

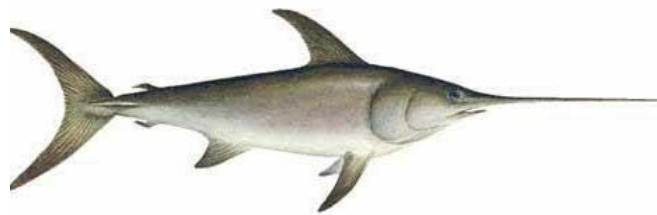


Striped Marlin Catches in the North Pacific from WCPFC Data

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Abstract

This working paper presents catch summaries and distribution plots of striped marlin in the North Pacific from non-ISC member countries. The data was provided by the WCPFC for longline catches of striped marlin only. The purpose was to provide the ISC Billfish Working Group with billfish catch data not available in the ISC or ISC Working Groups data holdings. This represents the first time this catch data has been made available to the ISC for stock assessment purposes.

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WCPFC Data Holdings

The Western and Central Pacific Fisheries Commission (WCPFC) was established by the Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC Convention) in June 2004. The WCPFC has 25 member countries, 7 Participating Territories, and 7 Cooperating Non-Members.

Japan, Chinese Taipei, Korea, and U.S.A. are member countries of both the ISC and the WCPFC. Many other WCPFC countries fish in the North Pacific but are not members of the ISC.

The WCPFC provided to the ISC Billfish Working Group historical longline catch data for striped marlin (*Kajikia audax*) in the North Pacific. These are presented in Table 1 by country for cumulative catch in metric tons, total years, and catch per year.

For comparison, striped marlin longline catches from the WCPFC database are also presented for ISC countries Japan, Chinese Taipei, Korea, and U.S.A.

The total catch of striped marlin for non-ISC members for all years of the WCPFC longline data is 2,212 metric tons. About 75% of that total is produced by Indonesia and Philippines, and about 21% is produced by China and Vanuatu. In their most productive years, Indonesia, Philippines, and Vanuatu produced annual catches of 40-80 metric tons. China in 2008 reported 124 metric tons of striped marlin.

Distribution of Striped Marlin Longline Catch

Figure 1 displays the distribution of striped marlin longline catches in the North Pacific by ISC and WCPFC member countries (I = ISC, W = WCPFC).

Figure 2 displays the distribution of striped marlin longline catches in the North Pacific for China for all years (1993-2010). Note that the catch totals are in numbers caught, not weight landed.

Figure 3 displays the distribution of striped marlin longline catches in the North Pacific for Vanuatu for all years (2002-2010). Note that the catch totals are in numbers caught, not weight landed.

For comparison, Figure 4 displays the distribution of striped marlin longline catches in the North Pacific for Korea for all years (1975-2010). Note that the catch totals are in numbers caught, not weight landed.

Table 1 – Striped marlin longline cumulative catch (mt) by country from WCPFC database.

Striped Marlin - Longline - WCPFC Data

ISC Countries	Total Catch (mt)	Total Years	Catch per Year	First Year	Last Year
REPUBLIC OF KOREA	2,732.6	36	75.9	1975	2010
UNITED STATES OF AMERICA	8,326.5	20	416.3	1991	2010
CHINESE TAIPEI	19,081.6	53	360	1958	2010
JAPAN	308,168	61	5051.9	1950	2010
totals	338,308.7	170	5904.1		

