

South Pacific Regional Fisheries Management Organisation

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SWG-11-12a

New Zealand SPRFMO Observer Implementation Report for 2011

Ministry for Primary Industries, New Zealand

This report constitutes New Zealand's Annual Observer Implementation Report for the year 2011 (January – December), pursuant to paragraph 3(d) of the SPRFMO Standards for the collection, reporting, verification and exchange of data.

New Zealand has had an observer programme in place since 1986, operating as a unit within the New Zealand Ministry for Primary Industries (MPI). It delivers coverage days for a number of clients, who are provided with some or all of the information collected.

These clients are: The Ministry for Primary Industries (Science, Field Operations, Fisheries Management groups), The Department of Conservation through the Conservation Services Levy, The National History Unit of the Museum of New Zealand, the New Zealand Fishing Industry, the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) and the Conversion Factors Working Group, which is a joint MPI and Industry working group.

The independence and credibility of the data collected by the NZ observer programme is subjected to critical review by our clients, who have established feedback mechanisms to inform and correct any deficiencies in our processes.

When the negotiations to establish a SPRFMO adopted data standard and observer coverage levels in 2007, New Zealand was in a position to meet the requirements through this established observer programme.

Observer Training

MPI recruitment requires all our permanent observers to successfully complete a three week training course before they are accepted into the programme. The course outline is as follows. Sessions preceded with a number are unit standards registered on the New Zealand Qualifications Framework:

- Observer Programme overview, Trip Planning.
- Catch effort logbooks (CELB)
- Catch effort logbook exercises
- Overview of the Observer manual
- 12306 – Identify common parts, fittings and equipment on a vessel
- 12310 – Prevent, extinguish and limit the spread of fire on a vessel
- 497 – Protect health & safety in the workplace
- 6213 – Use safe working practices in the seafood industry
- 12309 – Demonstrate knowledge of abandon ship procedures and demonstrate sea survival skills
- 15679 – Demonstrate a basic knowledge of commercial fishing methods
- Volumetric measurement
- Density factors
- Time Sampling
- Catch Assessment
- Mixed tows
- 19847 – Describe the reduction of marine mammal and turtle incidental capture during commercial fishing, including assessment
- 5332 – Maintain personal hygiene and use hygienic work practices working with seafood
- 19877 – Demonstrate knowledge of protection of the marine environment during seafood vessel operations
- Department of Conservation – Marine mammals and seabirds, mitigation devices
- Non-fish bycatch forms
- Benthic form
- Personal clothing and stores
- Communications / Key vessel personnel / Emergency Evacuation codes
- The psychology of deployment – Observer health and safety issues
- Code of conduct / complaint procedure
- QMS overview
- Scales
- Net bursts / discards / Schedule 6 releases
- Product states
- 19846 – Describe the reduction of seabird incidental capture during commercial fishing including assessment
- 23030 – Use basic knife skills as a fisheries observer
- 23027 - Demonstrate knowledge of information displays aboard seafood harvesting vessels
- The Compliance Business and Observer Compliance Contribution
- 20168 – Work on a commercial fishing vessel
- Briefing / Debriefing / General paperwork
- Performance Assessment System
- Conversion factors / practical exercise
- Fish ID book
- Fish ID practical

- Otoliths/Staging
- Biological sampling forms practical
- Biological Manual
- First Aid kits
- Tablets and at-sea data entry
- Observer Powers
- Compliance Investigation Services - Role, Use of Observer data, Profiling, Forensics.
- Employment Agreement
- MPI Science use of observer data
- Examination

Successful recruits are accepted into MPI Observer Services and then deployed with an observer trainer for one to two trips of an average duration of 30 day per trip.

Programme Design and Coverage

The MPI observer programme made provision in its annual plan to meet the observer coverage levels agreed by the SPRFMO negotiations:

- A minimum of 10% observer coverage for pelagic fisheries;
- 100% observer coverage for bottom trawl fisheries; and
- A minimum of 10% observer coverage for bottom fisheries other than bottom trawl fisheries.

New Zealand conducted no pelagic fishing for *Trachurus* species in the SPRFMO Area during 2011. New Zealand flagged vessels did fish in bottom fisheries in the SPRFMO Area using either bottom trawling or bottom lining fishing methods.

Table 1. Monthly fishing effort by New Zealand vessels fishing in the SPRFMO Area during 2011.

