



Australian Government

**Australian Bureau of Agricultural and
Resource Economics – Bureau of Rural Sciences**

**Australian National Report on 2009 fishing
activities to the South Pacific Regional
Fisheries Management Organisation (SPRFMO)
Science Working Group**

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1. Description of Fisheries

This report provides a summary of the fishing activities undertaken by Australian-registered vessels in 2009 in the South Pacific Regional Fisheries Management Organisation (SPRFMO) area.

This summary excludes data from within the Exclusive Economic Zone (EEZ) of mainland Australia and external territories (e.g. Macquarie Island or Norfolk Island). Data are not reported for squid fishing or fisheries that operate in the Western and Central Pacific Fisheries Commission (WCPFC) area.

Operators in the SPRFMO area are currently authorised to target various species with mid-water and demersal trawl, traps, drop-line, minor-line, auto-longline, and longline. The vessels undertaking high seas fishing in the SPRFMO area do so under permits issued by the Australian Fisheries Management Authority (AFMA).

Data presented are logbook records collected and reported by fishers. Data includes records from 1987 to 2009.

1.1 Fleet composition

A total of three Australian vessels fished in the area of the SPRFMO in 2008 and 2009 (Tables 1). Vessels fished with various line methods (Table 2), with no demersal trawling recorded in 2009. There was no trawling or pelagic fishing in the SPRFMO area in 2009.

Table 1. The number of vessels that actively fished in the SPRFMO area, 2007–2009.

Year	Vessels that actively fished pelagically (excl. squid)			Vessels that actively bottom fished		
	2007	2008	2009	2007	2008	2009
Vessels	0	0	0	4	3	3
Catch (t)	0	0	0	40	174	60
Effort (*hooks)	0	0	0	229,700*	761,800*	514,200*

Table 2. Permitted fishing methods for the SPRFMO area, 2007–2009.

Classification	Gear type
Bottom fishing	Demersal longline
	Demersal trawl
	Droplines
	Auto-longline
	Dropline
	Minor line
Pelagic fishing	Mid-water trawl

1.2 Area of operations

All fishing operations in 2009 were within the Australian fishing footprint (2002-06). Fishing occurred between March and August in 2009. No changes in management (ie permit conditions) or fishing practices were recorded in the fishery in 2009.

2. Catch, Effort and CPUE

The total catch of all species taken by Australian vessels in 2009 was 60 tonnes. Redthroat emperor (*Lethrinus miniatus*), morwong (*Nemadactylus macropterus* and *Nemadactylus spp.*), seabream (*Gymnocranius spp.*), yellowtail kingfish (*Seriola lalandi*) and blue-eye trevalla (*Hyperoglyphe Antarctica*) were the top five species caught by weight, and collectively comprised 86 percent of the total catch (see Appendix A for species composition in 2009).

There was no catch of jack mackerel (*Trachurus*) species by Australian vessels operating in the SPRFMO area in 2009.

The catch, nominal effort and catch per unit effort (CPUE) are shown for key species in Tables 3 and 4 for trawl and non-trawl fishing, respectively.

Total effort for the trawl fishery reduced from 70.7 trawl hours in 2007 to zero trawl hours in 2008 and 2009. Total number of active vessels in the trawl fishery declined from 14 in 2002 to two in 2007 and zero in 2009. The nominal CPUE for orange roughy (*Hoplostethus atlanticus*) in the trawl fishery shows substantial variation over time, with no clear trend. Other species caught by the trawl fishery, including smooth oreo dory (*Pseudocyttus maculatus*), spiky oreo dory (*Neocyttus rhomboidalis*), alfonsino (*Beryx decadactylus*) and cardinal fish (Apogonidae) show some fluctuation in CPUE over time.

Total effort (number of hooks) in the demersal longline and dropline fishery declined from 786,000 hooks in 2008 to 507,000 hooks in 2009. The demersal longline and dropline fishery peaked with six active vessels in 2004; there were three active vessels in 2008 and 2009.