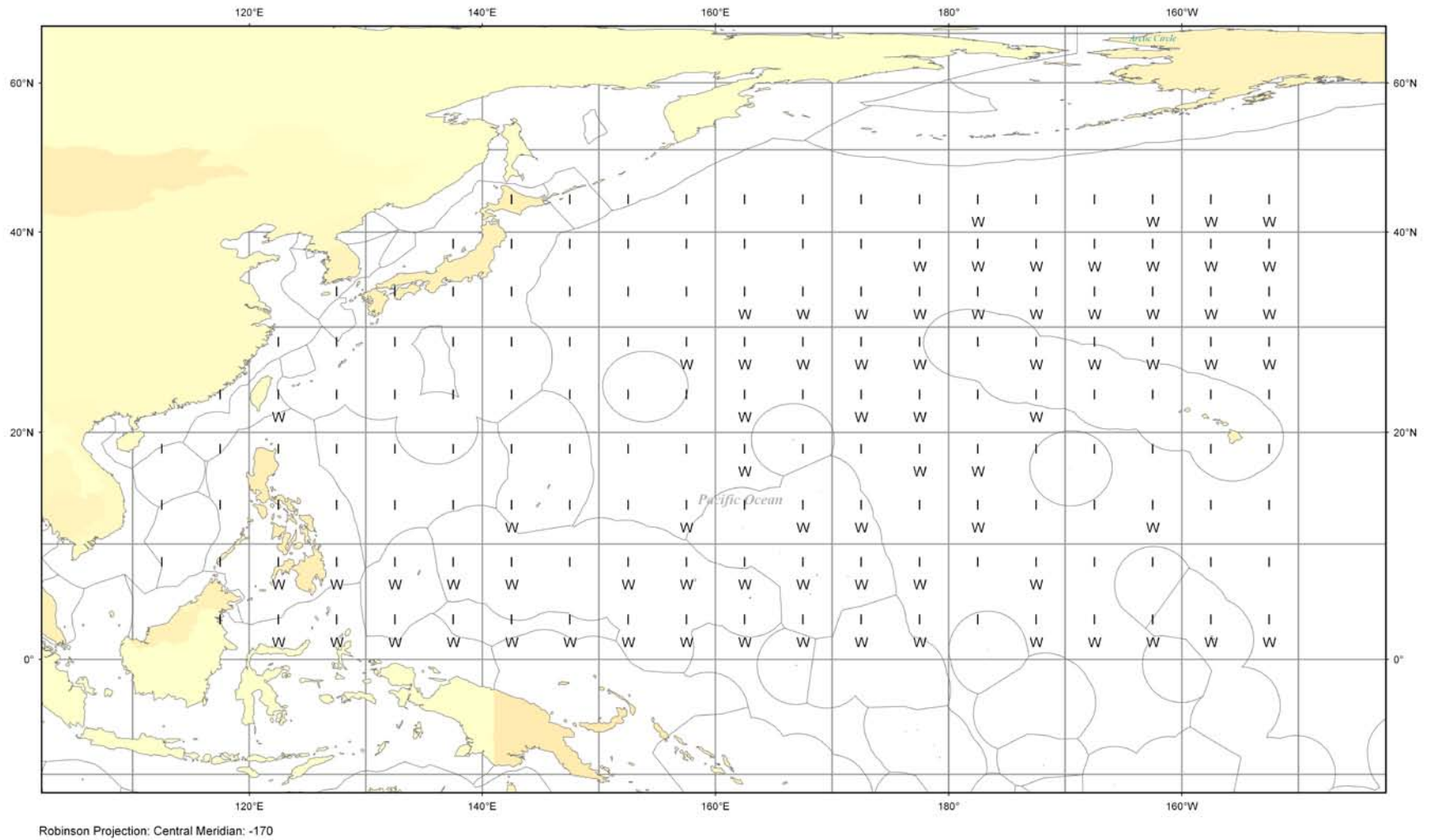
Striped Marlin - Longline - WCPFC Data

WCPFC Countries	Total Catch (mt)	Total Years	Catch per Year	First Year	Last Year
PALAU	0	0			
SOLOMON ISLANDS	0.03	1	0.03	1985	
KIRIBATI	0.13	2	0.06	2003	2004
COOK ISLANDS	0.13	1	0.13	2008	
PAPUA NEW GUINEA	0.24	1	0.24	2003	
USA (GUAM)	0.5	1	0.5	1995	
MARSHALL ISLANDS	4.53	4	1.13	1992	1993
BELIZE	29.03	8	3.63	2001	2010
FEDERATED STATES OF MICRONESIA	30.98	17	1.82	1991	2010
VANUATU	231.32	10	23.13	2002	2010
CHINA	244.07	19	12.84	1993	2010
PHILIPPINES	714.46	34	21.01	1970	2003
INDONESIA	956.44	28	34.16	1978	2006
totals	2,211.86	126	98.68		

