South Pacific Regional Fisheries Management Organisation

Data and Information Working Group

Chile, 27-29 October 2010

DIWG-08-INF-01

Update of Data Submitted to the Interim Secretariat as at 15 October 2010

Interim Secretariat

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1.0 Introduction

1.1 Catch/ Landing/ Observer/ VMS Data

This paper summarises the catch/landing, and observer data that have been submitted to the Interim Secretariat for the key species as of 15 October 2010. The species included in this report are MACKERELS, SQUIDS, ORANGE ROUGHY and ALFONSINOS. It also lists Vessel Monitoring System (VMS) data which have been received.

An overall summary of the data received between 2007 - 2009 is included in Appendix 1.

1.2 Bottom Footprint Data

Australia, Chile, Korea and New Zealand have submitted some bottom fishing footprint data to the Interim Secretariat. Additional information about these data is noted in section 8.0.

1.3 Key to Species Scientific Names Used

Chilean jack mackerel	CJM	*Trachurus murphyi*
Greenback horse mackerel	HMG	*Trachurus declivis*
Jack/horse mackerels	JAX	*Trachurus* species mix or specific *Trachurus* species unknown
Blue mackerel	MAA	*Scomber australasicus*
Chub mackerel	MAS	*Scomber japonicas*
Gould's flying squid	NDG	*Nototodarus gouldi*
Jumbo flying squid	GIS	*Dosidicus gigas*
Wellington flying squid	TSQ	*Nototodarus sloani*
Alfonsionos nei	ALF	*Beryx* species
Splendid alfonsino	BYS	*Beryx splendens*
Southern Ray's Bream	BRU	*Brama australis*

2.0 Summary of Jack Mackerel (*Trachurus*) Data Received by the Interim Secretariat

Table 2.1: Annual Catch Data - *Trachurus* species (Part 1 of 4)

NB: Does not include data submissions specifically identified as chub mackerel, or mackerel where the species/type was not specified

	Catch (t)				
	Belize		Chile		China
Area	FAO 87 (5x5 squares)	FAO 87 (5x5 squares)	FAO 87 (High Seas only)	FAO 87 (High Seas and EEZ)	FAO87
Species	*T. murphyi*	Horse mackerel	*T. murphyi*	*T. murphyi*	*T. murphyi*
2009	x		343,135	834,927	117,963
2008	x		519,738	896,108	143,182
2007		~12,585	262,617	1,302,784	140,582
2006		~481		1,366,770	160,000
2005		~867		1,430,434	143,000
2004		0		1,451,599	131,020
2003		0		1,421,296	94,690
2002		0		1,518,994	76,261
2001		0		1,649,933	20,090
2000				1,234,299	x
1999				1,219,689	
1998				1,612,912	
1997				2,917,064	
1996				3,883,326	
1995				4,404,193	
1994				4,041,447	
1993				3,236,244	
1992				3,212,060	
1991				3,020,512	
1990				2,471,875	
1989				2,390,117	
1988				2,138,255	
1987				1,770,037	
1986				1,184,317	
1985				1,456,989	
1984					
1983					
1982					
1981					
1980					
1979					
1978					
1977					
1976					
1975					
1974					
1973					
1972					
1971					
1970					

^ Total includes small quantities of unspecified mackerel

X Data not displayed as totals are for less than 3 vessels

~ Participants agreed to totals being displayed where less than 3 vessels were fishing

Table 2.1: Annual Catch Data - *Trachurus* species (Part 2 of 4)

NB: Does not include data submissions specifically identified as chub mackerel, or mackerel where the species/type was not specified

	Catch (t)				
	Cook Islands	**Cuba**	**EU**		**Faroe Islands**
Area	FAO87	Unspecified	FAO87 (High Seas)	FAO 71, 77, 81, 87 combined	FAO87
Species	*Trachurus* species	*Trachurus* species	*T. murphyi*	*Trachurus* species	*T. murphyi*
2009			111,921		~20,213
2008			106,665		~22,919
2007	x		123,511		^38,700
2006			62,137		
2005			6,179		
2004					
2003					
2002					
2001					
2000					
1999					
1998					
1997					
1996					
1995					
1994					
1993					
1992				7,842	
1991		5,769		109,292	
1990		31,047		81,909	
1989		14,784		11,584	
1988		12,335		76,036	
1987		34,226		864	
1986		43,387		828	
1985		42,287		847	
1984		24,428		80,848	
1983		45,981		40,357	
1982		61,016		7,600	
1981		50,930		2,029	
1980		54,295		7,540	
1979				45,495	
1978				29,455	
1977				1,078	
1976				719	
1975				680	
1974				55	
1973				35	
1972					
1971					
1970					

^ Total includes small quantities of unspecified mackerel
X Data not displayed as totals are for less than 3 vessels
~ Participants agreed to totals being displayed where less than 3 vessels were fishing

Table 2.1: Annual Catch Data - *Trachurus* species (Part 3 of 4)

NB: Does not include data submissions specifically identified as chub mackerel, or mackerel where the species/type was not specified

	Catch (t)				
	Japan	**Korea**	**Peru**	**Russian Fedn.**	
Area	FAO87	FAO87 (High Seas)	FAO 87 (High Seas)	FAO81	FAO87
Species	*T. murphyi*	*T. murphyi*		*T. declivis*	*T. murphyi*
2009		~13,759	13,326		
2008		12,600			x
2007		10,940		0	0
2006		10,474		0	0
2005		x		0	7,040
2004		7,438		0	62,300
2003		2,010		0	7,540
2002				0	0
2001				0	0
2000				0	0
1999	7			223	0
1998				52	0
1997				886	0
1996				2,280	0
1995				1,602	0
1994				1,804	0
1993				4,260	0
1992				2,892	32,000
1991				127,000	591,800
1990	157			67,518	1,122,297
1989	x			56,543	1,096,292
1988	x			58,797	938,288
1987	x			107,329	818,628
1986	x			146,200	785,000
1985	5,229			133,300	837,700
1984	x			22,300	1,056,600
1983	x			10,651	866,500
1982				4,953	735,898
1981	x			0	771,630
1980				13	544,970
1979	x			0	532,209
1978	1,667	x		254	49,220
1977	2,273			710	0
1976	x			0	0
1975				0	0
1974				0	0
1973				0	0
1972				0	5,500
1971				0	0
1970				0	0

^ Total includes small quantities of unspecified mackerel

X Data not displayed as totals are for less than 3 vessels

~ Participants agreed to totals being displayed where less than 3 vessels were fishing

Table 2.1: Annual Catch Data - *Trachurus* species (Part 4 of 4)

NB: Does not include data submissions specifically identified as chub mackerel, or mackerel where the species/type was not specified

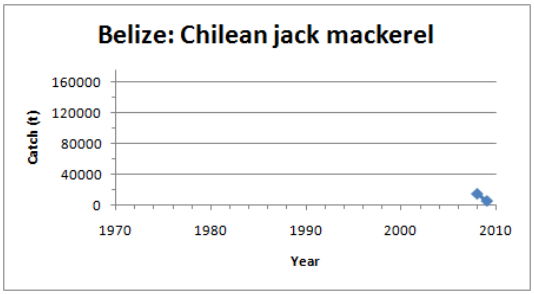
	Catch (t)		
	Ukraine		Vanuatu
Area	FAO81	FAO87	FAO87
Species	*T. murphyi*	*T. murphyi*	*T. murphyi*
2009			79,942
2008			100,066
2007			112,501
2006			129,535
2005			77,356
2004			94,685
2003			53,959
2002			
2001			
2000			
1999			
1998			
1997			
1996			
1995			
1994			
1993			
1992		2,736	
1991	7,838	65,126	
1990	3,574	115,049	
1989	2,292	109,695	
1988	868	104,006	
1987	5,274	89,116	
1986	5,778	81,275	
1985	7,313	100,464	
1984		162,524	
1983	1,982	140,185	
1982	631	82,633	
1981		85,517	
1980		58,677	
1979		90,371	
1978		4,783	
1977			
1976			
1975			
1974			
1973			
1972			
1971			
1970			

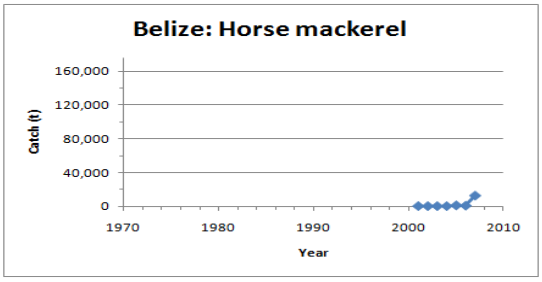
^ Total includes small quantities of unspecified mackerel

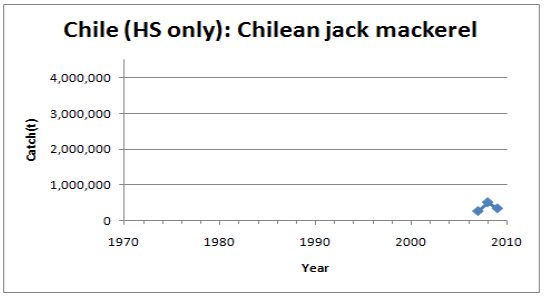
X Data not displayed as totals are for less than 3 vessels;

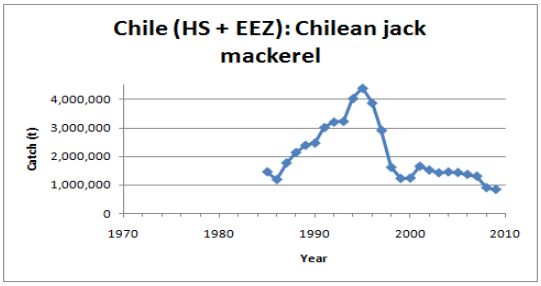
~ Participants agreed to totals being displayed where less than 3 vessels were fishing

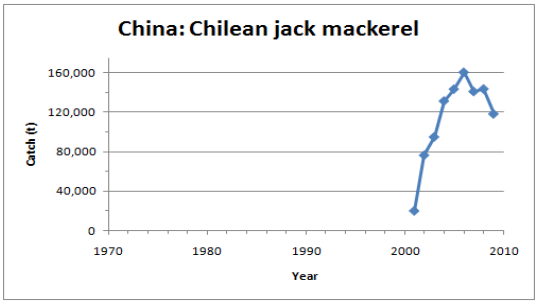
Figure 2.1: Annual Catch Data – *Trachurus* species (Part 1 of 2)

