

**Conservation and Management Measure for the Interim Management of Bottom
Fishing in the Agreement Area
(Interim Management of Bottom Fishing)**

The Meeting of the Parties to the Southern Indian Ocean Fisheries Agreement;

RECOGNISING that Article 4(a) of the *Southern Indian Ocean Fisheries Agreement* (the Agreement) calls on the Contracting Parties, in giving effect to the duty to cooperate, to adopt measures on the basis of the best scientific evidence available to ensure the long-term conservation of fishery resources, taking into account the sustainable use of such resources and implementing an ecosystem approach to their management;

FURTHER RECOGNISING Articles 4(c), (e) and (f) of the Agreement which call on the Contracting Parties to apply the precautionary approach, that fishing practices and management measures shall take due account of the need to minimise the harmful impact that fishing activities may have on the marine environment and noting that biodiversity in the marine environment shall be protected;

FURTHER RECOGNISING Articles 6(1)(d) and (e) of the Agreement which provides that the Meeting of the Parties shall adopt conservation and management measures (CMMs) for ensuring the long-term sustainability of fishery resources, taking into account the need to protect marine biodiversity, based on the best scientific evidence and adopt generally recommended international minimum standards for the responsible conduct of fishing operations;

MINDFUL of Article 16 of the Agreement that calls on Contracting Parties, acting jointly under the Agreement, to cooperate closely with other international fisheries and related organisations in matters of mutual interest;

NOTING United Nations General Assembly (UNGA) Resolution 61/105 and subsequent resolutions of UNGA that call upon RFMOs to assess, on the basis of the best available scientific information, whether individual bottom fishing activities would have significant adverse impacts on vulnerable marine ecosystems (VMEs), and to ensure that if it is assessed that these activities would have significant adverse impacts, they are managed to prevent such impacts, or not authorised to proceed;

FURTHER NOTING UNGA Resolution 64/72 which calls upon RFMOs to establish and implement appropriate protocols for the implementation of UNGA Resolution 61/105, including definitions of what constitutes evidence of an encounter with a VME, in particular threshold levels and indicator species; and to implement the FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas (FAO, 2009; FAO Deep-sea Fisheries Guidelines) in order to sustainably manage fish stocks and protect VMEs;

FURTHER NOTING UNGA Resolution 66/68 which encourages RFMOs to consider the results available from marine scientific research, including those obtained from seabed mapping programs concerning the identification of areas containing VMEs, and to adopt conservation and management measures to prevent significant adverse impacts from bottom fishing on

¹ CMM 01(2025) (Interim Management of Bottom Fishing) supersedes CMM 01(2024) (Interim Management of Bottom Fishing).

such ecosystems, consistent with the FAO Deep-sea Fisheries Guidelines, or to close such areas to bottom fishing until such conservation and management measures are adopted, as well as to continue to undertake further marine scientific research, in accordance with international law as reflected in Part XIII of the United Nations Convention on the Law of the Sea;

AWARE of the steps being taken by the Meeting of the Parties to address the impacts of large-scale pelagic drift nets and deepwater gillnets in the SIOFA Area of Application (the Agreement Area) through the adoption of CMM 05(2016) (Pelagic Driftnets and Deepwater Gillnets);

COMMITTED to ensuring that bottom fishing undertaken in the Agreement Area is consistent with the long-term sustainability of deep-sea fish stocks and the protection of the marine environment; and

NOTING the SIOFA bottom fishing impact assessment standard and the updated SIOFA bottom fishing footprint adopted by the Meeting of the Parties in 2017 and 2023, respectively;

***ADOPTS* the following CMM in accordance with Article 6 of the Agreement:**

Objective

1. The objective of this CMM is to promote the sustainable management of deep-sea fisheries resources in the Agreement Area, including target fish stocks and non-target species, and to protect the marine ecosystem, including, *inter alia*, the prevention of significant adverse impacts on vulnerable marine ecosystems.