ISC Countries with NO Longline Data

MEXICO

COSTA RICA



I = ISC
W = WCPFC

Figure 1

Figure 2

CHINA

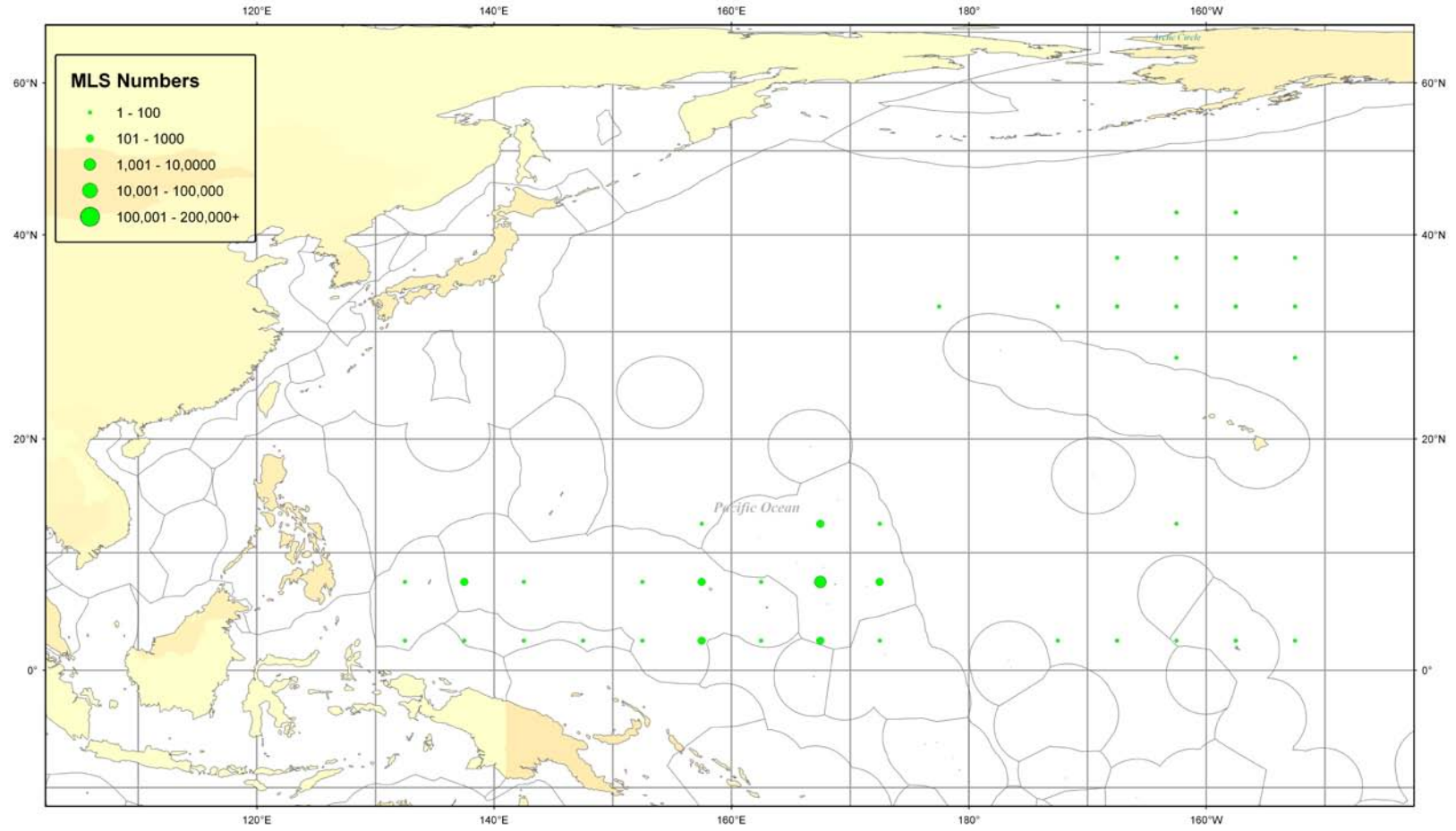


Figure 3

