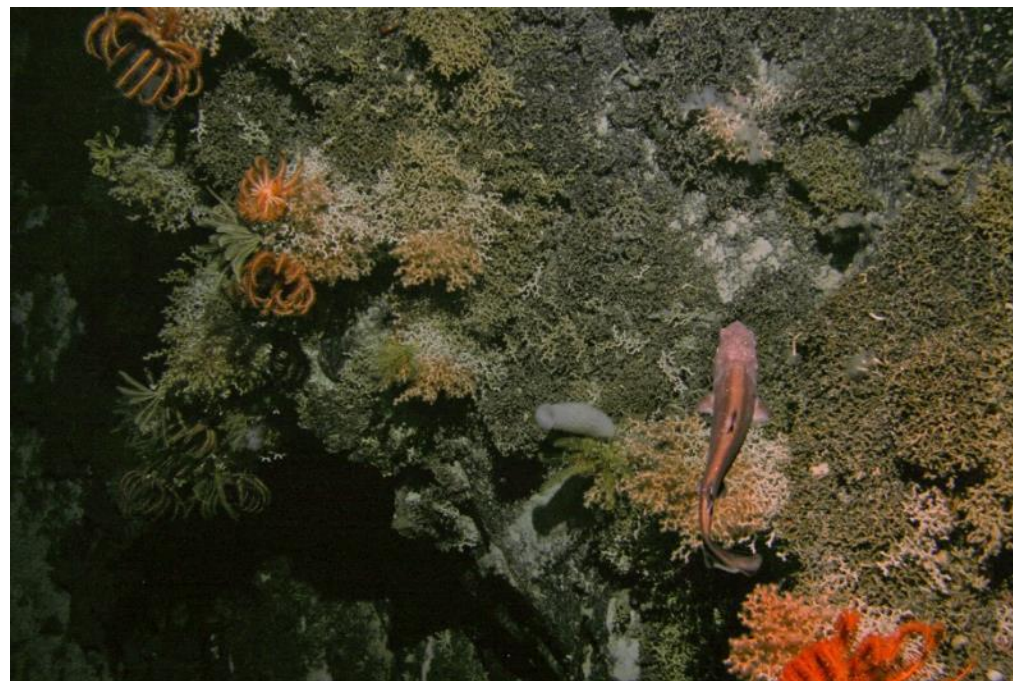


Utility of move-on rules to prevent Significant Adverse Impacts of bottom fisheries on VMEs in the SPRFMO Area

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The Issue

- Bottom trawling can cause significant disturbance to the seafloor - impacting the integrity of habitats, communities and species
- UNGA resolutions 61/105 (2007) and 64/72 (2010) called upon RFMOs to protect VMEs