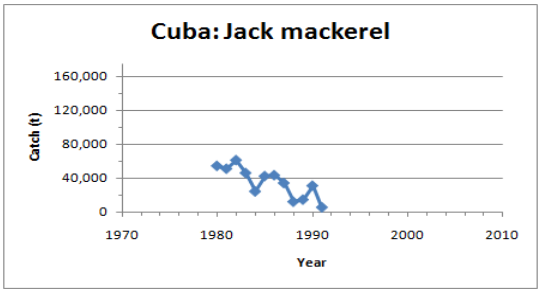


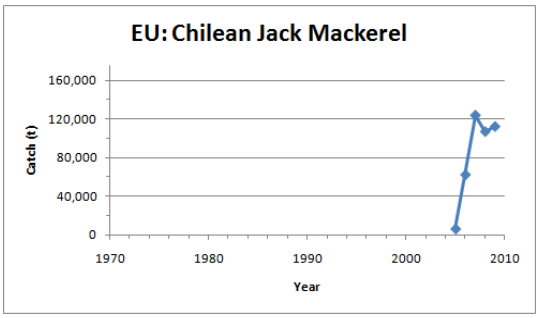


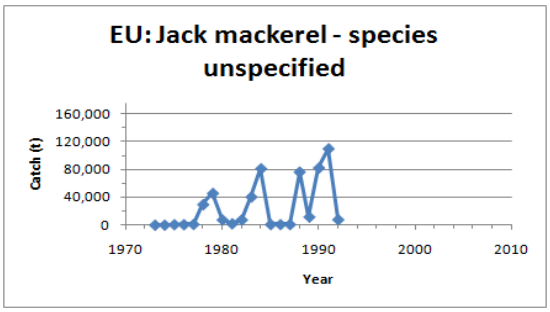


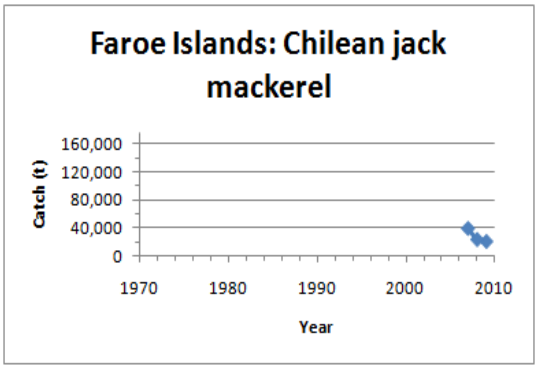












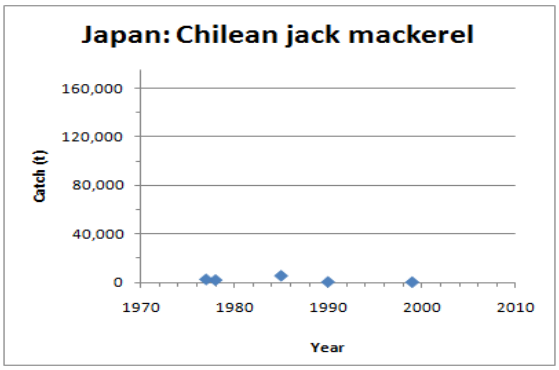
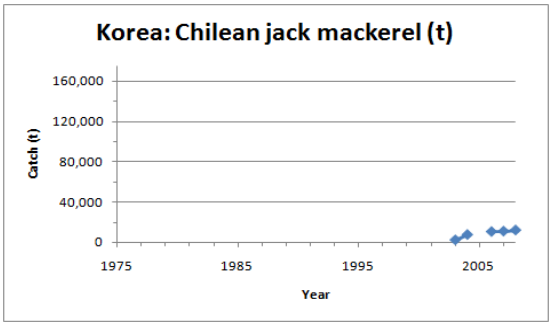
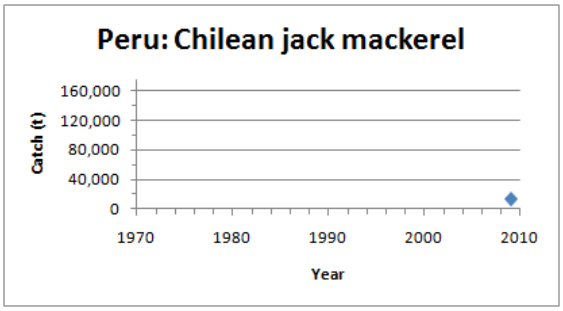
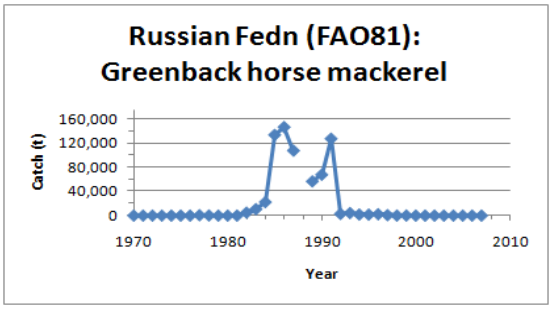
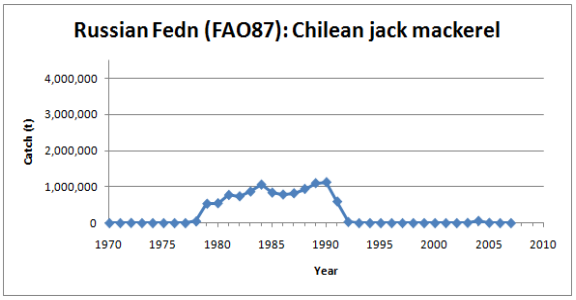


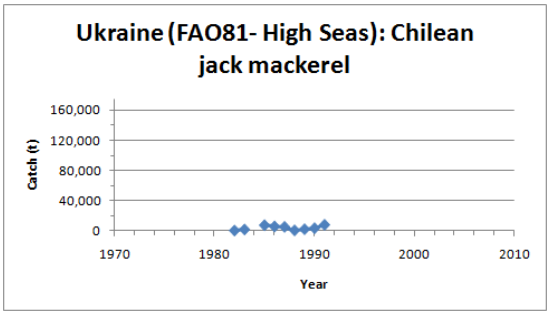
Figure 2.1: Annual Catch Data - *Trachurus* species (Part 2 of 2)

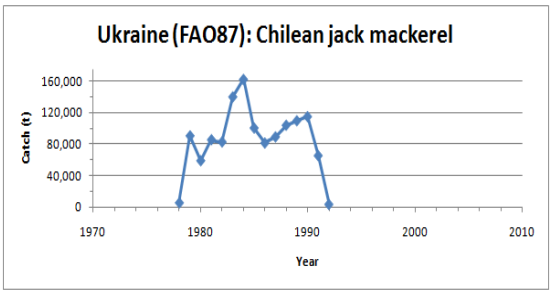


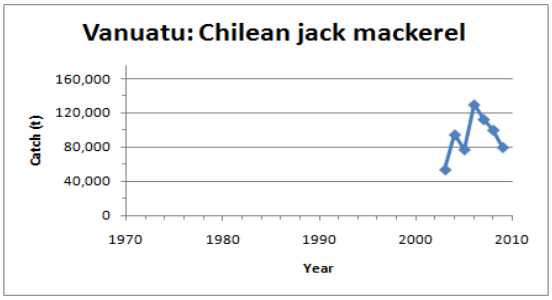












Finer Scale Chilean Jack Mackerel (*T. murphyi*) Data Received to Date

The following table details the finer scale *Trachurus murphyi* data received to date by the Interim Secretariat:

Table 2.2: Summary of More Detailed *Trachurus* Data Received

PARTICIPANT	Finer Scale Catch/ Landing Data Provided for the Years Listed		
	5x5 Degree Square	1x1 Degree Square	Tow by Tow
Belize	2008 (by month and vessel)	2007 (JAX by vessel/day/ month)	
Chile		2007-2009	
China	2000-2007	2008	2009
Cook Islands			2007
EU	2007		2008-2009
Faroe Islands			2008-2009 (preliminary)
Korea	2003-2006		2007-2009
Russian Fedn.			2008
Vanuatu			2008-2009*

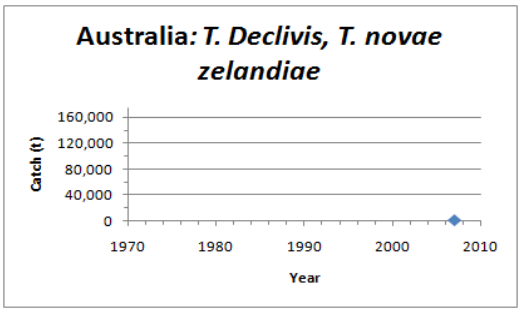
* Also provided catch by day and vessel for 2007

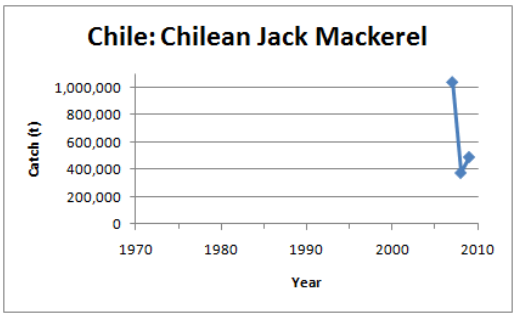
3.0 EEZ Catch Data Summaries of Mackerel (*Trachurus* species)

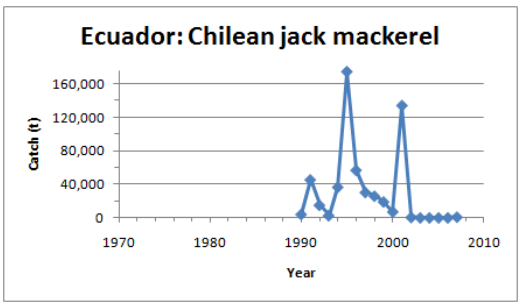
Table 3.1: Annual Catch Data of EEZ *Trachurus* Species