VANUATU

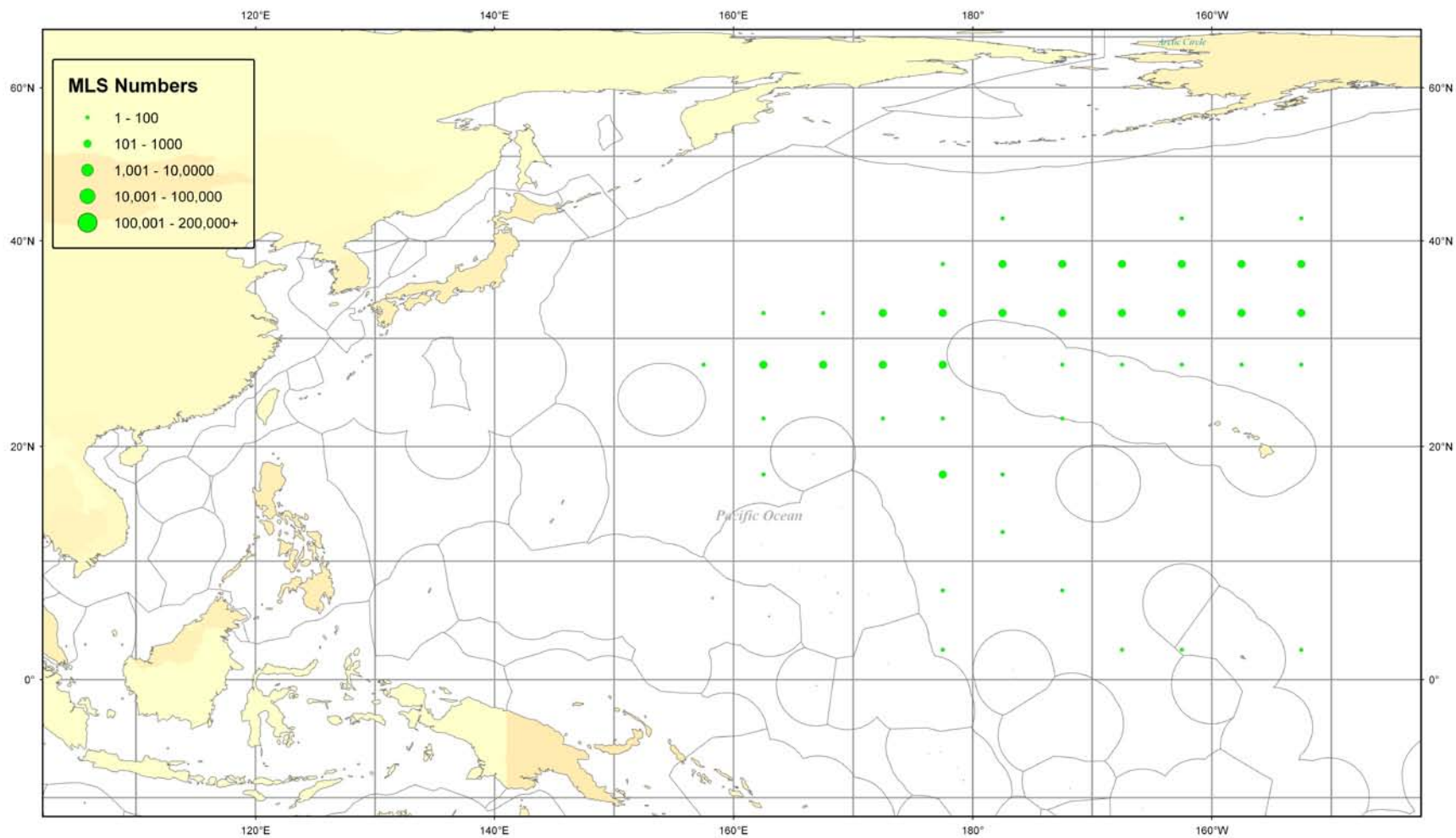


Figure 4

KOREA