Month and Year	Number of bottom trawl vessels	Vessel days in bottom trawl	Number of bottom line vessels	Vessel days in bottom line
January 2011	3	26		
February 2011	0	0		
March 2011	0	0		
April 2011	1	22		
May 2011	3	35		
June 2011	6	95		
July 2011	6	54		
August 2011	3	15		
September 2011	0	0		
October 2011	1	19	2	8
November 2011	1	13	2	21
December 2011	1	11	1	8

Table 2. Observer coverage achieved in the New Zealand bottom trawl and bottom line fisheries in the SPRFMO Area during 2011.

Month and Year	Number of bottom trawl vessels covered	Observed vessel days in bottom trawl	Number of bottom line vessels covered	Observed vessel days in bottom line
January 2011	2	23	0	0
February 2011	0	0	0	0
March 2011	0	0	0	0
April 2011	1	22	0	0
May 2011	3	35	0	0
June 2011	6	92	0	0
July 2011	6	59	0	0
August 2011	3	15	0	0
September 2011	0	0	0	0
October 2011	1	21	0	0
November 2011	1	13	0	0
December 2011	1	11	0	0

The costs of observer coverage were fully recovered directly from industry through the direct charging of vessel operators.

New Zealand's implementation of the SPRFMO interim measures, including the move on rule, is described in detail in its bottom fishery impact assessment¹. In summary, the move on rule is applied in open 'moderately trawled' areas, where vessels that encounter evidence of a VME when bottom trawling are required to move on 5 nautical miles from the position that hauling of the gear commences, and cannot return to that area for the duration of the trip.

Evidence of a VME is determined through the applications of the VME Evidence Process set out in the fishers high seas fishing permit and reproduced in Appendix 1. This process is completed by the observer, and a completed copy of the form given to the master in a timely manner. If a move on is triggered it is the master's responsibility to notify MPI and to ensure that the vessel does not fish within 5 nautical miles of this position for the remainder of the trip.

¹ Bottom Fishery Impact Assessment. Bottom Fishing Activities by New Zealand Vessels Fishing in the High Seas in the SPRFMO Area during 2008 and 2009.

Data collection and Reporting

Observers on vessels fishing in the SPRFMO area were tasked to:

- Complete the VME Evidence process for all bottom trawl tows in areas where the move on rule applied;
- Complete MPI benthic material forms for all tows in all areas;
- Determine and record catch effort and catch information on each fishing tow in all areas independent of vessel reporting; and
- Obtain biological data and samples on target and other species. This includes measuring and sexing fish and collecting otoliths.

The observer reporting forms are detailed in Appendix 1.

Observers deployed on SPRFMO trips were all experienced observers and were briefed prior to each trip on the benthos identification as it related to the VME evidence process.

Observer data for 2011 for was reported to the SPRFMO interim Secretariat as required by the data standards.

Problems Encountered

Implementing the SPRFMO observer requirements did not present insurmountable problems. Most of the prerequisite processes were already in place when the data standards and coverage levels were agreed.

One or two observers are required on each bottom trawl vessel to achieve one hundred percent observer coverage of all bottom trawling activities. The number is reviewed on a case by case basis, and includes consideration of the working hours of the observers, and the fishing capacity of each vessel. In all the 2011 bottom trawl trips only one observer was requested per trip. The onus was placed on the vessel operators via the high seas permitting process to keep their fishing effort within the hours achievable with the level of coverage they have requested. Fishing effort on a few occasions exceeded the daily hours safely manageable by a solo observer. In total, 98% of all hauls were viewed by an Observer.

The only other bottom fishery in the SPRFMO Area other than bottom trawling was bottom lining. There was no observer coverage for the bottom lining fishery in 2011. It had been anticipated that more than 2 vessels would engage in bottom lining in 2011. Observer coverage would be provided for subsequent bottom lining vessels.

Appendix 1. Observer data collection forms used to monitor New Zealand high seas fisheries

- **Observer Trawl catch Effort Logbook**

[illegible]

- **Observer Benthic Materials Form**

Observer Benthic Materials Form (Version 1 - October 2007)

(Version 1 - October 2007)

1. Benthic Material includes all **Non-targeted** marine invertebrates, marine plants and/or structures that are connected with the seafloor. You should complete a **separate row** for each individual identifiable item.