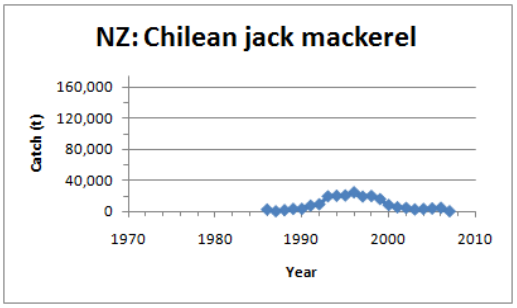
Area	Catch (t)					
	Australia	**Chile**	**Ecuador**	**New Zealand**	**Peru**	**Ukraine**
	EEZ	EEZ	EEZ	EEZ	EEZ	FAO81 (NZ EEZ)
Species	Mix of *T. Declivis, T. novae zelandiae*)	*T. murphyi*	*T. murphyi*	*T. murphyi*	*T. murphyi*	Mix of *Trachurus declivis, T. murphyi, T. novaezelandiae*
2009		491,792				
2008		376,370			169,537	
2007	680	1,040,167	927		254,426	22,067
2006				4,645	277,568	
2005				3,759	80,663	
2004				3,083	187,369	22,600
2003				2,401	217,734	25,016
2002			604	4,470	154,219	5,667
2001			133,969	5,345	723,733	7,577
2000			7,122	8,226	296,579	12,213
1999			19,072	16,203	184,679	15,306
1998			25,900	20,376	386,946	9,309
1997			30,302	19,569	649,751	9,740
1996			56,782	25,331	438,736	13,093
1995			174,393	21,013	376,600	8,990
1994			36,575	20,604	196,771	4,192
1993			2,673	19,938	130,681	7,937
1992			15,022	9,301	96,660	2,878
1991			45,313	7,519	136,337	319
1990			4,144	3,154	191,139	214
1989				3,167	140,720	
1988				1,488	118,076	
1987				0	46,304	
1986				2,228	49,863	
1985				?	87,466	
1984				?	184,333	
1983					76,825	
1982					50,013	
1981					37,875	
1980					123,380	6
1979					151,591	
1978					386,793	
1977					504,992	
1976					54,154	
1975					37,899	
1974					129,211	
1973					42,781	
1972					18,782	
1971					9,189	
1970					4,711	

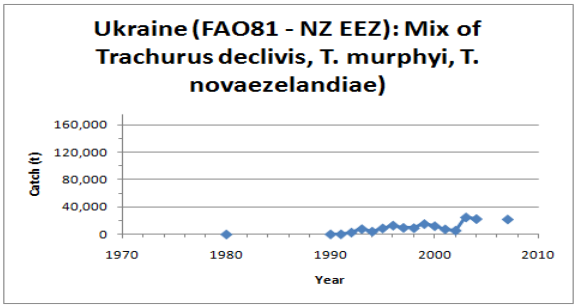
Figure 3.1: Annual Catch Data of EEZ *Trachurus* Species Catch

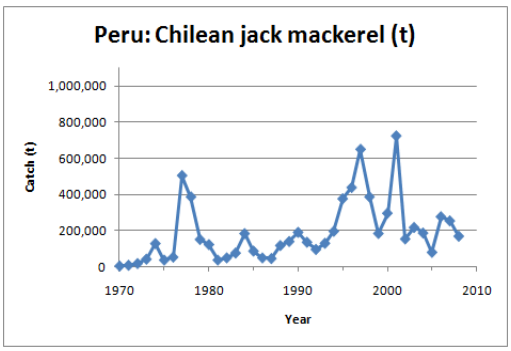












4.0 Summary of 'Other Mackerel' Data Received by the Interim Secretariat

Table 4.1: Annual Catch Data - Other Mackerels (including chub & unspecified mackerel) Part 1 of 3

	Catch (t)				
	Belize	**Chile**		**EU**	
Area	5x5 squares	FAO 87 (High Seas only)	FAO 87 (High Seas and EEZ)	FAO87	FAO 71, 77, 81, 87 combined
Species	Mackerel- species unspecified/ *S. japonicus*	*S. japonicus*	*S. japonicus*	*S. japonicus*	Mackerel- species not specified
2009	x*	21,936	158,452	5,168	
2008	x*	45,702	133,018	5,879	
2007	966	63,492	297,189	9,067	
2006			345,673	5,989	
2005			280,756	211	
2004			577,336		
2003			572,052		
2002			343,371		
2001			365,031		
2000			95,789		
1999			120,123		
1998			71,769		
1997			211,649		
1996			146,649		
1995			110,210		
1994			27,171		
1993			96,023		
1992			72,364		36
1991			191,723		14,396
1990			192,948		98,123
1989			39,328		109,556
1988			26,423		90,655
1987			32,799		82,955
1986			1,584		79,454
1985			11,314		81,361
1984					69,055
1983					39,792
1982					44,628
1981					78,261
1980					48,129
1979					93,311
1978					13,273
1977					596
1976					97
1975					7

X Data not displayed as totals are for less than 3 vessels
~ Belize chose to display all of their data for 2007, irrespective of whether less than 3 vessels were fishing
* Species confirmed as *Scomber japonicus*

Table 4.1: Annual Catch Data - Other Mackerels (including chub & unspecified mackerel) Part 2 of 3

	Catch (t)			
	Faroe Islands	**Japan**	**Korea**	**New Zealand**
Area	FAO87	FAO87	FAO87 (High Seas and EEZ)	5x5
Species	*S. japonicus*	Chub mackerel	*S. japonicus*	*S. australasicus*
2009	x		x	
2008	x		968	
2007			1,240	
2006			1,460	0
2005			x	5
2004			708	3
2003			39	0
2002				5
2001				
2000				
1999		1		
1998				
1997				
1996				
1995				
1994				
1993				
1992				
1991				
1990		<0.5		
1989				
1988				
1987				
1986				
1985				
1984		1		
1983				
1982				
1981				
1980				
1979		1		
1978		<0.5		
1977				
1976				
1975				

X Data not displayed as totals are for less than 3 vessels

~ Belize chose to display all of their data for 2007, irrespective of whether less than 3 vessels were fishing

* Species confirmed as *Scomber japonicus*

Table 4.1: Annual Catch Data - Other Mackerels (including chub & unspecified mackerel) Part 3 of 3

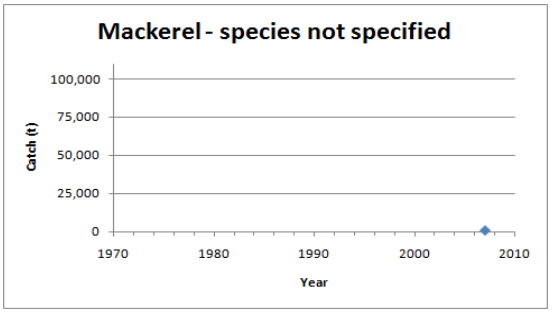
	Catch (t)				
	Russian Fedn.		Ukraine		Vanuatu
Area	FAO81	FAO87	FAO81 (includes some catch from NZ EEZ)	FAO87	FAO87
Species	Pacific mackerel	Chub mackerel	*S. australasicus*	*S. japonicus*	*S. japonicus*
2009					4,901
2008		*x			8,945
2007	0	0			7,705
2006	0	0			3,352
2005	0	0			1,819
2004	0	0	0		3,137
2003	0	0	0		1,553
2002	0	0	0		
2001	0	0	0		
2000	0	0	0		
1999	0	0	0		
1998	0	0	0		
1997	0	0	0		
1996	0	0	0		
1995	75	0			
1994	204	0	0		
1993	326	0	0		
1992		0	0	17	
1991	828	18,257	0	1,063	
1990	100	74,168		2,085	
1989	700	28,160	25	999	
1988	x	34,805		519	
1987	50	3,835	1	79	
1986	0	1,920		647	
1985	50	38,275		39	
1984	0	71,952		78	
1983	0	4,416			
1982	0	41,878		565	
1981	0	41,500		4,708	
1980	0	48,300		1,282	
1979	0	5,800		522	
1978	0	1,773		122	
1977	0	0			
1976	0	0			
1975	0	0			

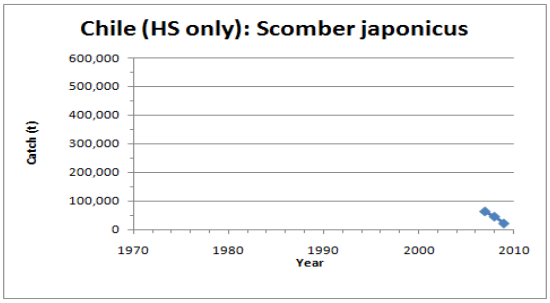
X Data not displayed as totals are for less than 3 vessels

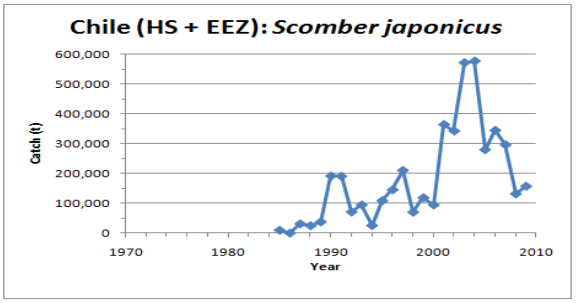
~ Belize chose to display all of their data for 2007, irrespective of whether less than 3 vessels were fishing

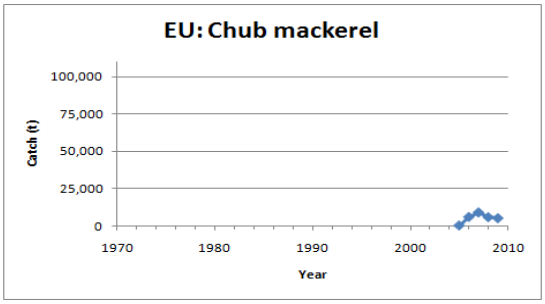
* Species confirmed as *Scomber japonicus*

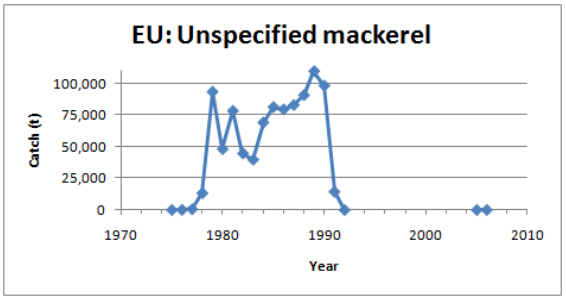
Figure 4.1: Annual Catch Data - Other Mackerels (including chub & unspecified mackerel)