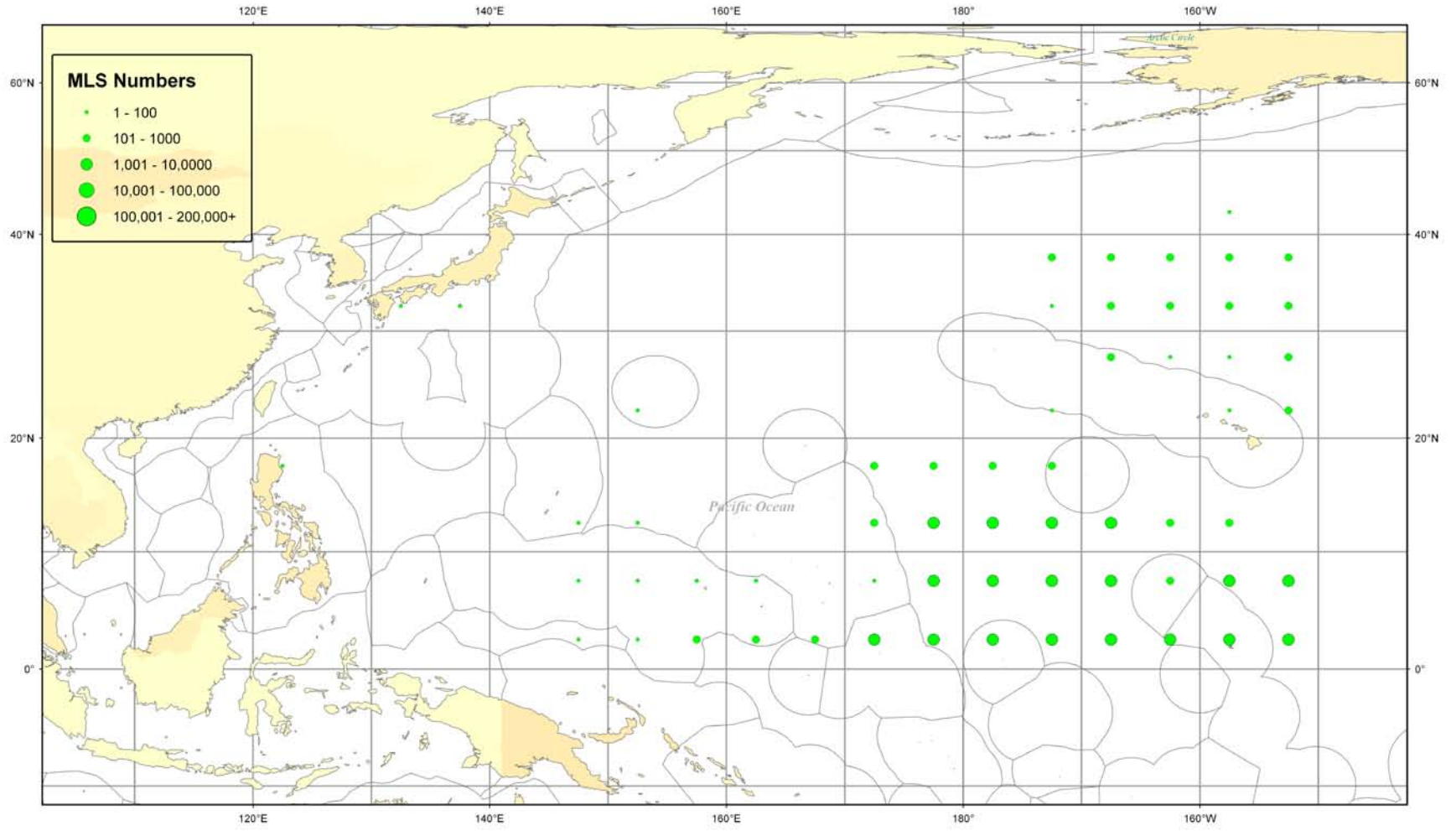
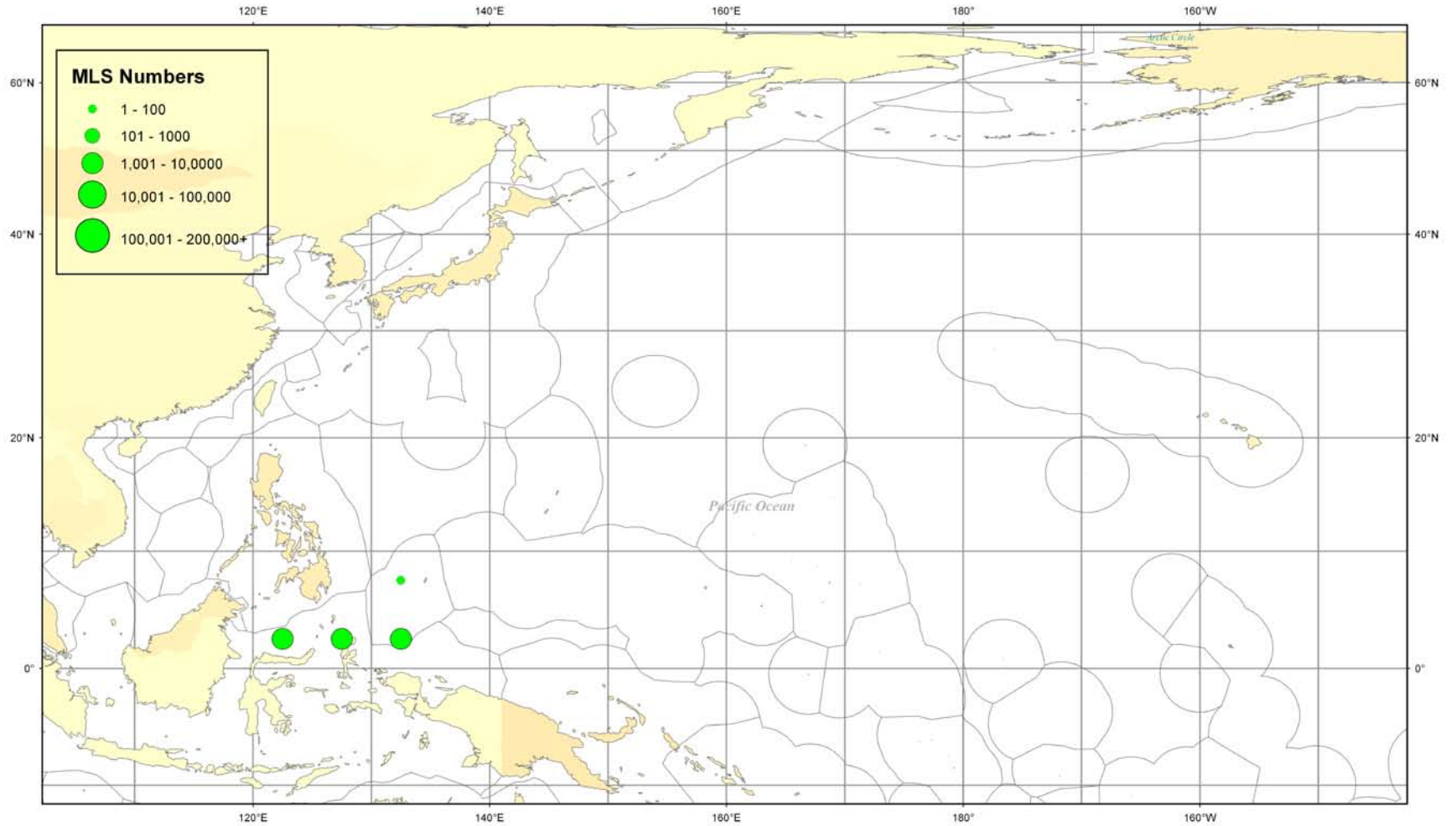