Table 3. Number of high seas vessels, effort and annual catch of major species using trawl gear in the SPRFMO area, 1987–2009. No trawl effort or catch were recorded for the SPRFMO area in 2008 and 2009.

Year	No. Vessels	Effort (Trawl h)	Catch of major species (t) (nominal CPUE t/rawl h)						Total Catch (t)
			Orange roughy	Smooth oreo	Spikey oreo	Alfonsino	Cardinal-fishes	Other species	
1987 – 1990 ¹	6	105	9 (0.08)	0 (0)	0 (0)	0 (0)	0 (0)	8	17
1991 – 1993 ¹	6	85	367 (4.31)	1 (0.01)	107 (1.26)	0 (0)	0 (0)	4	479
1994	7	257	192 (0.74)	0 (0)	6 (0.02)	0 (0)	2 (0)	3	203
1995 – 1996 ¹	6	62	21 (0.34)	12 (0.19)	10 (0.16)	0 (0)	52 (0.84)	2	98
1997	10	396	1458 (3.68)	505 (1.27)	448 (1.13)	1 (0)	15 (0.03)	41	2468
1998	12	916	3098 (3.38)	420 (0.46)	620 (0.68)	1 (0)	2 (0)	3	4143
1999	10	777	2514 (3.23)	106 (0.137)	89 (0.11)	8 (0.01)	1(0)	4	2720
2000	12	752	948 (1.26)	123 (0.16)	86 (0.11)	4 (0)	7 (0)	1	1170
2001	9	307	751(2.45)	13 (0.04)	31 (0.10)	1 (0)	0 (0)	3	799
2002	14	215	383 (1.79)	4 (0.02)	35 (0.16)	3 (0.01)	0 (0)	5	429
2003	10	115	156 (1.36)	3 (0.03)	32 (0.28)	2 (0.02)	0 (0)	5	198
2004	10	69	351 (5.08)	16 (0.23)	9 (0.13)	1 (0.01)	0 (0)	2	381
2005	7	47	207 (4.40)	74 (1.57)	1 (0.02)	81 (1.72)	0 (0)	17	380
2006	7	121	166 (1.37)	0 (0)	0 (0)	209 (1.73)	0 (0)	77	452
2007	2	70.7	148 (2.09)	0 (0)	1 (0.01)	86 (1.21)	2 (0.02)	16	253
2008	0	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0	0
2009	0	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0	0
Total		4224	10 620	1277	1475	311	78	175	13 935

¹Data were combined to ensure ≥ 5 vessels.

Table 4. Number of high seas vessels and annual catch of major species using non-trawl gear in the SPRFMO area, 1997–2009.

Year	No. Vessels	Catch of major species (t) 1997 - 2009					Total catch (t)
		Morwong*	Blue eye trevalla	Ocean blue eye trevalla	Yellowtail kingfish	Other spp.	
1997 – 1998 ¹	5	31	32	0	15	36	114
1999	5	29	22	0	13	20	85
2000 – 2001 ¹	5	121	27	35	19	72	274
2002	6	81	27	66	32	39	244
2003	5	16	30	13	1	28	89
2004	6	0	2	7	0	9	19
2005 – 2006 ¹	5	0	3	0	0	4	8
2007	4	6	16	0	1	16	40
2008	3	24	3	0	25	120	174
2009	3	13	4	0	9	32	60
Total	47	321	166	121	115	342	1107

¹Data were combined to ensure ≥ 5 vessels.

*Morwong catch is combined *Nemadactylus macropterus* and *Nemadactylus* spp.

Table 5. Data for the five species with the highest catch in the bottom longline and dropline fishery in the SPRFMO area, 2007–2009.