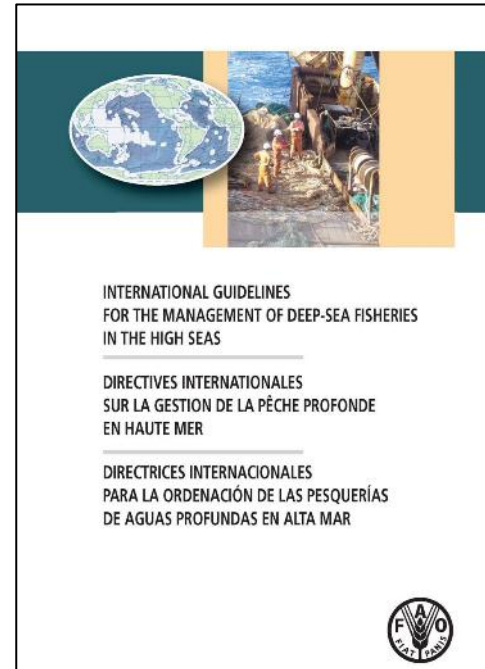


SPRFMO
South Pacific Regional Fisheries Management Organisation



VMEs and indicator taxa

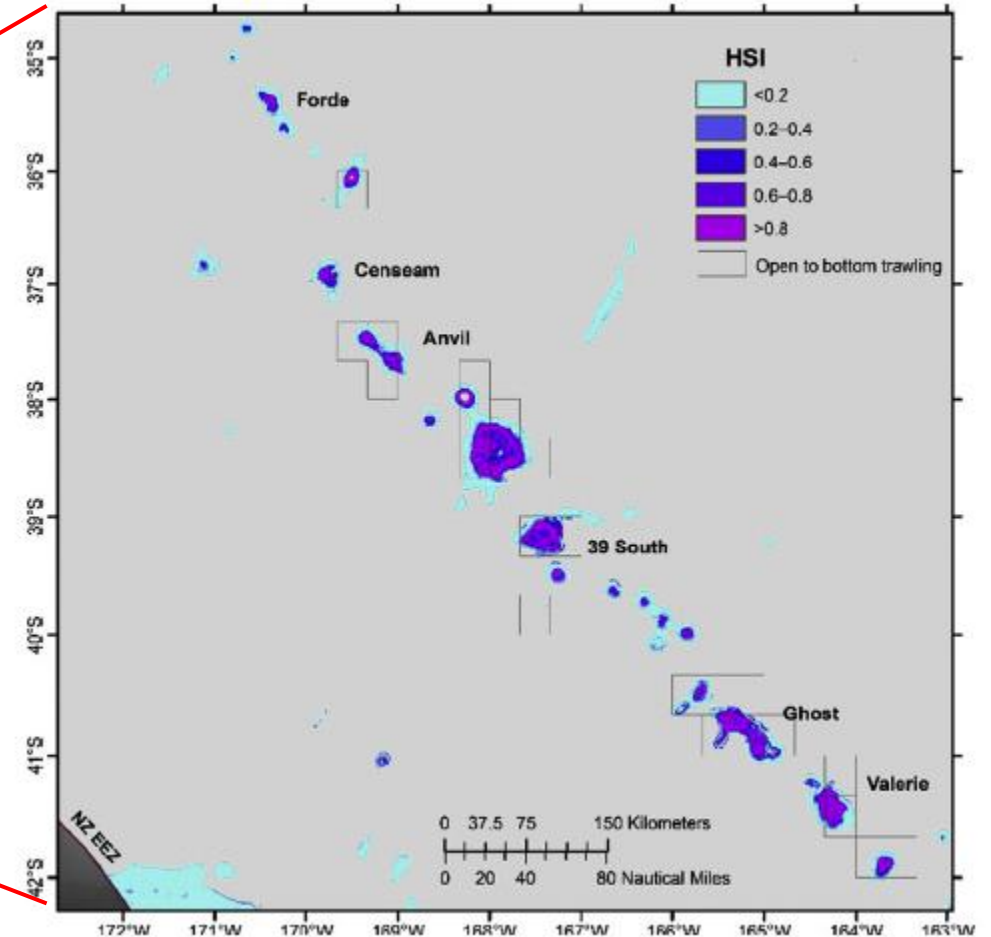
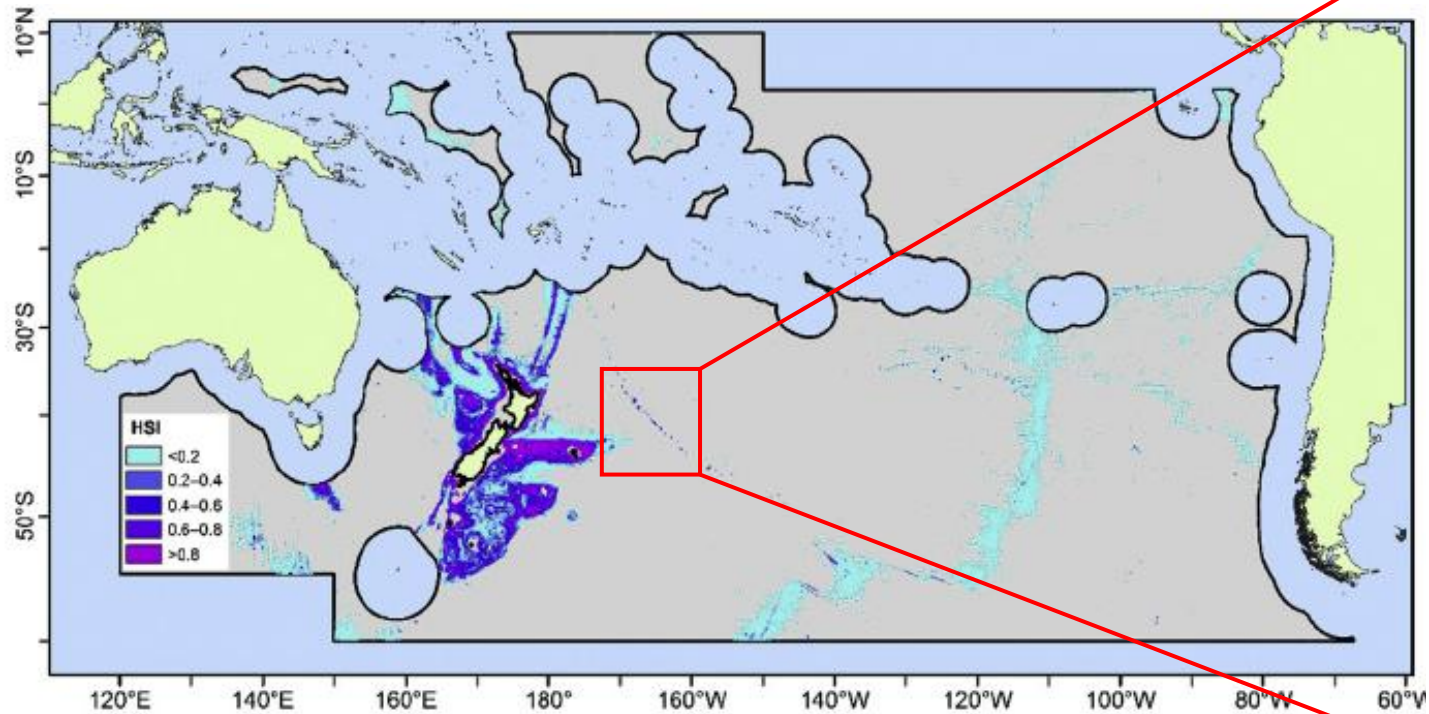
- FAO 2009 guidelines provide definition of VMEs and how to identify them
- Parker et al. (2009) identify VME indicator taxa for South Pacific