Figure 5

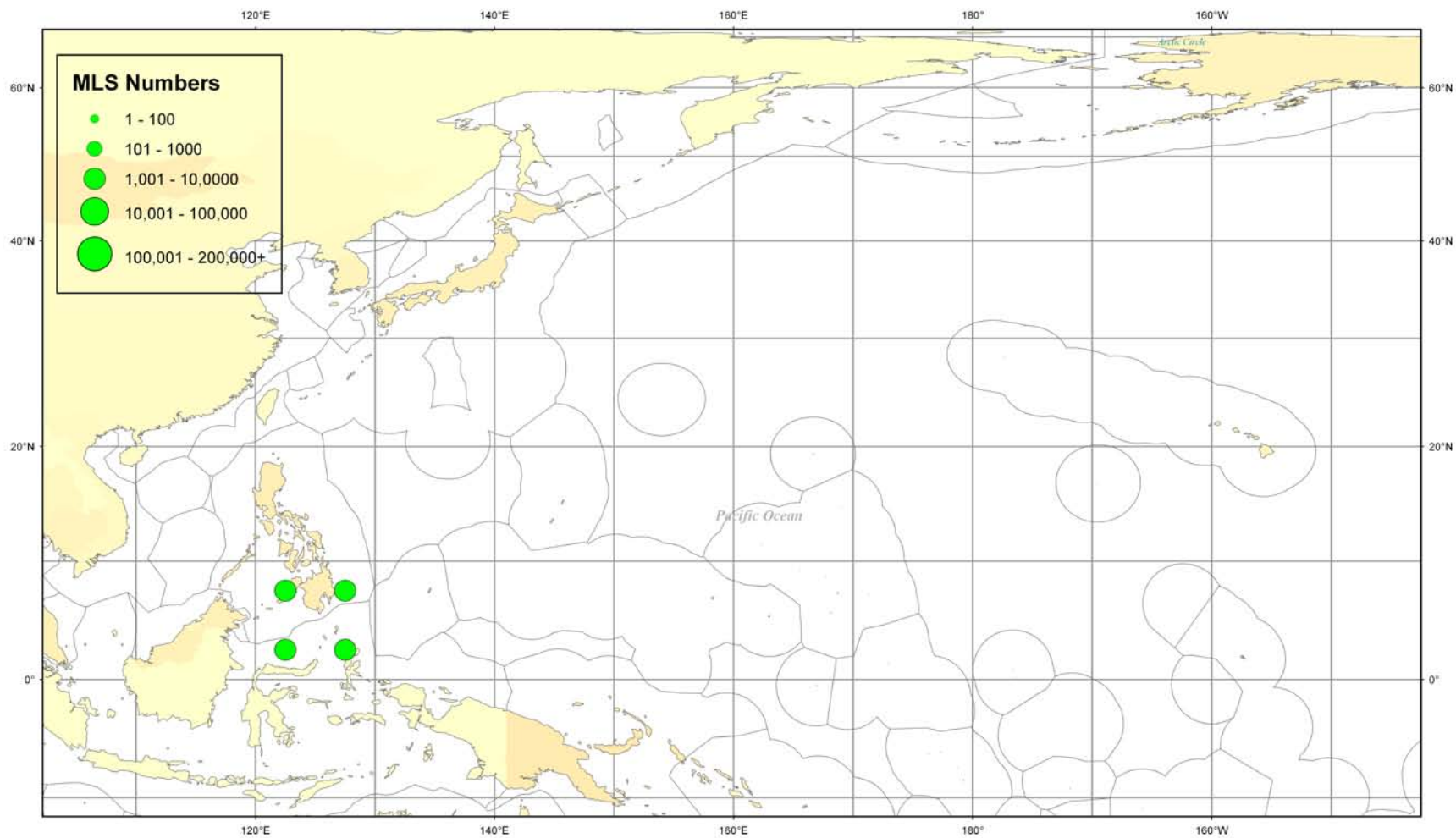
INDONESIA



Robinson Projection: Central Meridian: -170

Figure 6

PHILIPPINES



Robinson Projection: Central Meridian: -170

YEAR	Striped Marlin (mt)									
	Japan	Taiwan	Korea	USA	PH	ID	CN	VU	FM	BZ
1950	7.393									
1951	18.713									
1952	7,379.385									
1953	5,544.931									
1954	8,249.140									
1955	7,975.203									
1956	9,265.591									
1957	8,254.437									
1958	10,138.178	542.995								
1959	10,137.034	391.003								
1960	9,132.573	398.002								
1961	9,332.889	306.000								
1962	10,815.392	331.996								
1963	8,981.629	560.004								
1964	14,745.288	392.005								
1965	11,117.962	355.004								
1966	7,146.867	340.008								
1967	9,996.863	386.247								
1968	10,410.789	332.683								
1969	6,379.457	572.026								
1970	11,340.682	495.003			10.752					
1971	7,767.106	449.005			12.024					
1972	4,951.764	384.261			12.504					
1973	5,855.407	568.228			14.952					
1974	5,683.285	500.913			17.400					
1975	3,693.973	765.964	77.304		17.760					
1976	3,528.612	362.013	53.258		14.952					
1977	2,541.980	533.645	30.079		21.192					
1978	3,099.994	618.244	81.793		12.600	8.892				
1979	5,851.090	457.908	78.285		16.584	9.312				

YEAR	Striped Marlin (mt)									
	Japan	Taiwan	Korea	USA	PH	ID	CN	VU	FM	BZ
1980	5,921.201	250.791	10.384		21.528	10.812				
1981	4,724.991	504.974	125.276		29.592	13.212				
1982	3,638.387	402.122	101.871		34.680	26.364				
1983	2,848.678	555.008	17.354		51.624	7.668				
1984	4,218.558	965.006	72.387		23.472	12.216				
1985	6,488.975	515.912	56.405		33.264	18.036				
1986	8,511.659	179.007	61.325		44.088	17.820				
