



# **South Pacific Regional Fisheries Management Organisation**

**1<sup>st</sup> Meeting of the Scientific Committee**

**La Jolla, United States of America, 21-27 October 2013**

**SC-01-INF-16**

**Chilean Jack Mackerel Fishery Input Data for Stock Assessment - Chile**

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(Note: An excel version will be available via the Github data repository refer SC-01-INF-02)

#	1	2	3	4	5	6	7	8	9	10	11	12
<b>Fishery 1wt-age</b>												
1970	0.0501	0.0891	0.1288	0.1887	0.2483	0.3131	0.3959	0.4885	0.5836	0.7279	0.8798	1.1151
1971	0.0501	0.0891	0.1288	0.1887	0.2483	0.3131	0.3959	0.4885	0.5836	0.7279	0.8798	1.1151
1972	0.0501	0.0891	0.1288	0.1887	0.2483	0.3131	0.3959	0.4885	0.5836	0.7279	0.8798	1.1151
1973	0.0501	0.0891	0.1288	0.1887	0.2483	0.3131	0.3959	0.4885	0.5836	0.7279	0.8798	1.1151
1974	0.0501	0.0891	0.1288	0.1887	0.2483	0.3131	0.3959	0.4885	0.5836	0.7279	0.8798	1.1151
1975	0.0501	0.0891	0.1288	0.1887	0.2483	0.3131	0.3959	0.4885	0.5836	0.7279	0.8798	1.1151
1976	0.0501	0.0891	0.1288	0.1887	0.2483	0.3131	0.3959	0.4885	0.5836	0.7279	0.8798	1.1151
1977	0.0501	0.0891	0.1288	0.1887	0.2483	0.3131	0.3959	0.4885	0.5836	0.7279	0.8798	1.1151
1978	0.0501	0.1053	0.1238	0.1628	0.2044	0.3139	0.3694	0.4055	0.4339	0.4535	0.5902	1.1151
1979	0.0501	0.1075	0.1628	0.1791	0.2172	0.2740	0.3699	0.4197	0.4737	0.6286	0.6335	1.1151
1980	0.0501	0.0686	0.1176	0.2096	0.2562	0.3243	0.4104	0.4510	0.5105	0.9979	0.8798	1.1151
1981	0.0501	0.0942	0.1392	0.2136	0.2692	0.3306	0.4122	0.4807	0.5803	0.6610	1.1121	1.1151
1982	0.0714	0.0928	0.1676	0.2019	0.2478	0.3055	0.3556	0.4107	0.4455	0.4710	0.7193	1.1151
1983	0.0840	0.0992	0.1190	0.2213	0.2639	0.3142	0.3766	0.4291	0.4750	0.5279	0.5397	1.1151
1984	0.0501	0.1643	0.1865	0.2165	0.2727	0.3450	0.3939	0.4370	0.4965	0.5680	0.7856	1.1151
1985	0.0501	0.1667	0.1725	0.2242	0.2714	0.3397	0.4010	0.4652	0.5357	0.5819	0.7260	1.1151
1986	0.0956	0.0995	0.1429	0.2221	0.2891	0.3324	0.4177	0.4970	0.5495	0.8692	0.8798	1.1151
1987	0.0920	0.1207	0.1459	0.1894	0.2334	0.3363	0.4269	0.4773	0.5129	0.6501	0.8032	1.1151
1988	0.0501	0.1102	0.1668	0.1966	0.2296	0.2975	0.4723	0.5449	0.5858	0.7106	0.8798	1.1151
1989	0.0501	0.1226	0.1672	0.2302	0.2697	0.3103	0.3790	0.4909	0.5411	0.5690	0.7131	1.1151
1990	0.0690	0.0987	0.1605	0.2484	0.2898	0.3380	0.4095	0.5328	0.6511	0.6765	0.7564	1.1151
1991	0.0488	0.1212	0.1426	0.2005	0.2766	0.3657	0.4077	0.4782	0.6366	0.7196	0.7937	0.8833
1992	0.0695	0.0923	0.1275	0.2011	0.2678	0.3003	0.3725	0.4441	0.5121	0.5951	0.6814	0.7858
1993	0.0214	0.1156	0.1522	0.2052	0.2981	0.3641	0.4220	0.4886	0.5278	0.5958	0.7743	0.8891
1994	0.0590	0.0973	0.1067	0.2348	0.2914	0.3305	0.3873	0.4595	0.5649	0.7483	0.7979	0.8979
1995	0.0694	0.1009	0.1370	0.1863	0.2627	0.3214	0.3566	0.4343	0.5614	0.6685	0.8798	1.1151
1996	0.0671	0.0000	0.1397	0.1699	0.2292	0.2946	0.3672	0.5067	0.6567	0.6385	0.8798	1.1151
1997	0.0288	0.0634	0.1253	0.1766	0.2462	0.3573	0.5032	0.6152	0.5836	0.7279	0.8798	1.1151
1998	0.0000	0.0819	0.1037	0.1949	0.2489	0.2899	0.3903	0.4751	0.6341	0.7279	0.8798	1.1151
1999	0.0714	0.0745	0.0894	0.1468	0.2697	0.3148	0.4459	0.7218	0.5836	0.7279	0.8798	1.1151
2000	0.0431	0.0544	0.1375	0.1910	0.2249	0.2510	0.3721	0.4885	0.5836	0.7279	0.8798	1.1151
2001	0.0657	0.0933	0.1122	0.1332	0.2042	0.2856	0.4208	0.4885	0.5836	0.7279	0.8798	1.1151
2002	0.0286	0.0590	0.0919	0.1724	0.2379	0.3268	0.3981	0.4164	0.6277	0.7279	0.8798	1.1151
2003	0.0356	0.0823	0.1023	0.1411	0.2268	0.3093	0.4158	0.4639	0.5335	0.7279	0.8798	1.1151
2004	0.0370	0.0784	0.1636	0.1862	0.2031	0.2572	0.3425	0.4885	0.5836	0.7279	0.8798	1.1151
2005	0.0286	0.0758	0.1111	0.1749	0.2222	0.2684	0.2812	0.4885	0.5836	0.7279	0.8798	1.1151
2006	0.0318	0.0739	0.1144	0.1320	0.2035	0.3736	0.4423	0.5065	0.6064	0.7279	0.8798	1.1151
2007	0.0874	0.0749	0.1218	0.1576	0.2224	0.2957	0.4041	0.5142	0.6142	0.7234	0.7234	1.1151
2008	0.0419	0.0475	0.0665	0.1866	0.2435	0.2914	0.3883	0.5628	0.6161	0.7476	0.8798	1.1151
2009	0.0153	0.0471	0.1058	0.1377	0.2394	0.2850	0.3355	0.5261	0.5836	0.7279	0.8798	1.1151
2010	0.0133	0.0475	0.1008	0.1720	0.2328	0.3005	0.3974	0.4930	0.6387	0.7722	0.8798	1.1151
2011	0.0193	0.0653	0.0951	0.1670	0.2760	0.3137	0.3979	0.4885	0.5836	0.7279	0.8798	1.1151
2012	0.0161	0.0479	0.0878	0.2021	0.2351	0.2687	0.3959	0.4885	0.5836	0.7279	0.8798	1.1151
2013	0.0504	0.0896	0.1288	0.1882	0.2479	0.3122	0.3954	0.4880	0.5650	0.6868	0.8213	1.0864
#	1	2	3	4	5	6	7	8	9	10	11	12
<b>Fishery 2wt-age</b>												
1970	0.0520	0.0930	0.1310	0.1780	0.2620	0.2940	0.3400	0.3960	0.5490	0.7380	0.9840	1.0930
1971	0.0520	0.0930	0.1310	0.1780	0.2620	0.2940	0.3400	0.3960	0.5490	0.7380	0.9840	1.0930
1972	0.0520	0.0930	0.1310	0.1780	0.2620	0.2940	0.3400	0.3960	0.5490	0.7380	0.9840	1.0930
1973	0.0520	0.0930	0.1310	0.1780	0.2620	0.2940	0.3400	0.3960	0.5490	0.7380	0.9840	1.0930