General provisions and definitions

2. This CMM applies to all fishing vessels flying the flag of a Contracting Party, cooperating non-Contracting Party, participating fishing entity or cooperating non-participating fishing entity (collectively CCPs) to the Agreement engaging or intending to engage in bottom fishing in the Agreement Area. A reference in this CMM to fishing and related activities *of* a CCP (such as *its* fishing, *its* catch or *its* effort) is taken to refer to fishing and related activities undertaken by vessels flying its flag.
3. The following definitions apply to this CMM:
 - a. 'vulnerable marine ecosystem' (VME) means a marine ecosystem identified using the criteria outlined in paragraph 42 of the FAO International Guidelines for the Management of Deep-Sea Fisheries in the High Seas (FAO, 2009; FAO Deep-sea Fisheries Guidelines).
 - b. 'bottom fishing' means fishing using any gear type likely to come in contact with the seafloor or benthic organisms during the normal course of operations.
 - c. 'SIOFA bottom fishing footprint' means the map of the spatial extent of historical bottom fishing in the Agreement Area, for all vessels flagged to all CCPs, adopted by the Meeting of the Parties in 2023.
 - d. 'electronic observer program' means a program that uses electronic monitoring equipment in place of, or in conjunction with, a human observer or human observers on board a vessel that is capable of generating, storing and transmitting data to competent authorities;

- e. 'SIOFA Bottom Fishing Impact Assessment Standard' (SIOFA BFIAS) means the minimum standard for assessing the potential impacts of proposed bottom fishing activities on VMEs and deep sea fish stocks in the Agreement Area, adopted by the Meeting of the Parties in 2017;
 - f. 'SIOFA Bottom Fishing Impact Assessment' (SIOFA BFIA) means the assessment of the cumulative potential impacts of all actual and proposed bottom fishing activities on VMEs and deep-sea fish stocks in the Agreement Area, adopted by the Meeting of the Parties in 2023.
4. The provisions of this CMM are not necessarily to be considered precedents for future allocation or other decisions in accordance with Articles 6(2), (3) and (4) of the Agreement relating to participation in bottom fisheries in the Agreement Area and adjacent areas of national jurisdiction, as appropriate.

Scientific Committee work on bottom fishing and subsequent consideration by the Meeting of the Parties

5. The Scientific Committee shall, whenever a substantial change to the fishery has occurred or new data has otherwise been provided to the Scientific Committee warranting changes, develop, provide and update advice and recommendations to the Meeting of the Parties on:
- a. guidelines for evaluating and approving electronic observer programs for scientific data collection;
 - b. the status of stocks of principal deep-sea fishery resources targeted, and, to the extent possible, taken as bycatch and caught incidentally in these deep-sea fisheries, including straddling fishery resources;
 - c. criteria for what constitutes evidence of an encounter with a VME, in particular threshold levels and indicator species for all gears;
 - d. the most appropriate response to a VME encounter, including *inter alia* closing particular areas to a particular gear type or types;
 - e. the interim SIOFA Standard Protocol for Future Protected Areas Designation adopted by the Meeting of the Parties in 2018;
 - f. research and management plans for each of the benthic fishery closures listed in CMM 18(2025). Such plans shall include, *inter alia*, conservation and management objectives taking socio-economic considerations into account where possible, appropriate measures to implement these objectives and timeframes for evaluation and review;
 - g. the SIOFA BFIAS, taking account of the latest scientific information available;
 - h. the SIOFA BFIA;
 - i. any maps of where VMEs are known to occur, or likely to occur, in the Agreement Area; and
 - j. the SIOFA bottom fishing footprint.
6. The Scientific Committee shall also periodically review all benthic taxa bycatch data to inform its consideration of the location of potential VMEs and potential impacts thereon.

7. Upon receipt of advice and recommendations from the Scientific Committee on the matters listed in paragraph 5, the Meeting of the Parties shall act on the Scientific Committee's advice and recommendations at its next ordinary meeting. This may include, when the Meeting of the Parties considers it appropriate, to authorise any document or other output arising from the advice or recommendations, and amendments thereto.

Duties of Contracting Parties, CNCPs and PFEs undertaking bottom fishing activity in the Agreement Area

Interim bottom fishing measures

8. CCPs shall ensure that vessels flying their flag engage in bottom fishing activities in the Agreement Area only in accordance with the terms of this CMM together with CMM 15(2025) (Management of Demersal Stocks).
9. CCPs shall ensure that vessels flying their flag do not engage in bottom fishing activities in the Agreement Area outside the SIOFA bottom fishing footprint or within the SIOFA bottom fishing footprint with a particular gear type or technique not used before in that fishery in that area, except if such activities have been authorised by the Meeting of the Parties pursuant to CMM 17(2025) (New and Exploratory Fisheries).

