

**43<sup>rd</sup> ANNUAL MEETING, 20-24 SEPTEMBER 2021****Recommendations of the  
Working Group on Ecosystem Approach Framework to Fisheries Management (WG-EAFFM)**

The NAFO Joint Fisheries Commission-Scientific Council Working Group on Ecosystem Approach Framework to Fisheries Management (WG-EAFFM) met via WebEx on 14-16 July 2021 and 20-21 July 2021 (COM-SC Doc. 21-03) and agreed on the following recommendations:

**The WG-EAFFM:****In regards to SAI work,**

1. **Recommends that the Commission direct the Secretariat to share its work on bottom fishing impacts along with any potential up-date of the SAI outcome with the UNGA VME review in 2022.**

**In regards to Seamounts,**

2. **Welcomes the recommendation from the SC on the proposal on revision boundaries of seamount closures and recommend the proposal be forwarded to the Commission for consideration, noting that some Contracting Parties need additional time for consultation on the revision with scientists and stakeholders.**

**In regards to Taxa Changes,**

3. **Recommends that the Commission adopt the Scientific Council recommended changes to Annex I.E.6 “VME Indicator Species” of the NAFO CEM (Annex 6).**

**In regards to Roadmap/Workshop**

4. **Recommends, given the long-term importance and ground-breaking nature of this work, that the Commission request Scientific Council, in consultation with WG-EAFFM, engage an external independent panel to conduct a scientific review of the NAFO Roadmap as it applies to estimating fisheries production and total catches (Tier 1) whilst considering a full range of species interactions (Tier 2). The outcomes of this would be available in advance of the planned workshop in 2022.**
5. **Recommends that the Commission strongly encourage participation by Contracting Parties and observers at both the open dialogue meeting and the subsequent WG-EAFFM Workshop.**
6. **Recommends that the Commission request the participation of WG-RBMS representatives and co-Chairs at both the open dialogue meeting and the subsequent WG-EAFFM Workshop, including potentially co-chairing the meetings, as many of these issues could overlap with its work, particularly the review of the PA Framework.**

**In regards to the review of NAFO CEM Chapter 2,**

7. **Re-iterates its prior recommendation that the Commission request the Scientific Council to review the effectiveness of NAFO CEM, Chapter 2 from a scientific and technical perspective and to report back at 2022 WG-EAFFM meeting.**
8. **Recommends that the Commission request STACTIC and the Secretariat to work with NAFO fishery observers to determine if, and how, the current VME identification guides can be improved to assist in VME species identification.**
9. **Recommends that the Commission request STACTIC, for WG-EAFFM’s 2022 meeting, to develop NAFO CEM text requiring the Secretariat to inform those Contracting Parties with an inspection presence when vessels are operating in closed areas at speeds indicating fishing may be occurring.**

In regards to VMEs,

10. Recommends that the Commission extend the current closures in Chapter 2 of the NAFO CEM for five (5) years. Consequently,
  - a. Article 17.1 of the NAFO CEM should read: Until 31 December 2024-2026, no vessel shall engage in bottom fishing activities in any of the areas illustrated in Figure 3 and defined by connecting the following coordinates specified in Table 5 in numerical order and back to coordinate 1.
  - b. Article 17.2 of the NAFO CEM should read: Until 31 December 2024-2026, no vessel shall engage in bottom fishing activities in the area of Division 3O illustrated in Figure 4 and defined by connecting the coordinates specified in Table 6 in numerical order and back to coordinate 1.
  - c. Article 17.3 of the NAFO CEM should read: Until 31 December 2024-2026, no vessel shall engage in bottom fishing activities in the areas 1-13 illustrated in Figure 5 and defined by connecting the coordinates specified in Table 7 in numerical order and back to coordinate 1.
11. Additional VME protections are needed, therefore, recommends that the Commission consider the SC's advice regarding additional area-based management measures to protect VMEs from SAI, and consider adopting additional measures if proposed at the 2021 Annual Meeting.