Fleet	2		1		2		2
yr	Acoustic CS	yr	Acoustic N	yr	CPUE_CS	yr	DEPM_CS
1997	3530	1984	99	1983	0.6458	1999	5724
1998	3200	1985	324	1984	0.5690	2000	4688
1999	4100	1986	123	1985	0.4661	2001	5627
2000	5600	1987	213	1986	0.4023	2003	1388
2001	5950	1988	134	1987	0.4813	2004	3287
2002	3700	1991	242	1988	0.4097	2005	1043
2003	2640	2006	112	1989	0.4187	2006	3283
2004	2640	2007	275	1990	0.3326	2007	626
2005	4110	2008	259	1991	0.4093	2008	1935
2006	3192	2009	18	1992	0.3486		
2007	3140	2010	440	1993	0.3018		
2008	487	2011	432	1994	0.3592		
2009	328	2012	230	1995	0.3223		
				1996	0.3335		
				1997	0.2930		
				1998	0.2769		
				1999	0.3287		
				2000	0.3087		
				2001	0.3967		
				2002	0.3314		
				2003	0.2893		
				2004	0.3157		
				2005	0.2870		
				2006	0.3159		
				2007	0.2402		
				2008	0.1607		
				2009	0.1338		
				2010	0.0985		
				2011	0.0573		
				2012	0.1725		
				2013	0.1479		