Effort limitation and general measures

10. (1) Each CCP shall, unless otherwise approved by the Meeting of the Parties, establish and apply specific measures to limit the level and spatial extent of the bottom fishing effort of vessels flying their flag. In particular, such measures shall include:
 - a. for CCPs that have fished more than 40 days in a single year, in the Agreement Area, at the close of the Meeting of the Parties in 2016:
 - i. limits on its bottom fishing effort and/or catch, over a 12 month period to its average annual level in active years over a representative period for which reliable data exists;
 - ii. constraints on the spatial distribution of its bottom fishing effort, excluding line and trap methods, to recently fished areas to prevent any expansion of such fishing activities;
 - iii. provisions to ensure its bottom fishing will not have significant adverse impacts on VMEs and take into account its BFIA submitted pursuant to paragraph 22 or 27 and reviewed by the Scientific Committee, and any areas identified under paragraph 19 where VMEs are known to occur, or are likely to occur; and
 - iv. provisions ensuring that any vessel flying its flag is not authorised to fish in any areas that the Meeting of the Parties has decided to close to fishing.
 - b. for CCPs that have not fished more than 40 days in a single year, in the Agreement Area, at the close of the Meeting of the Parties in 2016:
 - i. limits on its bottom fishing effort and/or catch, and spatial distribution, as disclosed to the Meeting of the Parties in accordance with paragraph 10(2) and (3); and
 - ii. provisions as referred to in subparagraphs 10(1) a. iii. and iv.

(2) The measures established by CCPs pursuant to this paragraph shall be disclosed to the ordinary Meeting of the Parties and shall be made publicly available on the SIOFA website by the Secretariat.

(3) CCPs may revise the measures they establish pursuant to this paragraph provided that any amendments made are consistent with the requirements of paragraph 10(1). Revised measures shall be notified to the Secretariat within 30 days of the amendment, and shall be disclosed at the next ordinary Meeting of the Parties.

(4) The provisions of this paragraph are not necessarily to be considered a precedent for future decisions taken by the Meeting of the Parties pursuant to paragraph 9.

11. Any CCP that has not submitted the measures required pursuant to paragraph 10(1), shall not authorise any vessels flying its flag to bottom fish in the Agreement Area until:
- that CCP has submitted the measures required in paragraph 10(1); or
 - it has otherwise been decided by the Meeting of the Parties.

Vulnerable Marine Ecosystems

12. CCPs shall apply to vessels flying their flag the following threshold levels for encounters with VMEs:
- the threshold that triggers the encounter protocol for longline gears shall be the catch/recovery of 10 or more VME-indicator units² of species listed in Annex 1 in a single line segment³.
 - the threshold that triggers the encounter protocol for the trawls shall be more than 60 kg of live corals and/or 300 Kg of sponges in any tow.

The threshold that triggers the encounter protocol for the trawl as defined in paragraph 12b shall be reviewed by the Scientific Committee in 2020.

13. Where evidence of a VME is encountered above threshold levels established under paragraph 12 in the course of fishing operations, CCPs shall require any vessel flying their flag to immediately cease bottom fishing activities within:
- For bottom or mid water trawling, or fishing with any other net - two (2) nautical miles either side of a trawl track extended by two (2) nautical miles at each end;
 - For longline and trap activities - a radius of one (1) nautical mile from the midpoint of the line segment⁴;
 - For all other bottom fishing gear types - a radius of one (1) nautical mile from the

² 'VME indicator unit' means either one liter of those VME indicator organisms that can be placed in a 10-litre container, or one kilogram of those VME indicator organisms that do not fit into a 10-litre container

³ Line segment' means a 1000-hooks section of line or a 1 200 m section of line, whichever is the shorter.

⁴ Line segment means a 1000 hooks section of line or a 1200 meters section of line, whichever is the shorter, and for pot lines a 1200 meters section

midpoint of the operation.