- Uniqueness or rarity
- Functional significance of habitat
- Fragility
- Life history traits make recovery difficult
- Structural complexity

Taxonomic level	Common name
Vulnerable taxa	
Phylum Porifera	Sponges
Phylum Cnidaria	
Class Anthozoa	
Order Actinaria	Anemones
Order Alcyonacea	Soft corals
Order Gorgonacea	Sea fans
Order Pennatulacea	Sea pens
Order Scleractinia	Stony corals
Order Antipatharia	Black corals
Class Hydrozoa	
Order Anthoathecatae	
Family Stylasteridae	Hydro corals
Habitat indicators	
Phylum Echinodermata	
Class Crinoidea	Sea lilies
Class Asteroidea	
Order Brisingida	Armless stars

SPRFMO Area & VME



SPRFMO's response to UNGA Res

- 2007 Interim measures (voluntary)



- Limit effort and catch to 2002-06 average annual levels; Not expand bottom fishing to new areas; starting 2010 apply a CMM for VME; to map sites where VME occur; close areas; 5 nm move-on rule; observers; 100% VMS coverage.

- 2009 Interim mea.



- Ban deep-water gillnets.

- 2009 SPRFMO Convention



- Protect ecosystems with with long recovery times following disturbance; precautionary approach; EBFM approach; recall UNGA resolutions.

- 2012 BFIAS



- Provide a min.std. for assessing impacts of bottom fishing.

- 2017 CMM 03/2017



- Bottom foot-print & catch freeze; 100% observer coverage for bottom-trawl; 5 nm move-on rule; areas open and closed to bottom-fishing; none vessel authorized to fish out the foot-print without previous assessment (SPRFMO BFIAS & FAO 2009 Guidelines); assessments shall be made publicly available.