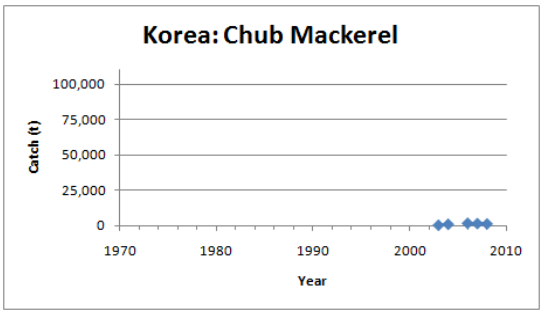


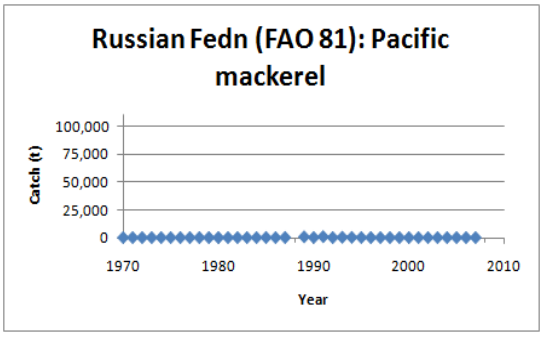












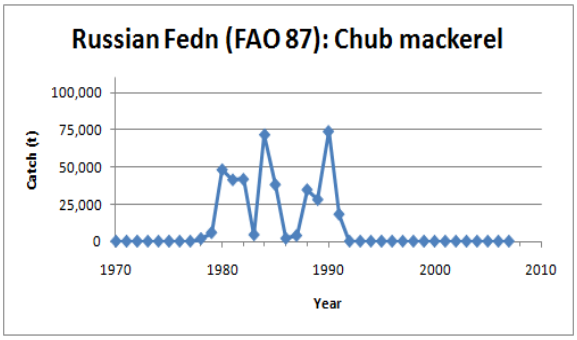
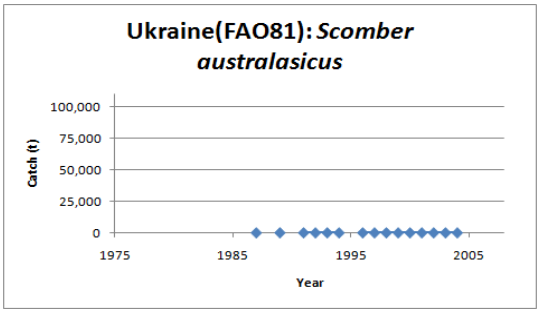
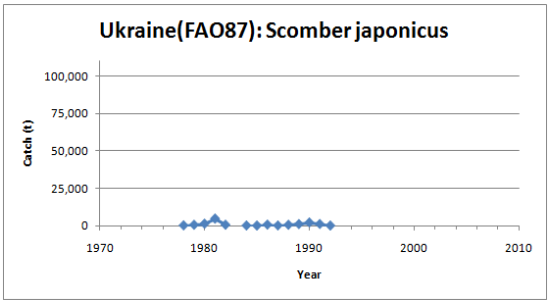
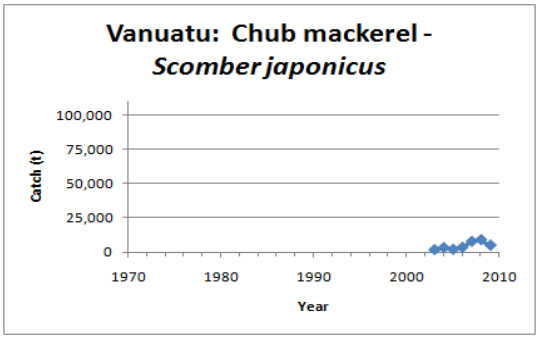


Figure 4.1 Contd: Annual Catch Data - Other Mackerels (including chub & unspecified mackerel)







Finer Scale 'Other' Mackerel Data Received to Date

The following table details the finer scale 'other mackerel' (non-*Trachurus)* data received to date by the Interim Secretariat:

Table 4.2: Summary of Finer Scale Non-*Trachurus* Data Received

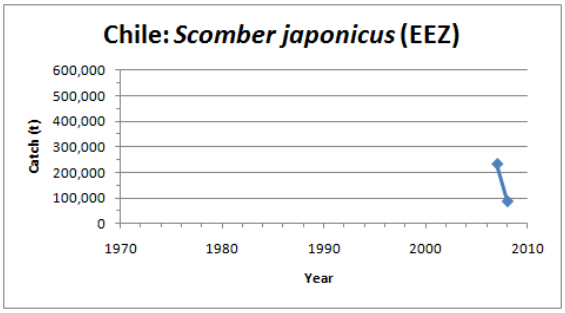
PARTICIPANT	Finer Scale Catch/ Landing Data Provided for the Years Listed		
	5x5 Degree Square	1x1 Degree Square	Tow by Tow
Belize	2008 (by month and vessel)	2007 (mackerel - species not specified - by vessel/day/ month)	
Chile		2007-2009	
EU	2007		2008-2009
Faroe Islands			2008-2009 (preliminary)
Korea	2003-2006		2007-2009
Russian Fedn.			2008
Vanuatu			2008-2009*

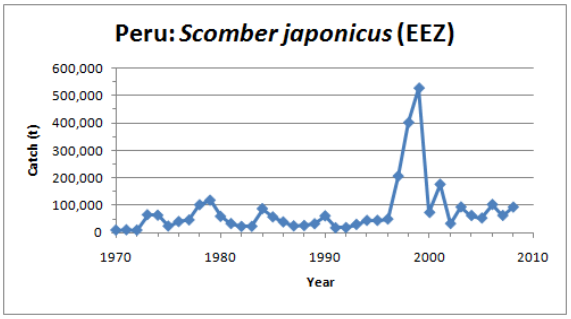
* Also provided catch by day and vessel for 2007

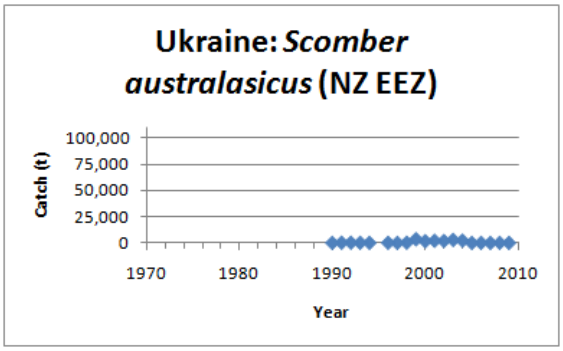
Table 4.3: Annual Catch Data of EEZ Chub Mackerel

Area	Catch (t)		
	Chile	**Peru**	**Ukraine**
	EEZ	EEZ	NZ EEZ
Species	*S. japonicus*	*S. japonicus*	*S. australasicus*
2009	136,516		
2008	87,316	92,989	
2007	233,697	62,387	
2006		102,322	
2005		52,895	
2004		62,255	2,165
2003		93,384	2,843
2002		32,698	1,849
2001		176,202	2,040
2000		73,263	1,677
1999		527,729	3,457
1998		401,903	214
1997		206,183	9
1996		49,221	156
1995		44,259	
1994		44,115	133
1993		29,504	94
1992		17,939	213
1991		17,304	224
1990		60,776	2
1989		32,042	
1988		25,554	
1987		24,072	
1986		38,709	
1985		57,069	
1984		87,134	
1983		22,579	
1982		22,072	
1981		32,803	
1980		59,062	
1979		118,067	
1978		101,505	
1977		46,071	
1976		40,172	
1975		23,588	
1974		63,270	
1973		64,966	
1972		8,707	
1971		10,113	
1970		8,791	

Figure 4.2: Annual Catch Data of EEZ Chub Mackerel (*Scomber japonicas*) Catch







5.0 Squid Data Summary: Fish Taken Entirely or Partially within SPRFMO Area

Chile (2007 – 08) and Peru (1990 – 2008) have also submitted EEZ only catches of jumbo flying squid.

Table 5.1: Squid Annual Catch Data Received (Part 1 of 3)

	Catch (t)			
	Belize	**Chile**	**China**	**EU**
Area	FAO 87 (5x5 squares)	FAO 87 (HS and EEZ)	FAO87	Unspecified
Species	Squid - species not specified	*D. gigas*	*D. gigas*	Squid - species not specified
2009		*56,337		
2008		145,171	79,064	
2007	0	124,389	49,963	
2006	0	219,800	62,000	
2005	825	296,953	86,000	
2004	681	175,134	205,600	
2003	479	15,191	81,000	
2002	588	5,589	50,483	
2001	453	3,476	17,770	
2000		9		
1999		6		
1998		5		
1997				
1996		2		
1995				
1994		205		
1993		7,442		
1992		9,400		
1991		445		1,075
1990				6,497
1989				2,003
1988				
1987				
1986				
1985				
1984				
1983				
1982				
1981				
1980				
1979				
1978				
1977				
1976				
1975				
1974				
1973				
1972				

~ Catch figures are preliminary

X Data not displayed as totals are for less than 3 vessels; Belize chose to display all of their data, irrespective of whether less than 3 vessels were fishing

* This catch was all taken within the Chilean EEZ

Table 5.1: Squid Annual Catch Data Received (Part 2 of 3)

	Catch (t)				
	Japan	**Korea**	**New Zealand**	**Russian Fedn.**	**Russian Fedn.**
Area	FAO87	FAO87 (EEZ & High Seas)	5x5	FAO81	FAO87
Species	*D. gigas*	Squid - species not specified	Squids nei (OMZ, UHX, UHU)	Squid - species not specified	Squid - species not specified
2009					
2008			0		
2007			<0.5	0	0
2006	323		<0.5	0	0
2005	1,633	x	0	0	0
2004	4,615	13,574	<0.5	0	0
2003	4,510	4,722	<0.5	0	0
2002	33,978	23,979	<0.5	0	0
2001	1,132	11,517		0	0
2000	1,704	20,822		0	0
1999	x	19,728		1,352	0
1998				1,907	0
1997	x	3,359		5,809	0
1996	644	12,896		8,365	0
1995	37	35,719		17,004	0
1994	2,698	69,664		22,098	0
1993	3,579	62,887		15,600	0
1992	1,874	43,022		28,767	0
1991	50	24,015		17,331	23,240
1990	x	3,465		21,654	7,860
1989	x			13,413	380
1988	x			x	0
1987				9,135	0
1986				15,818	0
1985				18,267	130
1984				19,076	10
1983				20,319	0
1982				18,118	10
1981				12,902	60
1980				15,506	0
1979				14,308	45
1978				3,112	0
1977				26,837	0
1976				0	0
1975				0	0
1974				0	0
1973				0	0
1972				0	<0.5
1971				0	
1970				0	
1969				100	

~ Catch figures are preliminary

X Data not displayed as totals are for less than 3 vessels; Belize chose to display all of their data, irrespective of whether less than 3 vessels were fishing