- 2.** Write the trip number

[illegible]

3. This form is page number for this trip. Is this form the last page for this trip? ☐ Yes ☐ No

- **Observer Seven Day Report**

**NZ MFISH OBSERVER 7-DAY
REPORT**
ENTER DATA IN WHITE BOXES

*Add more columns, or rows if
necessary*

**Please email to ccamlr@fish.govt.nz
within 12 hours of the end of the 7 Day
reporting period**

(1) General Information

Names of observe	
Vessel name	
Vessel call sign	
Month and year (mm-yy)	

(2) Total Catch by Species by Longline for 7 DAY PERIOD

whole weight (kg)	
whole weight (kg)	
whole weight (kg)	
whole weight (kg)	
whole weight (kg)	

**(4) Seabird/Marine mammal
incidents during 7 day period**

Comments	
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(5) Total Fishing Effort during TRIP to date

Total number of sets completed	
Total number of hooks set	

(6) Toothfish tagged to date

Total number TOT tagged	
Total weight (tonnes) TOT caught to date	

(7) Skates tagged to date

Total number skates tagged	
Total number skates caught to date	

(8) Any Other Comments

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- **VME Identification Form and associated VME Species Identification Guide implemented on New Zealand high seas bottom trawlers**

Vulnerable Marine Ecosystem Evidence Process (Version 1.0 - Apr 08)

1. Trip, tow, and vessel information

Trip number	Tow number	Observer/s	Name of vessel master

2. Date, time, and position that hauling of the gear commenced

Date dd/mm/yy	Time 24-hr clock	Latitude Degrees Minutes	Longitude Degrees Minutes EW

3. Instructions

Assess the total weights of all organisms whether dead or alive in each of the relevant taxonomic groups and record in Section 4. If the Observed Weight of a taxonomic group is **greater than** (not equal to) the Threshold Weight, write the VME Indicator Score for that group in the "Score" Column.

If a taxonomic group is present, but the Observed Weight is **not** greater than the Threshold Weight, tick in the "Tick" column.

Sum the scores and count the ticks. Record these totals at the bottom of the columns. Add the Sum of scores to the Count of ticks and record it as the Total VME Indicator Score.

If the Total VME Indicator Score is 3 or greater, the area is considered to have Evidence of a Vulnerable Marine Ecosystem.

The taxonomic groups recorded on this form may not be a complete record of all benthic material present in the tow.

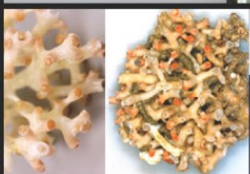
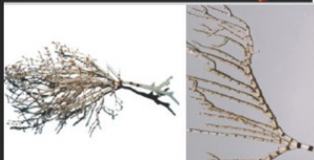
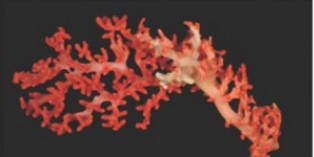
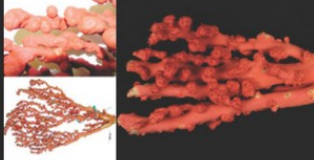
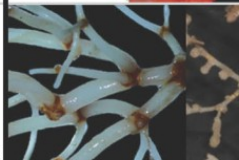
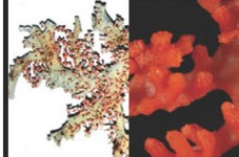
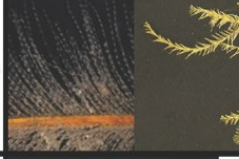
4. Relevant taxonomic groups, weights, and scores

Taxonomic Group	Code	Method of Weighting	Observed Weight (kg)	Threshold Weight (kg)	VME Indicator Score	Score if Threshold Weight exceeded	Tick if not scored but present
PORIFERA	ONG	☐		50	3	☐	☒
Cnidaria							
Anthozoa (class)							
Actiniaria (order)	ATR	☐		0	1	☐	☐
Scleractinia (order)	SIA	☐		30	3	☐	☒
Antipatharia (order)	COB	☐		1	3	☐	☒
Alcyonacea (order)	SOC	☐		1	3	☐	☒
Gorgonacea (order)	GOC	☐		1	3	☐	☒
Pennatulacea (order)	PTU	☐		0	1	☐	☐
Hydrozoa (class)	HDR	☐		6	3	☐	☒
Unidentified Coral	COU	☐		0	1	☐	☐
Echinodermata							
Crinoidea (class)	CRI	☐		0	1	☐	☐
Brisingida (order)	BRG	☐		0	1	☐	☐
Sum of scores							
Count these ticks							
Total VME Indicator Score → Sum of scores + count of ticks =							

5. Vessel notification

As soon as the form is completed for any tow provide a copy to the person in charge of the vessel.