14. CCPs shall immediately report any VME encounter to the Secretariat and in their National Reports to the Scientific Committee in accordance with the guidelines at Annex 2. In the event of an encounter, CCPs shall cooperate to the extent possible with the Secretariat and other CCPs engaged in bottom fishing to exchange such data and information as may be relevant to the Scientific Committee's consideration of the encounter area.
15. On receipt of a notification under paragraph 14, the Secretariat shall:
 - a. record the location of the encounter area;
 - b. within three working days of receipt, notify all CCPs that bottom fishing is suspended in the encounter area; and
 - c. publicise the encounter area on the non-public area of the SIOFA website for the duration of the suspension.
16. Upon receipt of a notification from the Secretariat under paragraph 15b., CCPs shall ensure that vessels flying their flags do not undertake bottom fishing in the notified encounter area unless and until the Meeting of the Parties determines management action under paragraph 18 that would permit the resumption of bottom fishing in the encounter area.
17. As an encounter may be considered evidence of a potential presence of a VME, the Scientific Committee shall, at each ordinary meeting, review any encounter reported pursuant to paragraph 14 and any other benthic bycatch data it considers relevant and provide advice to the Meeting of the Parties thereon.
18. On the basis of the advice of the Scientific Committee, the Meeting of the Parties shall decide to confirm whether the encounter area should remain closed to all or some gears. Where the Meeting of the Parties decides that an encounter area should remain closed to all or some gears, the Secretariat shall make the information publicly available on the SIOFA website.
19. The Meeting of the Parties shall identify, on the basis of the best available scientific information including advice and recommendations provided by the Scientific Committee pursuant to paragraph 5i, areas where VMEs are known or likely to occur in the Agreement Area and map these sites, and the Secretariat shall circulate such data and information to all CCPs.
20. The Secretariat shall make available the maps in paragraph 19 on a dedicated webpage and update them in a timely manner.

Provision of data by CCPs

21. CCPs shall submit to the Secretariat:
 - a. relevant data on the spatial extent of their historical bottom fishing effort in the Agreement Area expressed as grid blocks of at least 20 minutes resolution or, if available, a finer scale; and
 - b. any other data the Scientific Committee may consider to be useful in updating the SIOFA BFIA, including data relating to recorded encounters with VMEs or indicators

of VMEs.

22. Any CCP that authorises or is seeking to authorise any vessel flying its flag to bottom fish in the Agreement Area shall submit to the Secretariat a Bottom Fishing Impact Assessment for its individual bottom fishing activities in the Agreement Area that meets the requirements of paragraph 26.
23. The Scientific Committee shall consider all BFIA's received under paragraph 22 and 28b. at its next ordinary meeting, and provide advice in its meeting report as to:
 - a. the likely cumulative impacts of bottom fishing impact activity from vessels flying the flag of a CCP in the Agreement Area; and
 - b. whether each BFIA meets the requirements of paragraph 26.
24. If the Scientific Committee's advice is that a BFIA does not meet the requirements of paragraph 26, the Meeting of the Parties may request that CCP who submitted the BFIA to revise and resubmit its BFIA to the next ordinary meeting of the Scientific Committee, and to decide to either:
 - a. suspend any vessel flying its flag from bottom fishing in the Agreement Area until the Scientific Committee provides advice that the BFIA meets the requirements of paragraph 26; or
 - b. undertake any other course of action, as the Meeting of the Parties may decide, taking into account Scientific Committee advice and the objectives of this CMM.
25. Any CCP that has not submitted a BFIA in accordance with paragraph 22 shall not authorise any vessels flying its flag to bottom fish in the Agreement Area until:
 - a. that CCP has prepared and submitted a BFIA, and the Scientific Committee has reviewed that BFIA and determined it meets the requirements of paragraph 26; or
 - b. it has otherwise been decided by the Meeting of the Parties.
26. All BFIA's, including the SIOFA BFIA, shall:
 - a. be prepared, to the extent possible, in accordance with the FAO International guidelines for the management of deep-sea fisheries resources in the high seas;
 - b. meet the standards of the SIOFA BFIA's;
 - c. take into account areas identified where VMEs are known or are likely to occur in the area to be fished pursuant to paragraph 19;
 - d. take into account all relevant information provided pursuant to paragraph 21, and in addition, for the SIOFA BFIA, paragraph 22;
 - e. be updated when a substantial change in the fishery has occurred, such that it is likely that the risk or impacts of the fishery may have changed;
 - f. assess, to the extent possible, the historical and anticipated cumulative impact of all bottom fishing activity in the Agreement Area, if applicable; and
 - g. address whether the proposed activities achieve the objectives described in paragraph 1 of this CMM and Article 2 of the Agreement.