In regards to ABNJ Deep Sea Fisheries Project,

12. Recommends the Commission support the ABNJ Deep Sea Fisheries Project, including offering in-kind support from NAFO.

In regards to Sargasso Sea Commission,

13. Recommends the Commission support the development of an MOU between the Sargasso Sea Commission Secretariat and NAFO Secretariat.

## Annex 6. Updated List of VME Indicator Species for inclusion in Part. VI, Annex I.E of the NCEM

### List of VME Indicator Species

Common Name and FAO ASFIS 3- ALPHA CODE	Taxon	Family	FAO ASFIS 3-ALPHA CODE
	<i>Asconema foliatum</i>	Rossellidae	ZBA
	<i>Aphrocallistes beatrix</i>	Aphrocallistidae	
	<i>Asbestopluma (Asbestopluma) ruetzleri</i>	Cladorhizidae	ZAB (Asbestopluma)
	<i>Axinella</i> sp.	Axinellidae	
	<i>Chondrocladia grandis</i>	Cladorhizidae	ZHD (Chondrocladia)
	<i>Cladorhiza abyssicola</i>	Cladorhizidae	ZCH (Cladorhiza)
	<i>Cladorhiza kenchingtonae</i>	Cladorhizidae	ZCH (Cladorhiza)
	<i>Craniella</i> spp.	Tetillidae	ZCS (Craniella spp.)
	<i>Dictyaulus romani</i>	Euplectellidae	ZDY (Dictyaulus)
	<i>Esperiopsis villosa</i>	Esperiopsidae	ZEW
	<i>Forcepia</i> spp.	Coelosphaeridae	ZFR
	<i>Geodia barretti</i>	Geodiidae	
Large-Sized Sponges (PFR - Porifera)	<i>Geodia macandrewii</i>	Geodiidae	
	<i>Geodia parva</i>	Geodiidae	
	<i>Geodia phlegraei</i>	Geodiidae	
	<i>Haliclona</i> sp.	Chalinidae	ZHL
	<i>Iophon piceum</i>	Acarnidae	WJP
	<i>Isodictya palmata</i>	Isodictyidae	
	<i>Lissodendoryx (Lissodendoryx) complicata</i>	Coelosphaeridae	ZDD
	<i>Mycale (Mycale) lingua</i>	Mycalidae	YHL (Mycale lingua)
	<i>Mycale (Mycale) loveni</i>	Mycalidae	
	<i>Phakellia</i> sp.	Axinellidae	
<i>Polymastia</i> spp.	Polymastiidae	ZPY	
<i>Stelletta normani</i>	Ancorinidae	WSX (Stelletta)	
<i>Stelletta tuberosa</i>	Ancorinidae	WSX (Stelletta)	
<i>Stryphnus fortis</i>	Ancorinidae	WPH	
<i>Thenea muricata</i>	Pachastrellidae	ZTH (Thenea)	
<i>Thenea valdiviae</i>	Pachastrellidae	ZTH (Thenea)	

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	<i>Weberella bursa</i>	Polymastiidae	ZWB (Weberella spp.)
	<i>Enallopsammia rostrata</i>	Dendrophylliidae	FEY
Stony Corals (CSS - Scleractinia)	<i>Lophelia pertusa</i>	Caryophylliidae	LWS
	<i>Madrepora oculata</i>	Oculinidae	MVI
	<i>Solenosmilia variabilis</i>	Caryophylliidae	RZT
	<i>Stichopathes</i> sp.	Antipathidae	QYX
	<i>Leiopathes</i> cf. <i>expansa</i>	Leiopathidae	
	<i>Leiopathes</i> sp.	Leiopathidae	
	<i>Plumapathes</i> sp.	Myriopathidae	
Black corals (AQZ- Antipatharia)	<i>Bathypathes</i> cf. <i>patula</i>	Schizopathidae	
	<i>Parantipathes</i> sp.	Schizopathidae	
	<i>Stauropathes arctica</i>	Schizopathidae	SQW
	<i>Stauropathes</i> cf. <i>punctata</i>	Schizopathidae	
	<i>Telopathes magnus</i>	Schizopathidae	
	<i>Acanella arbuscula</i>	Isididae	KQL (Acanella)
	<i>Anthothela grandiflora</i>	Anthothelidae	WAG
	<i>Chrysogorgia</i> sp.	Chrysogorgiidae	FHX
Small Gorgonians (GGW)	<i>Metallogorgia melanotrichos</i>	Chrysogorgiidae	QFY (Chrysogorgiidae)
	<i>Narella laxa</i>	Primnoidae	QON (Primnoidae)
	<i>Radicipes gracilis</i>	Chrysogorgiidae	CZN
	<i>Swiftia</i> sp.	Plexauridae	
	<i>Acanthogorgia armata</i>	Acanthogorgiidae	AZC
	<i>Calyptrophora</i> sp.	Primnoidae	QON (Primnoidae)
	<i>Hemicorallium bathyrubrum</i>	Coralliidae	COR (Corallium)
Large Gorgonians (GGW)	<i>Hemicorallium bayer</i>	Coralliidae	COR (Corallium)
	<i>Iridogorgia</i> sp.	Chrysogorgiidae	QFY (Chrysogorgiidae)
	<i>Keratoisis siemensii</i>	cf. Isididae	IQO (Isididae)