Table 1: Move-on rules and criteria in force in SPRFMO bottom fisheries pursuant to CMM-03-2017

Member	Taxa	Move-on criteria	Move-on response	Relevant implementation details	Other management measures in place to protect VMEs
Bottom trawl fisheries (including midwater trawls for benthic-pelagic species)					
Australia	Live & dead corals & sponges	50 kg per tow	Move 5 n. miles from the tow track and remain away for duration of permit. Area closed to all Australian flagged vessels using same gear type	5 mile movement is away from any point on trawl track or on line between locations of longline anchors	No spatial closures (all trawl footprint "open" subject to move-on)
New Zealand	Live & dead sponges	50 kg per tow	If any one of the criteria is met, the vessel must move 5 miles from the tow track and remain away for duration of trip. Area remains open to other vessels	5 mile movement is away from the location at which the trawl tow commenced	Nested within spatial closures (move-on applies within moderately-fished areas only)
	Live & dead scleractinians	30 kg per tow			
	Live & dead gorgonians	1 kg per tow			
	Live & dead black corals	1 kg per tow			
	Live & dead soft corals	1 kg per tow			
	Live & dead hydrozoans	1 kg per tow			
	11 named taxa, live or dead	Presence of any 3 taxa in a tow			

Weakness of move-on rule

- Open blocks may contain VME.
- Move-on rule is not applied to heavily trawled blocks within foot-print.
- Move-on rules had not been intended as stand-alone measures to protect VMEs, rather they were “back stops” to complement long-term closures (Kenchington, 2011)
- Rogers & Gianni (2010) and Kenchington (2011) contended that move-on rules are not intended as stand-alone measures and should be complemented with spatial closures.
- Move-on rules should be considered to be temporary measures, providing precautionary protection for areas showing evidence of VMEs until objectively planned spatial closures can be implemented to protect known and highly bio-diverse VME areas (SC-01, 2013)

Disadvantages of move-on rule

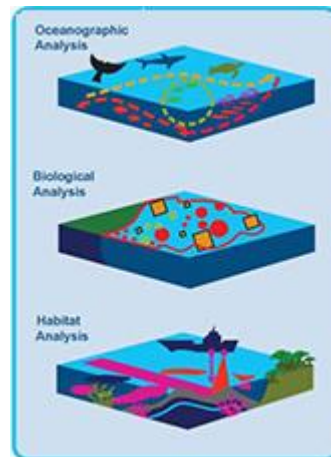
- Impose costs and uncertainty on fisheries.
- Relatively complex (and therefore costly) to design and administer.
- Do not avoid initial impacts on VMEs (providing only an uncertain response to an impact).
- May shift fishing effort away from preferred fishing areas, thereby potentially increasing total fishing effort and the impact of the fishery on vulnerable habitats and areas. This could occur where no spatial management exists or where open and closed areas have not been well-designed.

Utility of move-on rules within well-designed spatial management frameworks

- Move-on rules provide a useful contribution to protecting VMEs from significant adverse impacts (though not preventing any adverse impacts) if there are no spatial management measures in place, or the measures in place are poorly-designed, arbitrary, or based on highly uncertain science about the distribution of VMEs
- However, where well-designed spatial management measures are in place and evidence suggests that significant adverse impacts have been prevented (at the system scale) by those measures, then move-on rules would appear to offer utility only if new and highly unexpected insights into the distribution or density of VME indicator taxa arose from the benthic bycatch in a particular trawl (information utility)

Final Remarks

- Move-on rules are best viewed as an interim data collection and protection measure until evidence-based and comprehensive measures are in place.
- SPRFMO's members have used a series of stakeholder workshops to consider the best available science using decision-support tools to design potential spatial management areas to provide for sustainable fisheries while preventing significant adverse impacts on VMEs.
- Move-on rules may have some utility within a spatial management regime designed to provide these joint outcomes if new and highly unexpected insights into the distribution or density of VME indicator taxa arose from the benthic bycatch in a particular trawl or a sequence of two or more trawls.





Gracias



Chaltu



Maururu