27. All BFIA's, including the SIOFA BFIA, shall be made publicly available on the SIOFA website once the Scientific Committee has determined that they meet the requirements of paragraph 26.

Provision of data by, and interim bottom fishing measures for, new CCPs

28. Paragraphs 10 to 12 shall not apply to any State or fishing entity that becomes a CCP after the Meeting of the Parties in 2017. However, prior to authorising any vessels flying its flag to bottom fish in the Agreement Area, each of these new CCPs which has fished more or less than 40 days in a single calendar year as referred to in paragraph 10(1) a. or b. shall:
- a. advise the Meeting of the Parties of the measures it intends to take pursuant to paragraph 10(1) a. i., ii., iii. and iv.;
 - b. 30 days prior to an ordinary meeting of the Scientific Committee after it becomes a CCP, submit the data referred to in paragraph 21 and a BFIA as outlined in paragraph 22 to the Scientific Committee for its consideration in accordance with paragraph 24.
29. Subject to agreement of the Meeting of the Parties, based on the advice from the Scientific Committee and the measures submitted in accordance with paragraph 28, a new CCP referred to in paragraph 28 may then authorise vessels flying its flag to bottom fish in the Agreement Area, in accordance with paragraphs 10-12.
30. A CCP seeking to authorise any vessel flying its flag to undertake bottom fishing in the Agreement Area in a manner at variance with the requirements of paragraph 10 to limit the bottom fishing effort of vessels flying its flag shall submit to the Scientific Committee, at least 30 days prior to an ordinary meeting of the Scientific Committee, a proposal to undertake that activity or activities. This proposal shall include an assessment of the impact of the proposed fishing activity in accordance with the requirements for BFIA's outlined in paragraph 26, any proposed measures to mitigate that impact, and any other information as required by the Scientific Committee to undertake the assessment in paragraph 23.
31. On receipt of any proposal developed pursuant to paragraph 30, the Scientific Committee shall, at its next ordinary meeting:
- a. assess, on the basis of the best available scientific information, whether the proposed bottom fishing would have significant adverse impacts on VMEs;
 - b. if it is assessed that these activities would have significant adverse impacts, consider what measures should be taken to prevent such impacts, or, if those impacts cannot be appropriately mitigated, whether the proposed bottom fishing should proceed or not;
 - c. assess, taking into account, *inter alia*: the cumulative impacts of other fishing occurring in that area, where such information is available; whether the proposed activities are compatible with the sustainable management of bottom fisheries, including target fish stocks and non-target species; and the protection of the marine environment, including *inter alia*, the prevention of significant adverse impacts on vulnerable marine ecosystems; and

- d. provide recommendations and advice to the Meeting of the Parties in its meeting report on each of these matters, as applicable.
- 32. The Meeting of the Parties shall, taking into account the recommendations and advice of the Scientific Committee, decide whether or not to authorise bottom fishing in accordance with a proposal made pursuant to paragraph 30 including, if applicable, the extent to which such bottom fishing shall be authorised.
- 33. If applicable, the Meeting of the Parties shall also decide which measures or conditions shall be applied to any activity authorised pursuant to paragraph 32 to ensure that fishing activity is consistent with the objectives of Article 2 of the Agreement and paragraph 1 of this CMM.

General management and conditions for bottom fishing in the Agreement Area

- 34. Consistently with Article 11(1)(a) of the Agreement, CCPs shall only authorise vessels flying their flag to bottom fish in the Agreement Area in accordance with the provisions of the Agreement, this CMM and all other applicable CMMs, and shall ensure that such vessels do not engage in any activity which undermines the effectiveness of these measures.
- 35. Nothing in this CMM shall affect the rights of a CCP to apply additional or more stringent compatible measures to vessels flying their flag that are conducting bottom fishing.
- 36. Nothing in this CMM exempts a CCP from complying with any other obligations in the Agreement or any CMMs adopted by the Meeting of the Parties.