1987	5,566.156	393.014	73.498		69.000	67.668				
1988	8,896.304	488.176	60.305		57.960	71.040				
1989	4,348.939	191.292	40.605		63.120	37.464				
1990	2,477.128	177.842	29.494		9.672	40.284				
1991	3,812.891	259.045	12.017	523.744	9.672	50.916			0.049	
1992	3,167.585	227.732	48.908	545.068	9.672	56.136			0.043	
1993	4,254.304	230.818	54.607	630.841	9.672	43.284	5.883		1.068	
1994	3,631.604	147.288	78.932	383.804	9.672	40.320	21.238		1.132	
1995	3,815.399	175.186	94.181	727.435	9.672	42.912	10.884		4.358	
1996	1,952.550	189.544	51.215	523.693	9.672	51.036	11.051	0.067	1.560	
1997	1,997.084	340.711	61.553	34.797	9.672	42.648	2.014	0.060	0.989	
1998	1,625.214	292.364	214.818	37.932	9.672	52.764	0.054	0.054	6.181	
1999	1,245.025	260.098	161.368	326.220	9.672	54.504	3.088	0.049	0.834	
2000	993.543	247.544	69.097	274.454	9.672	24.840	1.654	0.039	4.763	
2001	766.279	51.624	35.406	539.494	9.672	32.004	7.943	0.035	0.139	0.653
2002	520.857	46.772	112.488	297.312	9.672	49.944	16.881	5.742	0.115	5.795
2003	1,077.896	151.568	189.999	870.226	9.672	73.668	7.650	10.314	0.258	3.646
2004	481.060	409.708	101.770	480.763	6.286	47.880	2.547	71.844	3.320	5.359
2005	342.370	424.543	131.533	497.187	5.880	0.278	2.309	54.477	0.670	2.546
2006	420.037	123.361	192.271	606.008	5.564	0.400	1.730	33.098	0.634	0.598
2007	298.105	260.175	22.638	260.239	3.509	0.252	1.207	20.033	3.613	2.703
2008	532.961	195.753	56.285	403.435	5.381	0.387	124.084	18.406	1.336	4.145
2009	139.670	198.242	43.774	237.235	2.644	0.190	22.983	12.434	0.327	2.037
2010	109.159	183.263	30.119	126.658	1.871	0.135	0.874	4.901	0.521	7.733