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	<i>Keratoisis grayi</i>	Isididae	IQO (Isididae)
	<i>Lepidisis</i> sp.	Isididae	QFX (Lepidisis)
	<i>Paragorgia arborea</i>	Paragorgiidae	BFU
	<i>Paragorgia johnsoni</i>	Paragorgiidae	BFV
	<i>Paramuricea grandis</i>	Plexauridae	PZL (Paramuricea)
	<i>Paramuricea placomus</i>	Plexauridae	PZL (Paramuricea)
	<i>Paramuricea</i> spp.	Plexauridae	PZL (Paramuricea)
	<i>Parastenella atlantica</i>	Primnoidae	QON (Primnoidae)
	<i>Placogorgia</i> sp.	Plexauridae	
	<i>Placogorgia terceira</i>	Plexauridae	
	<i>Primnoa resedaeformis</i>	Primnoidae	QOE
	<i>Thouarella (Euthouarella) grasshoffi</i>	Primnoidae	QON (Primnoidae)
	<i>Anthoptilum grandiflorum</i>	Anthoptilidae	AJG (Anthoptilum)
	<i>Distichoptilum gracile</i>	Protoptilidae	WDG
	<i>Funiculina quadrangularis</i>	Funiculinidae	FQJ
	<i>Halipterus</i> cf. <i>christii</i>	Halipteridae	ZHX (Halipterus)
	<i>Halipterus finmarchica</i>	Halipteridae	HFM
Sea Pens (NTW – Pennatulacea)	<i>Halipterus</i> sp.	Halipteridae	ZHX (Halipterus)
	<i>Kophobelemnion stelliferum</i>	Kophobelemnidae	KVF
	<i>Pennatula aculeata</i>	Pennatulidae	QAC
	<i>Ptilella</i> spp.	Pennatulidae	
	<i>Pennatula</i> sp.	Pennatulidae	
	<i>Protoptilum carpenteri</i>	Protoptilidae	
	<i>Umbellula lindahli</i>	Umbellulidae	OJZ (Umbellula spp)
	<i>Virgularia mirabilis</i>	Virgulariidae	
Tube-Dwelling Anemones	<i>Pachycerianthus borealis</i>	Cerianthidae	WQB

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Erect Bryozoans (BZN – Bryozoa)	<i>Eucratea loricata</i>	Eucrateidae	WEL
	<i>Conocrinus lofotensis</i>	Bourgueticrinidae	WCF
Sea Lilies (CWD – Crinoidea)	<i>Gephyrocrinus grimaldii</i>	Hyocrinidae	
	<i>Trichometra cubensis</i>	Antedonidae	
Sea Squirts (SSX – Asciacea)	<i>Boltenia ovifera</i> <i>Halocynthia aurantium</i>	Pyuridae Pyuridae	WBO

Unlikely to be observed in trawls; *in situ* observations only:

Large xenophyophores      *Syringamina* sp.      Syringamminidae