Common name	Species name	2007 (t)	2008 (t)	2009 (t)
Redthroat emperor	<i>Lethrinus miniatus</i>	7	60	16
Yellowtail kingfish	<i>Seriola lalandi</i>	1	25	9
Seabream	<i>Gymnocranius spp</i>	1	21	10
Blue-eye trevalla	<i>Hyperoglyphe antarctica</i>	16	3	4
Morwong	<i>Nemadactylus macropterus</i> & <i>Nemadactylus</i> spp.	6	24	13

3. Fisheries Data Collection and Research Activities

Australian vessels require a permit from AFMA to fish in the SPRFMO area. The permits are issued for a period of up to 12 months. Satisfactory compliance with previous permit conditions is one factor in deciding whether to grant new fishing permits. Australia collects detailed information on fishing trips through reporting requirements as part of permit conditions for bottom fishing in the high seas. All Australian flagged vessels fishing on the high seas are required to have a vessel monitoring system (VMS) to verify certain logbook information.

No changes to fisheries data collection or research activities were recorded in the fishery in 2009.

3.1 Logbooks

Since 2002, the permit conditions have included the requirement to record daily catch and effort data in logbooks on a shot-by-shot basis, including position of fishing operations. Fishers are also required to record discards and bycatch in the logbooks. AFMA distributes, collects and processes these logbooks. Disposal of the catch is also monitored by AFMA through catch disposal records.

3.2 Vessel Monitoring System

VMS has been required in all Commonwealth fisheries since 1 July 2007, including vessels fishing on the high seas. The AFMA VMS is based on Automatic Location Communicators (ALCs) with a built-in Global Positioning System (GPS) fitted to each vessel nominated against a Commonwealth fishing concession. These ALCs transmit data on vessel registration, date, time, vessel position, course and speed via Inmarsat communications satellites to a land earth station (LES). The frequency and accuracy of the VMS position reports meet the SPRFMO data standards.

These data are transferred via a ‘virtual private network’ (VPN) internet link to the AFMA head office in Canberra. At AFMA, vessel tracks are displayed as plots on a digitised marine chart and can be automatically cross referenced against spatial rules set in fisheries management plans. AFMA requires all vessels on the high seas vessels to comply with a stringent installation and maintenance standard for all ALC reporting.

3.3 Research

No research beyond biological sampling and length composition data collected by Australian observers was conducted in the SPRFMO area in 2009.

4. Biological Sampling and Length/Age Composition of Catches

Length-frequency data were collected by Australian observers in the SPRFMO area in 2009 but due to the low level of fishing effort the sample sizes were low. All length-frequency data for 2009 were provided in the data submission to SPRFMO.

5. Summary of Observer and Port Sampling Programs

5.1 Observer Program

The current permit conditions for bottom fishing in the high seas require 100 percent observer coverage on all vessels permitted to use demersal trawl gear. A minimum of 10 percent observer coverage is required on vessels using other demersal fishing methods. In 2009, there was no trawl fishing by Australian vessels. The level of observer coverage on the active non-trawl vessels in the SPRFMO area was approximately 15 percent.

The AFMA has recruited and trained observers since its establishment in 1992. Approximately twenty observers are currently employed in the AFMA observer program. They are sourced from universities and the maritime industries from around Australia and have demonstrated experience in collecting biological data at sea, fisheries research methodologies and collection of associated scientific data. Observers also hold marine radio operators certificate of proficiency (or similar qualifications and/or experience), a sea safety certificate and medical certificate, and have completed an AFMA observer training course.

Observers collect a range of data on vessel characteristics, fishing activity, catch composition, discarding and bycatch. There have been no changes to the requirements regarding observers in 2009.

5.1 Port Sampling Program

The disposal of the catch is monitored through catch disposal records.

Appendix A: Taxa caught in the SPRFMO area in 2009.