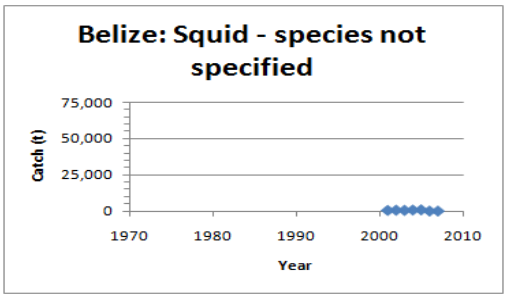
Table 5.1: Squid Annual Catch Data Received (Part 3 of 3)

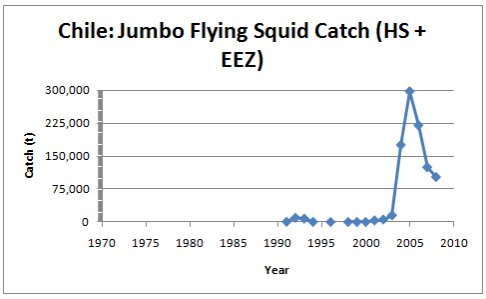
	Catch (t)			
	Ukraine		Chinese Taipei Fishing Entity	Chinese Taipei
Area	FAO81 (NZ EEZ)	FAO87	FAO87	FAO81 (NZ EEZ)
Species	*N. solani, N.gouldi*	*D. gigas*	*D. gigas*	*N. solani*
2009				
2008			31,161~	
2007			14,750	
2006			18,349	3,304
2005			15,976	3,831
2004	20,122		39,450	0
2003	10,379		23,009	0
2002	11,230		12,064	0
2001	8,623		0	0
2000	2,872		0	0
1999	1,462		0	761
1998	5,321		0	3,974
1997	7,955		0	6,620
1996	4,136		0	14,747
1995	6,630		0	8,284
1994	10,428		0	0
1993	5,546		0	0
1992	2,932	1	1,698	0
1991	699	398		0
1990		142		0
1989				0
1988				0
1987				850
1986				1,253
1985				8,343
1984				17,900
1983				16,377
1982				13,100
1981				8,147
1980	6,986			3,497
1979	6,191			1,601
1978				2,163
1977				1,797
1976				1,379
1975				254
1974				95
1973				109
1972				
1971				
1970				
1969				

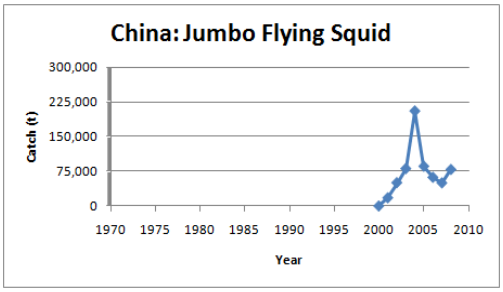
~ Catch figures are preliminary

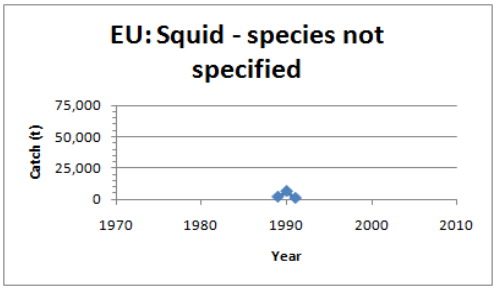
X Data not displayed as totals are for less than 3 vessels; Belize chose to display all of their data, irrespective of whether less than 3 vessels were fishing

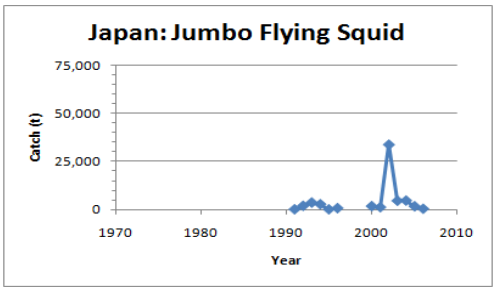
Figure 5.1: Squid Annual Catch Data Received

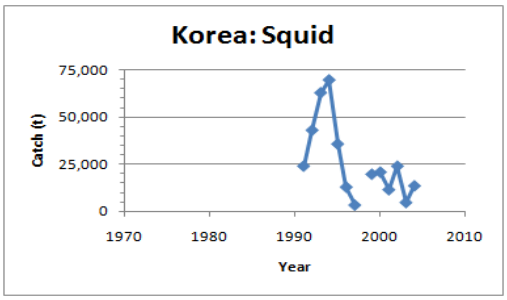


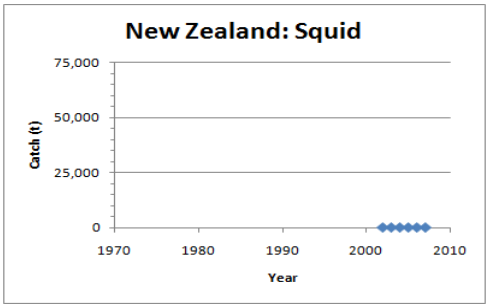


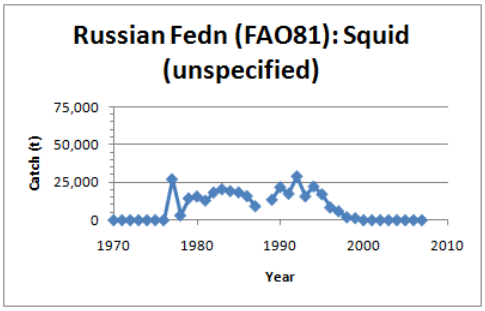












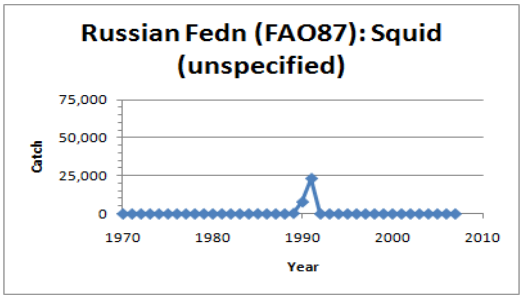
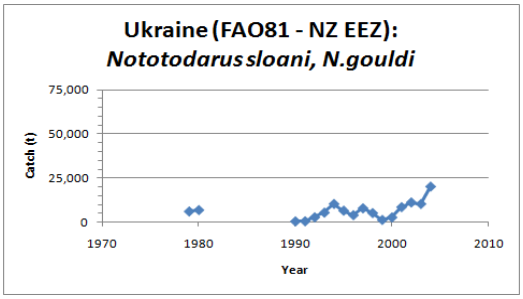
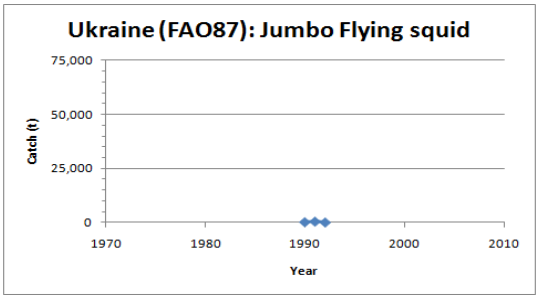
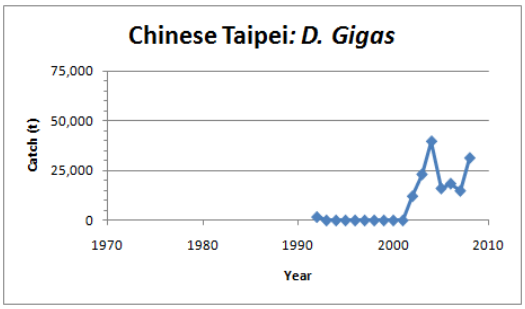
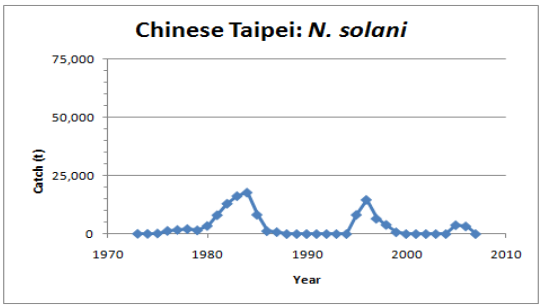


Figure 5.1 continued: Squid Annual Catch Data Received









Finer Scale Squid Data Received

The following table details the finer scale squid data received to date by the Interim Secretariat:

Table 5.2: Summary of Finer Scale Squid Data Received

PARTICIPANT	Finer Scale Catch/ Landing Data Provided for the Years Listed		
	5x5 Degree Square	1x1 Degree Square	Tow by Tow
Belize	2001-2005		
Chile		2007-2009	
China	2003-2008		
Japan	1988-2006		
New Zealand	2002-2009		
Chinese Taipei	2007-2008*		

* Figures for 2008 are preliminary

6.0 Orange Roughy Data Summary: Fish Taken Entirely or Partially within SPRFMO Area

Table 6.1: Annual Catch Data for Orange Roughy Received (Part 1 of 2)

Year	Catch (t)			
	Australia	Belize	China	EU
Area	23.5-60S, 120-180E	FAO 87 (5x5 squares)	FAO87	FAO 71, 77, 81, 87 combined
2009	0			
2008	0			
2007	x	332	336	
2006	166	200	570	
2005	207	506	710	
2004	351	914	592	
2003	156	9	562	
2002	383	0	597	
2001	751	0	520	
2000	948			
1999	2,514			
1998	3,098			
1997	1,458			
1996	x			
1995	x			
1994	192			
1993	x			
1992	x			
1991	x			
1990	x			
1989	x			
1988	x			
1987	x			
1986				
1985				
1984				
1983				
1982				
1981				3,748
1980				
1979				
1978				
1977				
1976				
1975				
1974				
1973				
1972				
1971				
1970				
1969				

X Data not displayed as totals are for less than 3 vessels

Belize chose to display all of their data, irrespective of whether less than 3 vessels were fishing

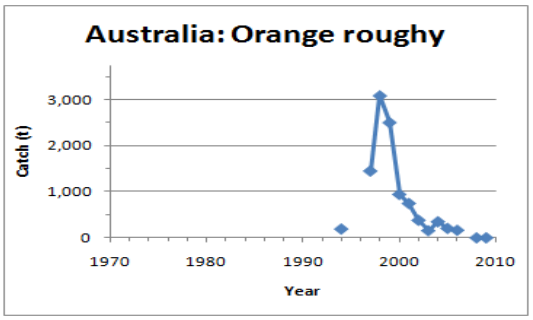
Table 6.1: Annual Catch Data for Orange Roughy Received (Part 2 of 2)