Name (if not vessel master)	Received by person in charge (signature)	Date received (dd/mm/yy)	Time received (24-hr clock)

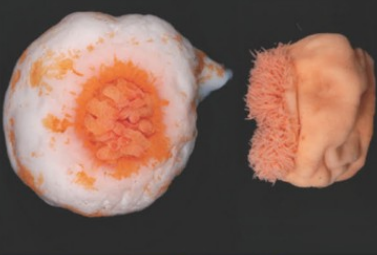
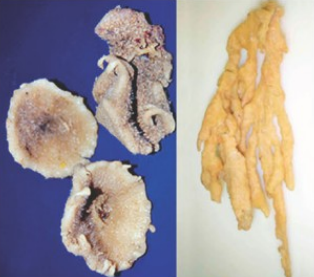
Classification guide for potentially vulnerable invertebrate taxa in the SPRFMO Area											
RAFT version 1.0 Note these are MFish codes These groups are not included: Bryozoan Sea Stars Crabs Urchins Worms Cats											
Code	SIA p 71-79	COB p 57-58	SOC pg 55-56	GOC p 59-65				COR p 9; 66-68	HYF p 9		
Level	Scleractinia (Order)	Antipatharia (Order)	Alcyonacea (Order)	Gorgonacea (Order)				Anthoathecata (Family)	Hydroida (Order)		
Taxon	Stony corals	Black corals	Soft corals	Isidiidae (Bamboo)	Coralliidae (Red / Precious)	Primnoidae (Bottle brush, Sea fans)	Paragorgiidae (Bubblegum)	Chrysogorgiidae (Golden)	Stylasterids (Hydrocorals)	Hyroids	
Form, Size	 Branching: Can form large matrices, often forms thickets Cups: usually small (<20cm), solitary or in small clusters	 Semi-rigid, woody, not very dense, dark brown or black skeleton, can be large (>2m). Branch tips can look like hydroids or small gorgonian	 Can be mushroom shaped. Floppy or soft, leather-like surface texture. Usually multiple large polyps, body not symmetrical, no foot or stalk	 Solid calcified trunk with brown joints (nodes), rings in x-section, branching 20 or 30, fine tips, tree like branch tips	 Calcified skeleton, no spines. Thick, stubby stems with fine side branches	 Dark or metallic tree-like branches, flexible	 Large (up to 2m), red, thick stems, breaks when flexed	 Gold, black or green metallic lustre. Semi-rigid single, main axis with semi-soft tissue cortex. Small specimens can be feathery like hydroids or bushy like black coral	 Calcified, no rings in X-section, often pink or white. Often uniplanar, side branches lattice from obviously thicker main stems	 Entire organism small, <30cm, flexible and plant-like, often feathery, no soft tissue covering	
	 Calcified, very hard or brittle stems Branching: Often smooth stems Cups: Can be ridged Polyp calyxes well formed with ridged edges, large, hard polyps	 Slimy flesh on branches. Surface with minute spines, may appear smooth. 30, fine or bushy tips	 Similar polyps to seapens, but soft corals are not stalked	 Can scrape off surface tissue, skeleton surface smooth between nodes	 Can scrape surface tissue off. Smooth (not sandpaper) with knobby ends. No pores on skeleton	 Usually no spines, some metallic lustre on skeleton. 30 Bushy branches, obvious polyps	 Chalky material, not hard. No spines. Can scrape off surface. Bulbous ends with polyps	 Can be non-branching and whip-like. Usually no spines, metallic lustre. Fine or sparse 3D branching	 Coarse sandpaper texture, can't scrape off surface tissue. Has minute pores	 Indistinct polyps, feathery tips	
Commonly mistaken for:	 Branching form can look like hard sponges but sponges are light with spicules	 Hydroid if small, or small pieces of dead Gorgonacea	 Small pieces of Coralliidae. Can also resemble Demosponges, which have no polyps	 Other gorgonians if in small pieces, but won't break easily	 Soft corals, which always have soft stems	 Hyroids if small pieces, but have distinct polyps	 Small pieces of Coralliidae	 Antipatharia, but tips are not slimy	 Small, hard Bryozoans or pieces of Coralliidae	 Small specimens of Gorgonacea or Antipatharia	

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Developed by: D Tracey, S Parker, E Mackay, O Anderson, C Ram, (2008)

Classification guide for potentially vulnerable invertebrate taxa in the SPREMO Area					
DRAFT version 1.0 Note these are MFish codes	Code	ONG p 30-45	ATR p 51-54	PTU p 69-70	CRI p 230-232
	Level	Porifera (Phylum)	Actinaria (Order)	Pennatulacea (Order)	Crinoidea (Class)
	Taxon	Hexactinellida (Glass sponges)	Anemones	Sea pens	Grinoids
	Form, Size	Demospongiae (Siliceous sponges)			
					
	Detail (Texture, colour, polyps)				
					
	Commonly mistaken for:				
					
	Commonly mistaken for:				
					

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Developed by: D Tracey, S Parker, E Mackay, O Anderson, C Ram, (2008)