical oceanography of six seamounts in the southwest Indian Ocean. *Deep-Sea Research II* 136 (2017) 44–58.

Rogers AD no date. Template for Submission of Scientific Information to Describe Ecologically or Biologically Significant Marine Areas: Middle of What Seamount, available here <https://www.cbd.int/doc/meetings/mar/ebsa-sio-01/other/ebsa-sio-01-uk-01-en.pdf>

Rogers, A., Alvheim, O., Bemanaja, E., Benivary, D., Boersch- Supan, P., Bornman, T., Cedras, R., DuPlessis, N., Gotheil, S., Høines, A., Kemp, K., Kristiansen, J., Letessier, T., Mangar, V., Mazungula, N., Mørk, T., Pinet, P., Read, J., Sonnekus, T. (Eds.), Secondary “Dr. Fritjof Nansen” Southern Indian Ocean Seamounts (IUCN/UNDP/ASCLME/NERC/EAF Nansen Project 2009 Cruise 410) 12th November – 19th December. Gland, CH, International Union for Conservation of Nature, 12/2009, 188 pp.

Rogers, A.D. 2012. An Ecosystem Approach to Management of Seamounts in the Southern Indian Ocean: Volume 1 – Overview of Seamount Ecosystems and Biodiversity. Gland, Switzerland, IUCN, for a history of scientific exploration in the region.

Rogers A.D. & M.L. Taylor. 2012. Benthic biodiversity of seamounts in the southwest Indian Ocean Cruise report – R/V James Cook 066 Southwest Indian Ocean Seamounts expedition – November 7th – December 21st, 2011. 235pp. [http://www-odp.tamu.edu/publications/prelim/176\\_PREL/176OBJT.HTML](http://www-odp.tamu.edu/publications/prelim/176_PREL/176OBJT.HTML)

SIODFA 2016, Southern Indian Ocean Deepwater Fisheries Association (SIODFA), Benthic Protected Areas in the Southern Indian Ocean. SIODFA Technical Report XVII 16/01. 40 pp