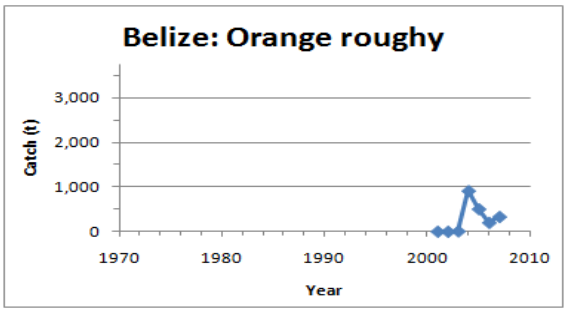
Year	Catch (t)				
	Korea	New Zealand	Russian Fedn.	Ukraine	
Area	FAO81 (EEZ and HS)	5x5	FAO81	FAO81 (outside NZ EEZ)	FAO81 (NZ EEZ)
2009		928			
2008		837			
2007	~44.2	866	0		
2006	~77.2	1,415	0		
2005	0	1,597	0		
2004	~137.9	1,697	0	49	223
2003	X	1,973	0	164	12
2002	208	2,578	0		
2001	94		0		195
2000	288		0	53	49
1999	x		0		
1998			0		
1997			0		
1996			0		
1995			0		
1994			0		
1993			0		
1992			0		
1991			506		
1990			36		
1989			1,132		
1988			x		
1987			130		
1986			2,475		
1985			4,306		
1984			4,028		
1983			7,229		
1982			8,860		
1981			14,076		
1980			17,300		
1979			1,251		
1978			0		
1977			319		
1976			0		
1975			0		
1974			0		
1973			0		
1972			0		
1971			0		
1970			0		
1969			0		

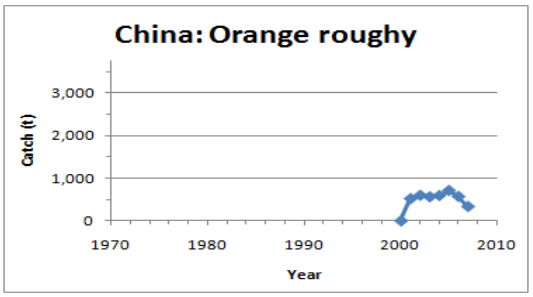
X Data not displayed as totals are for less than 3 vessels

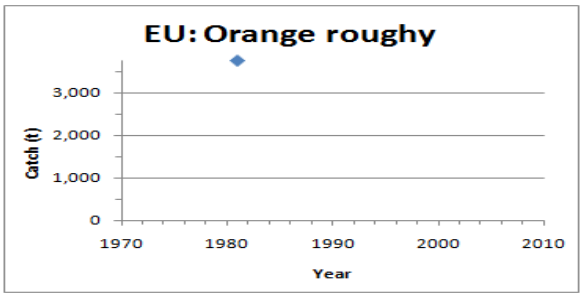
~ These results are presented in the national report, so are also displayed here

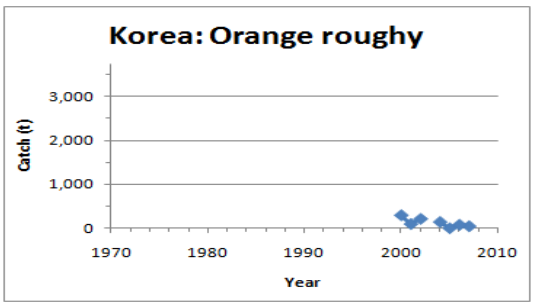
Figure 6.1: Annual Catch Data for Orange Roughy

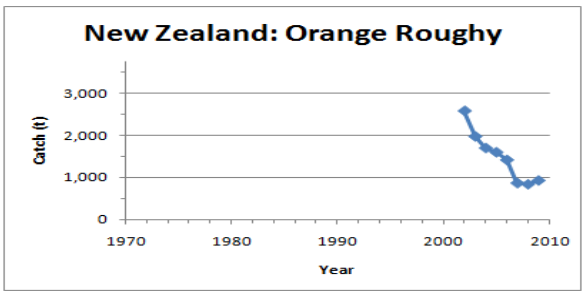


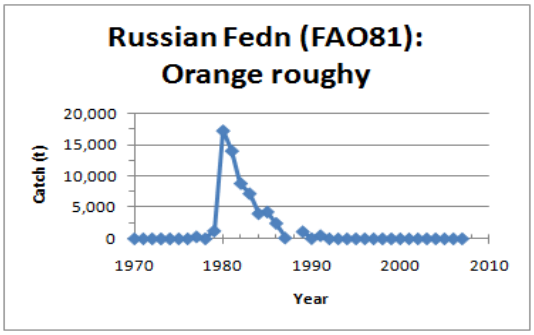




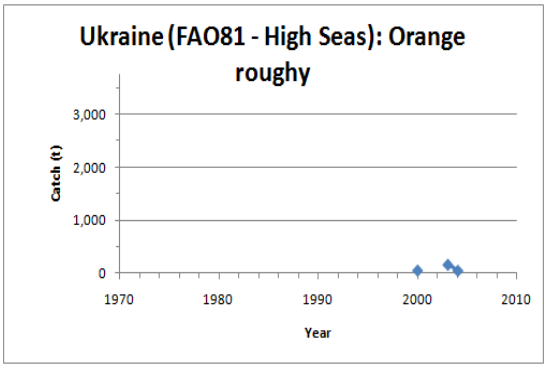


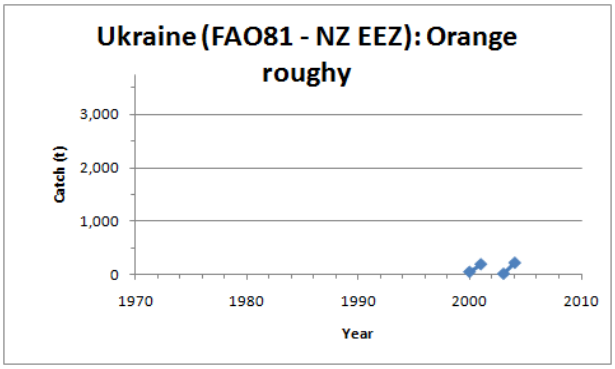






Note the different scale for the figure above





Finer Scale Orange Roughy Data Received

The following table details the finer scale orange roughy data received to date by the Interim Secretariat:

Table 6.2: Summary of Finer Scale Orange Roughy Data Received

PARTICIPANT	Finer Scale Catch/ Landing Data Provided for the Years Listed		
	5x5 Degree Square	1x1 Degree Square	Tow by Tow
Australia			2007
Belize	2003-2007		
New Zealand	2002-2009		

Boarfish Catch

Belize also provided 5x5 degree square data for boarfish for 2007.

7.0 Alfonsino Data Summary: Fish Taken Entirely or Partially within SPRFMO Area

Table 7.1: Annual Catch Data for Alfonsino (Part 1 of 2)

	Catch (t)			
	Australia	**Belize**	**Chile**	**EU**
Area	23.5-60S, 120-180E	FAO87 (5x5 squares)	FAO87 Nazca Ridge	FAO87
Species				
2009	x			x
2008				x
2007		61		x
2006	209	101		
2005	81	102	5	
2004	1	229		
2003	2	73	11	
2002	3	0	2	
2001	1	0	>0.5	
2000	4			
1999	8			
1998	1		144	
1997	1			
1996	0			
1995	0			
1994	0			
1993	0			
1992	0			
1991	0			
1990	0			
1989	0			
1988	0			
1987	0			
1986				
1985				
1984				
1983				
1982				
1981				
1980				
1979				
1978				
1977				
1976				
1975				

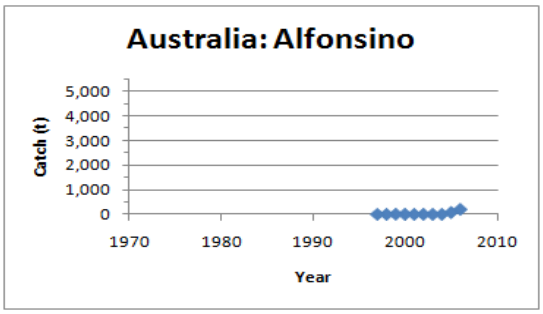
X Data not displayed as totals are for less than 3 vessels
Belize chose to display all of their data, irrespective of whether less than 3 vessels were fishing

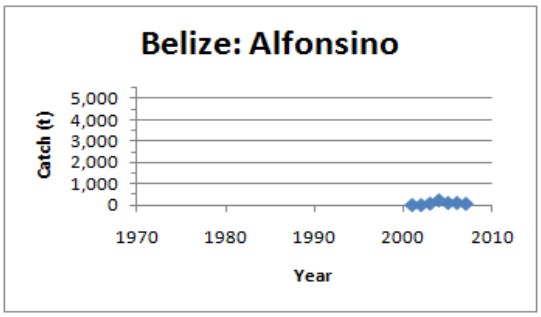
Table 7.1: Annual Catch Data for Alfonsino (Part 2 of 2)

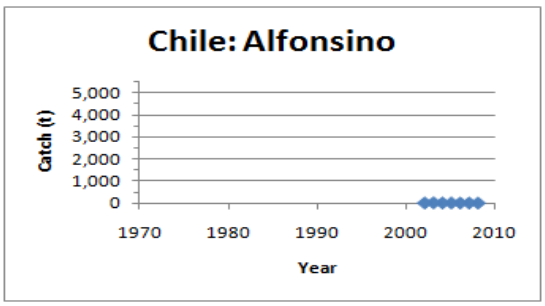
	New Zealand	Russian Federation	Russian Federation	Ukraine	Ukraine
Area	5x5 square	FAO81	FAO87	FAO81 (NZ EEZ)	FAO87
Species	*Beryx* species			*Beryx* species	*Beryx splendens*
2009	5				
2008	3				
2007	4	0	0		
2006	29	0	0		
2005	26	0	0		
2004	85	0	0		
2003	94	0	0	11	
2002	17	0	0		
2001		0	0	9	
2000		0	0		
1999		0	0		
1998		0	0		
1997		0	0		
1996		0	0		
1995		0	0		
1994		0	0		
1993		0	0		
1992		0	0		
1991		0	0		
1990		0	0		
1989		0	0		
1988		0	0		
1987		0	0		
1986		0	0		
1985		0	0		
1984		9	458		
1983		0	633		32
1982		0	620		
1981		0	676		198
1980		2,325	12	21	12
1979		5,323	907	4,804	
1978		1,783	0		
1977		3,491	0		
1976		0	0		
1975		0	0		