Common name	Taxonomic name
Alfonsino	<i>Beryx splendens</i>
Amberjack	<i>Seriola dumerili</i>
Barracouta	<i>Thyrsites atun</i>
Trumpeter	<i>Latridopsis sp.</i>
Bight redfish	<i>Centroberyx gerrardi</i>
Blacktip rockcod	<i>Epinephelus fasciatus</i>
Blackfin armour gurnard	<i>Satyrichthys cf moluccense</i>
Blackspot pigfish	<i>Bodianus vulpinus</i>
Blue eye trevalla	<i>Hyperoglyphe antarctica</i>
Blue grenadier	<i>Macruronus novaezelandiae</i>
Blue Maori cod	<i>Epinephelus cyanopodus</i>
Blue morwong	<i>Nemadactylus valenciennesi</i>
Blue shark	<i>Prionace glauca</i>
Boarfish	<i>Pentacerotidae</i>
Chimaeras	Chimaeridae
Cods and groupers	Serranidae
Common sawshark	<i>Pristiophorus cirratus</i>
Common warehou	<i>Seriolella brama</i>
Conger eels unspecified	Congridae - undifferentiated
Coral perch	<i>Trachyscorpia spp.</i>
Coral trout	<i>Plectropomus & Variola spp.</i>
Gemfish	<i>Rexea solandri</i>
Gulper shark	<i>Centrophorus granulosus</i>
Gummy shark	<i>Mustelus antarcticus</i>
Green jobfish	<i>Aprion virescens</i>
Hapuku	<i>Polyprion oxygeneios</i>
Hussar	<i>Lutjanus adetii</i>
King snapper	<i>Pristipomoides filamentosus</i>
Jackass morwong	<i>Nemadactylus macropterus</i>
Latchet	<i>Pterygotrigla polyommata</i>
Longfin perch	<i>Caprodon longimanus</i>
Longfin rockcod	<i>Epinephelus quoyanus</i>
Longtail red snapper	<i>Etelis coruscans</i>
Maori cod	<i>Epinephelus undulatostratus</i>
Morwongs unspecified	<i>Nemadactylus spp</i>

Common name	Taxonomic name
Oil fish	<i>Ruvettus pretiosus</i>
Pink ling	<i>Genypterus blacodes</i>
Porgies	<i>Sparidae spp</i>
Ray's bream	<i>Brama brama</i>
Reef ocean perch	<i>Helicolenus percoides</i>
Redfish	<i>Centroberyx affinis</i>
Redthroat emperor	<i>Lethrinus miniatus</i>
Ribaldo	<i>Mora moro</i>
Richardsons boarfish	<i>Pseudopentaceros richardsoni</i>
Robinson's bream	<i>Gymnocranius grandoculis</i>
Rockcods	<i>Aethaloperca & Anyperodon spp.</i>
Rosy snapper	<i>Pristipomoides filamentosus</i>
Ruby snapper	<i>Etelis carbunculus</i>
Rubyfish	<i>Plagiogeneion spp.</i>
School shark	<i>Galeorhinus galeus</i>
Sea perches unspecified	<i>Lutjanus spp.</i>
Shortfin mako shark	<i>Isurus oxyrinchus</i>
Shortfin spurdog	<i>Squalus megalops</i>
Smallfin gulper shark	<i>Centrophorus moluccensis</i>
Spikey oreodory	<i>Neocyttus rhomboidalis</i>
Stargazers unspecified	Uranoscopidae - undifferentiated
Starry triggerfish	<i>Abalistes stellaris</i>
Striped trumpeter	<i>Latris lineata</i>
Sweetlips	<i>Diagramma pictum (Diagramma labiosum)</i>
Thresher shark	<i>Alopias vulpinus</i>
Tomato rockcod	<i>Cephalopholis sonnerati</i>
Western pigfish	<i>Bodianus vulpinus</i>
Whaler sharks	<i>Carcharhinus sp.</i>
White warehou	<i>Serirolella caerulea</i>
Yellowfin tuna	<i>Thunnus albacares</i>