Scientific observer coverage

- 37. Each CCP shall ensure that any vessel flying its flag and undertaking bottom fishing in the Agreement Area:
 - a. using trawl gear has 100 percent scientific observer coverage for the duration of the trip; and
 - b. using any other bottom fishing gear type has 20 percent scientific observer coverage in any fishing year⁵.
- 38. Consistent with paragraphs 12 and 15 of CMM 02(2025) (Data Standards), the Scientific Committee shall regularly review the observer coverage levels prescribed in paragraph 37 at its ordinary meeting and provide advice to the Meeting of the Parties thereon.
- 39. The scientific observer coverage levels outlined in paragraph 37 shall be fulfilled through the use of human observers, except to the extent authorised by the Meeting of

⁵ For line fishing this should be expressed as the percentage of the total number of observed hooks or days.

the Parties pursuant to paragraph 41c.

40. Once the Meeting of the Parties has adopted Guidelines for evaluating and approving electronic observer programs developed pursuant to paragraph 5a, a CCP may submit a proposal to the Scientific Committee seeking to use an electronic observer program which uses, entirely or in part, electronic monitoring equipment, human observers and/or a port sampling program. As part of this proposal, that CCP shall submit evidence of, and data relating to, a statistically robust trial of the program that demonstrates it meets the data requirements prescribed in the SIOFA data standards CMM, once adopted by the Meeting of the Parties.
41. Following the submission of the proposal by the CCP to the Scientific Committee:
 - a. The Scientific Committee shall review the proposal and provide recommendations and advice thereon to the Meeting of the Parties, taking into account the Guidelines and whether the program will reliably collect all data required by CMM 02(2025) (Data Standards).
 - b. The Compliance Committee shall also review the proposal and provide advice and recommendations thereon to the Meeting of the Parties.
 - c. On receipt of the advice by the Scientific Committee and the Compliance Committee on the proposal, the Meeting of the Parties shall, at its next meeting, consider whether to authorise the use of that program by that CCP in place of the exclusive use of human observers.

Cooperation with other States

42. Contracting Parties resolve, individually or jointly, to request those States and fishing entities that are undertaking bottom fishing in the Agreement Area but are not currently CCPs to cooperate fully in the implementation of this measure and to consider participating in the work of SIOFA as a matter of priority.

Review

43. This CMM shall be reviewed no later than at the ordinary Meeting of the Parties in 2025. This review shall take into account, *inter alia*, the latest advice of the Scientific Committee, including advice on those matters listed in paragraphs 5 and appropriate catch levels for principal target species, in accordance with the objective described in paragraph 1.

Annex 1 - SIOFA VME indicator taxa (in bold)

Taxonomic level	Taxon name	FAO Code
Domain	Bacteria	
	Chemosynthetic organisms	CXV
Phylum	Bryozoa	BZN
Phylum	Xenophyophorea	XEF
Phylum	Brachiopoda	BRQ
Phylum	Porifera	PFR
Class	Hexactinellida	HXY
Class	Demospongiae	DMO
Phylum	Cnidaria	CNI
Order	Actiniaria	ATX
Order	Alcyonacea	AJZ
Order	Anthoathecata	AZN
Order	Antipatharia	AQZ
Order	Gorgonacea	GGW
Order	Scleractinia	CSS
Order	Pennatulacea	NTW
Order	Zoantharia	ZOT
Family	Stylasteridae	AXT
Phylum	Echinodermata	
Class	Crinoidea	CWD
Order	Euryalida	OEQ
Order	Cidaroida	CVD
Phylum	Anellida	
Family	Serpulidae	SZS
Phylum	Arthropoda	
Family	Bathylasmatidae	BWY
Phylum	Tunicata	
Class	Ascidacea	SSX
Phylum	Hemichordata	
Class	Pterobranchia	HET

Annex 2 - Guidelines for the Preparation and Submission of Notifications of Encounters with VMEs

1. General Information

Include contact information, nationality, vessel name(s) and dates of data collection.

2. VME location

Start and end positions of all gear deployments and/or observations.

Maps of fishing locations, underlying bathymetry or habitat and spatial scale of fishing.
Depth(s) fished.

3. Fishing gear

Indicate fishing gears used at each location.

4. Additional data collected

Indicate additional data collected at or near the locations fished, if possible.

Data such as multibeam bathymetry, oceanographic data such as CTD profiles, current profiles, water chemistry, substrate types recorded at or near those locations, other fauna observed, video recordings, acoustic profiles etc.

5. VME taxa

For each station fished, provide details of VME taxa observed, including but not limited to their relative density, absolute density, or weight and/or number of taxa.