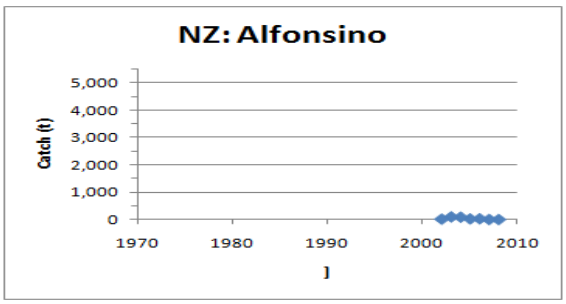
X Data not displayed as totals are for less than 3 vessels
Belize chose to display all of their data, irrespective of whether less than 3 vessels were fishing

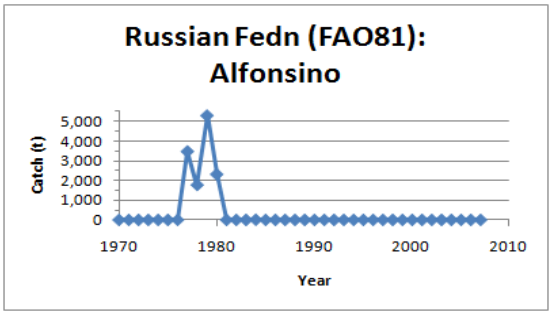
Figure 7.1: Annual Catch Data for Alfonsino

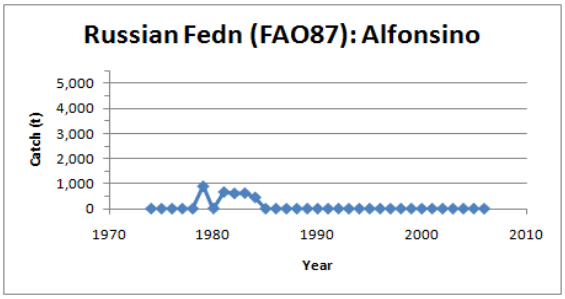


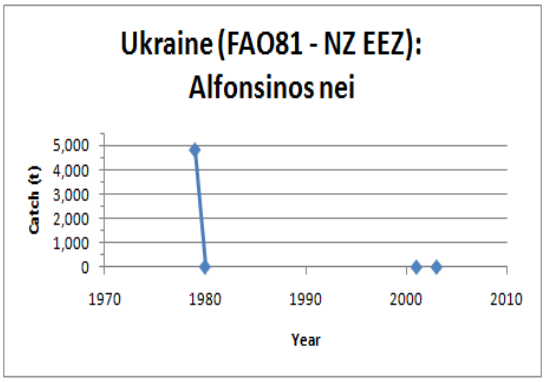


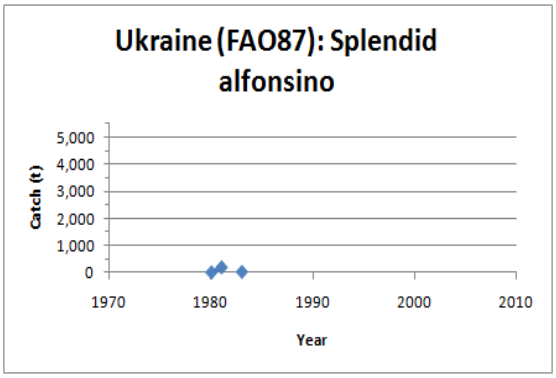












Finer Scale Alfonsino Data Received to Date

The following table details the finer scale alfonsino data received to date by the Interim Secretariat:

Table 7.2: Summary of More Detailed Alfonsino Data Received

PARTICIPANT	Finer Scale Catch/ Landing Data Provided for the Years Listed		
	5x5 Degree Square	1x1 Degree Square	Tow by Tow
Australia			2007-2009
Belize	2004-2007		
EU	2007		2008
New Zealand	2002-2009		

8.0 Bottom Trawl Fishing Footprint Data Received

#

The Interim Benthic Assessment Framework adopted at the 4th Meeting in September 2007, noted that a 'joint trawl footprint' map should be expressed as grid blocks of 20 minute resolution, with a 'fished' block being defined as any grid block partially crossed by at least one trawl track. The period 2002 to 2006 should be used as the reference period for developing this joint trawl footprint map.

Therefore, participants that bottom trawled within the proposed SPRFMO area between 2002 and 2006, should have submitted data to generate the joint trawl footprint map.

The following participants have submitted high seas bottom trawl fishing footprints in 20 by 20 minute blocks for the period 2002 – 2006:

Australia,
Chile,
Korea, and
New Zealand.

The New Zealand trawl footprint map includes information from New Zealand and foreign-flagged vessels that submitted information on NZ High Seas Trawl Catch and Effort returns.

APPENDIX 1: Summary of Data Received by the Interim Secretariat

Tables 1a – 1c provide a summary of the catch/landing, observer and VMS data provided to the Interim Secretariat by participant for the years 2007 - 2009.

Explanatory Note

Please note the following explanation regarding "Aggregated annual catch" as it appears in these two tables.

Aggregated Annual Catch

No	- indicates that no separate estimate of annual catch/landing by species was provided (e.g. based on landing rather than estimated catch information), however finer scale data such as tow by tow/ set by set / 1°x1° square or 5°x5° data may have been summed to give an annual catch estimate
Yes	- indicates that a separate estimate of annual catch/landing by species was provided and this estimate was not derived directly by the summing of finer scale estimated catch data - for example this annual figure may have been derived from landings (as opposed to estimated catch at sea) data, or may have included catch for which there is only broad positional information available, e.g. it is known that the catch was taken in the High Seas, but no latitudinal and longitudinal information is available.

Table 1a: Summary of Catch/Landing Data Received by the Interim Secretariat for 2007 (Part 1 of 2)

		Type of data	Data Provided?	Species/Fishery/ies for which Data Provided
Australia		Tow by tow/ set by set data (Bottom longline, dropline fisheries)	Yes	ALL
		Tow by tow/ set by set data (trawl fisheries)	Yes	ALL (Includes BYS and ORY)
		Aggregated annual catch (EEZ)	Yes	JAX (EEZ); Other species totals not reported due to confidentiality policy
		Observer	Yes (trawl)	ALL (Includes BXD, ORY; no lfs, no bios)
		VMS	No	
Belize		Tow by tow/ set by set data	No	
		1x1 degree square catch	Yes (by vessel/day/month)	JAX, Mackerel (species not specified)
		5x5 degree square catch data	Yes (by vessel)	ALF, BOR, ORY
		Aggregated annual catch	Yes	JAX, Mackerel (species not specified)
		Observer	No	
		VMS	Yes	
Chile		Tow by tow/ set by set data	No	
		1x1 degree square catch data (HS + EEZ)	Yes	CJM (HS + EEZ), MAS (HS + EEZ), GIS (HS + EEZ)
		Aggregated annual catch (HS + EEZ)	Yes	CJM (HS + EEZ), MAS (HS + EEZ), GIS (HS + EEZ)
		Observer	No	
		VMS	Yes (single position per vessel)	
China		Tow by tow/ set by set data	No	
		5x5 degree square catch	Yes	CJM, GIS
		Aggregated annual catch	Yes	CJM
		Observer	No	
		VMS	No	Received confirmation vessels have VMS capability
Cook Islands		Tow by tow/ set by set data	Yes	JAX
		1x1 degree square catch data	No	
		Aggregated annual catch	Yes	JAX
		Observer	No	
		VMS	Yes	
Ecuador		Aggregated annual catch (EEZ)	Yes	CJM (EEZ)
		Observer	No	
		VMS	No	
European Union	**Pelagic**	Tow by tow/ set by set data	No	
		5x5 degree square catch data	Yes	ALF, CBA, CJM, MAS
		Aggregated annual catch	No	
		Observer	No	
		VMS	Yes (as vessel tracks)	
	Fixed gill net	Tow by tow/ set by set data	No	
		5x5 degree square catch data	No	
		Aggregated annual catch	No	
		Observer	No	
		VMS	Yes (as vessel tracks)	

Key:

ALL - All species caught in High Seas	MAS - Chub mackerel (*Scomber japonicus*)
ALF - Alfonsinos	ORY - Orange roughy (*Hoplostethus atlanticus*)
CJM - Chilean jack mackerel (*Trachurus murphyi*)	
GIS - Jumbo flying squid (*Dosidicus gigas*)	
JAX - Jack and horse mackerels (*Trachurus* species)	EEZ - Exclusive Economic Zone
MAC - Atlantic mackerel (*Scomber scombrus*)	HS - High Seas

Table 1a: Summary of Catch/Landing Data Received by the Interim Secretariat for 2007 (Part 2 of 2)

PARTICIPANT	2007 CATCH/ LANDING/ Observer/ VMS DATA		
	Type of data	Data Provided?	Species/Fishery/ies for which Data Provided
Faroe Islands	Tow by tow/ set by set data	No	
	5x5 degree square catch data	No	
	Aggregated annual catch	Yes^	CJM
	Observer	No	
	VMS	Yes	
Korea	Tow by tow/ set by set data	Yes	CJM, MAS
	Aggregated annual catch	Yes	CJM, MAS, ORY
	Observer	No	
	VMS	Yes	
New Zealand	Tow by tow/ set by set data	No - Can be provided as soon as the SPRFMO database is available to accept these data	ALL
	5x5 degree square catch data	Yes	ALL
	Aggregated annual catch	No	
	Observer	No	
	VMS	No	
Peru	Aggregated annual catch (EEZ)	Yes	CJM (EEZ), MAS (EEZ), GIS (EEZ)
	Observer	No (not fishing in High Seas)	
	VMS	No (not fishing in High Seas)	
Russian Federation	NOT FISHING IN 2007		
Ukraine	Aggregated annual catch (NZ EEZ)	Yes	JAX (NZ EEZ)
	Observer	No	
	VMS	No	
Vanuatu	Catch by vessel by day	Yes	CJM/ MAS mix
	Aggregated annual catch	Yes (by vessel)	CJM, MAS
	Observer	No	CJM - Size composition data provided 2003 - 2006
	VMS	Yes	
Chinese Taipei	Tow by tow/ set by set data	No	
	5x5 degree square catch data	Yes	GIS
	Aggregated annual catch	No	
	Observer	No	
	VMS	No	

^ Total includes small quantities of *Scomber japonicus*

Key:

ALL - All species caught in High Seas	MAS - Chub mackerel (*Scomber japonicus*)
ALF - Alfonsinos	ORY - Orange roughy (*Hoplostethus atlanticus*)
CJM - Chilean jack mackerel (*Trachurus murphyi*)	
GIS - Jumbo flying squid (*Dosidicus gigas*)	
JAX - Jack and horse mackerels (*Trachurus* species)	EEZ - Exclusive Economic Zone
MAC - Atlantic mackerel (*Scomber scombrus*)	HS - High Seas

Table 1b: Summary of Catch/Landing Data Received by the Interim Secretariat for 2008 (Part 1 of 2)

PARTICIPANT		2008 CATCH/ LANDING/ Observer/ VMS DATA		
		Type of data	Data Provided?	Species/Fishery/ies for which Data Provided
Australia		Tow by tow/ set by set data (Bottom longline and dropline fisheries)	Yes	ALL
		Aggregated annual catch	No	Species totals not reported due to confidentiality policy
		Observer	Yes (demersal longline)	ALL (lfs for GMQ, LHI, PFM, ZRO; no bios)
		VMS	No	
Belize		Tow by tow/ set by set data	No	
		5x5 degree square catch data	Yes (by month and vessel)	CJM, MAS
		Aggregated annual catch	No	
		Observer	No	
		VMS	No	
Chile		Tow by tow/ set by set data	No	
		1x1 degree square catch data (HS + EEZ)	Yes	CJM (HS + EEZ), MAS (HS + EEZ), GIS (HS + EEZ)
		Aggregated annual catch (HS + EEZ)	Yes	CJM (HS + EEZ), MAS (HS + EEZ), GIS (HS + EEZ)
		Observer	No	
		VMS	No	
China		Tow by tow/ set by set data	No	
		1x1 degree square catch	Yes	CJM
		5x5 degree square catch data	Yes	GIS
		Aggregated annual catch	Yes	CJM
		Observer	No	
		VMS	No (a list of vessels which have VMS)	
European Union	Pelagic	Tow by tow/ set by set data	Yes	ALF, CJM, MAS
		Aggregated annual catch	Yes	ALF, CJM, MAS
		Observer	Yes (non-standard format)	CJM (bios only)
		VMS	No	
	Fixed gill net	Tow by tow/ set by set data	No	
		5x5 degree square catch data	No	
		Aggregated (Dec 2008-Dec 2008)	Yes	BUP, CUS, FIN, GGD, HKN, SCK
		Observer	Yes (not in standard template format)	ALL (Dec 2008)
		VMS	Yes (as vessel tracks)	

Key:

ALL - All species caught in High Seas	MAS - Chub mackerel (*Scomber japonicus*)
ALF - Alfonsinos	ORY - Orange roughy (*Hoplostethus atlanticus*)
CJM - Chilean jack mackerel (*Trachurus murphyi*)	
GIS - Jumbo flying squid (*Dosidicus gigas*)	
JAX - Jack and horse mackerels (*Trachurus* species)	EEZ - Exclusive Economic Zone
MAC - Atlantic mackerel (*Scomber scombrus*)	HS - High Seas

Table 1b: Summary of Catch/Landing Data Received by the Interim Secretariat for 2008 (Part 2 of 2)

PARTICIPANT	2008 CATCH/ LANDING/ Observer/ VMS DATA		
	Type of data	Data Provided?	Species/Fishery/ies for which Data Provided
Faroe Islands	Tow by tow/ set by set data	Yes	CJM, MAS
	Aggregated annual catch	Yes	CJM, MAS
	Observer	No	
	VMS	No	
Korea	Tow by tow/ set by set data	Yes (by vessel)	CJM, MAS
	Aggregated annual catch	No	
	Observer	Yes	CJM, MAS
	VMS	No	
New Zealand	Tow by tow/ set by set data	Can be provided as soon as the SPRFMO database is available to accept these data	
	5x5 degree square catch data	Yes	ALL
	Aggregated annual catch	No	
	Observer (trawl)	Yes - including Observer Implementation report	ALF, EPI, ORY, RIB, SSO (includes summary lf and bio info)
	VMS	No	
Peru	Aggregated annual catch (EEZ)	Yes	CJM (EEZ), MAS (EEZ), GIS (EEZ)
	Observer	No (not fishing in High Seas)	
	VMS	No (not fishing in High Seas)	
Russian Federation	Tow by tow/ set by set data	Yes	
	Aggregated annual catch	Yes (by vessel)	
	Observer	No	
	VMS	No	
Vanuatu	Tow by tow/ set by set data	Yes	CJM, MAS
	Aggregated annual catch	Yes (by vessel)	CJM, MAS
	Observer	No	CJM - Size composition data provided
	VMS	No	
Chinese Taipei	Tow by tow/ set by set data	No	
	5x5 degree square catch data	Yes (preliminary)	GIS
	Aggregated annual catch	No	
	Observer	No	
	VMS	No	

Key:

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ALF - Alfonsinos	ORY - Orange roughy (*Hoplostethus atlanticus*)
CJM - Chilean jack mackerel (*Trachurus murphyi*)	
GIS - Jumbo flying squid (*Dosidicus gigas*)	
JAX - Jack and horse mackerels (*Trachurus* species)	EEZ - Exclusive Economic Zone
MAC - Atlantic mackerel (*Scomber scombrus*)	HS - High Seas

Table 1c: Summary of Catch/Landing Data Received by the Interim Secretariat for 2009 (Part 1 of 2)

PARTICIPANT		2009 CATCH/ LANDING/ Observer/ VMS DATA		
		Type of data	Data Provided?	Species/Fishery/ies for which Data Provided
Australia		Tow/set (bottom longline & dropline)	Yes	ALL
		Tow/set (trawl)	Yes - nil return	
		Aggregated annual catch	No	
		Observer (bottom longline & dropline)	Yes	ALL
		Observer (trawl)	Yes - nil return	
		VMS	No	
Belize		Tow by tow/ set by set data	No	
		5x5 degree square catch data	Yes	CJM, MAS
		Aggregated annual catch	Derived from 5x5 only	
		Observer	No	
		VMS	Yes	
Chile		Tow by tow/ set by set data	No	
		1x1 degree square catch data	Yes	CJM (HS + EEZ), MAS (HS + EEZ), GIS (HS + EEZ)
		Aggregated annual catch	Yes	CJM (HS + EEZ), MAS (HS + EEZ), GIS (EEZ)
		Observer	Yes (lfs & biology incl wgt & sex freqs and maturity stages - but not in template format)	CJM, MAS
		VMS	No	
China		Tow by tow/ set by set data	Yes (all vessels)	CJM
		Aggregated annual catch	No	
		Observer	No	
		VMS	Yes (all vessels)	
Cook Islands		Tow by tow/ set by set data	No	
		Aggregated annual catch	No	
		VMS	No	
European Union	Pelagic	Tow by tow/ set by set data	Yes (all vessels)	CJM, MAS
		Aggregated annual catch	Yes	BRU, CJM, MAS
		Observer	Yes (in standard template format)	BRU, CJM, MAS
		VMS	Yes (as vessel tracks)	
	Fixed gill net	Tow by tow/ set by set data	Yes	ALL
		Aggregated annual catch	Yes (by vessel, month and species)	ALL
		Observer	Yes (not in standard template format: Jan - Mar 09) plus scientific reports	ALL
		VMS	Yes (as vessel tracks)	

Key:

ALL - All species caught in High Seas	MAS - Chub mackerel (*Scomber japonicus*)
ALF - Alfonsinos	ORY - Orange roughy (*Hoplostethus atlanticus*)
CJM - Chilean jack mackerel (*Trachurus murphyi*)	
GIS - Jumbo flying squid (*Dosidicus gigas*)	
JAX - Jack and horse mackerels (*Trachurus* species)	EEZ - Exclusive Economic Zone
MAC - Atlantic mackerel (*Scomber scombrus*)	HS - High Seas

Table 1c: Summary of Catch/Landing Data Received by the Interim Secretariat for 2009 (Part 2 of 2)

PARTICIPANT		2009 CATCH/ LANDING/ Observer/ VMS DATA		
		Type of data	Data Provided?	Species/Fishery/ies for which Data Provided
Australia		Tow/set (bottom longline & dropline)	Yes	ALL
		Tow/set (trawl)	Yes - nil return	
		Aggregated annual catch	No	
		Observer (bottom longline & dropline)	Yes	ALL
		Observer (trawl)	Yes - nil return	
		VMS	No	
Belize		Tow by tow/ set by set data	No	
		5x5 degree square catch data	Yes	CJM, MAS
		Aggregated annual catch	Derived from 5x5 only	
		Observer	No	
		VMS	Yes	
Chile		Tow by tow/ set by set data	No	
		1x1 degree square catch data	Yes	CJM (HS + EEZ), MAS (HS + EEZ), GIS (HS + EEZ)
		Aggregated annual catch	Yes	CJM (HS + EEZ), MAS (HS + EEZ), GIS (EEZ)
		Observer	Yes (lfs & biology incl wgt & sex freqs and maturity stages - but not in template format)	CJM, MAS
		VMS	No	
China		Tow by tow/ set by set data	Yes (all vessels)	CJM
		Aggregated annual catch	No	
		Observer	No	
		VMS	Yes (all vessels)	
Cook Islands		Tow by tow/ set by set data	No	
		Aggregated annual catch	No	
		VMS	No	
European Union	Pelagic	Tow by tow/ set by set data	Yes (all vessels)	BRU, CJM, MAS
		Aggregated annual catch	Yes	BRU, CJM, MAS
		Observer	Yes (in standard template format)	BRU, CJM, MAS
		VMS	Yes (as vessel tracks)	
	Fixed gill net	Tow by tow/ set by set data	Yes	ALL
		Aggregated annual catch	Yes (by vessel, month and species)	ALL
		Observer	Yes (not in standard template format: Jan - Mar 09) plus scientific reports	ALL
		VMS	Yes (as vessel tracks)	

Key:

ALL - All species caught in High Seas	MAS - Chub mackerel (*Scomber japonicus*)
ALF - Alfonsinos	ORY - Orange roughy (*Hoplostethus atlanticus*)
CJM - Chilean jack mackerel (*Trachurus murphyi*)	
GIS - Jumbo flying squid (*Dosidicus gigas*)	
JAX - Jack and horse mackerels (*Trachurus* species)	EEZ - Exclusive Economic Zone
MAC - Atlantic mackerel (*Scomber scombrus*)	HS - High Seas