#	Fishery		1	Age composition			Northern Chilean						
	1	2		3	4	5	6	7	8	9	10	11	12
1975	0	4073	13776	44143	60659	166146	171002	81053	29641	8253	4552	1070	
1976	0	27	1676	10342	62211	190616	229530	109553	17356	4612	104	0	
1977	122	12767	20036	48155	149760	239459	184136	68069	10018	155	0	0	
1978	0	5910	92821	171908	149947	99992	274829	227407	75025	11649	99	0	
1979	0	0	40320	104406	202313	247236	261704	212251	72124	7503	87	0	
1980	0	5663	19209	39611	120365	158767	188736	133955	25201	792	0	0	
1981	0	0	17592	107026	226852	272757	332572	167387	32014	4135	31	0	
1982	0	1674	29021	332623	362536	484944	639872	367034	127157	21795	225	0	
1983	0	102	1966	49812	151839	222327	205704	103468	21178	556	27	0	
1984	0	4148	232259	599923	284517	284809	377052	318705	67881	4009	0	0	
1985	0	886	53397	255301	400091	427340	252577	73876	12239	1256	0	0	
1986	4646	15143	14153	8069	9791	17324	26790	15727	6358	1078	0	0	
1987	940	69685	612169	638980	149771	36285	27361	8978	428	431	16	0	
1988	0	3652	130324	489772	452240	105585	5445	647	14	0	0	0	
1989	0	7901	4867	43820	326596	271953	55735	9161	2786	295	47	0	
1990	6262	77422	5668	27866	236685	412335	84292	8079	388	94	3	0	
1991	21	17154	218253	217953	121225	180648	259236	64615	5402	5551	1113	542	
1992	1787	30253	252037	142917	268721	274311	149879	60020	8877	790	39	0	
1993	2413	66476	1485903	597010	115335	99352	19235	7088	2161	730	123	77	
1994	431	139526	339253	101904	266129	131505	23152	3211	1618	68	0	0	
1995	2315	170501	345192	296965	146207	84328	17213	801	82	0	0	0	
1996	131844	269877	533140	572880	155446	30636	7068	63	68	0	0	0	
1997	191	26244	307207	204870	23575	694	72	0	0	0	0	0	
1998	0	3406	89297	37875	18933	5847	285	1	0	0	0	0	
1999	38	24289	319634	75711	15598	5394	392	7	0	0	0	0	
2000	57122	235887	136283	236690	110317	15424	39	0	0	0	0	0	
2001	1568	256795	1326138	491732	25070	1848	0	0	0	0	0	0	
2002	48483	98920	391463	176981	92150	18789	4497	276	26	0	0	0	
2003	7504	158188	604518	242543	53916	21616	9440	1894	295	0	0	0	
2004	747	17164	103070	464915	191312	7389	275	0	0	0	0	0	
2005	43804	324087	476065	193396	151443	43843	5150	0	0	0	0	0	
2006	27386	38392	390068	607711	68098	25256	8161	1256	49	0	0	0	
2007	681	93552	346671	475258	113550	27460	17712	7169	1191	165	165	66	
2008	14499	712726	359139	117862	138886	110359	12931	844	191	41	0	0	
2009	569	58921	250894	432581	34649	70639	3089	78	0	0	0	0	
2010	4	524298	57658	360130	140820	36448	9825	1044	506	146	0	0	
2011	20901	199846	94185	11650	3387	5921	383	0	0	0	0	0	
2012	20805	67006	84659	348635	46484	1063	0	0	0	0	0	0	
#	Fishery		2	Age composition			Southern Chilean						
	1	2	3	4	5	6	7	8	9	10	11	12	
1975	0	0	355	633	2259	7108	11305	10032	5551	1867	999	190	
1976	0	1272	364	353	1550	17545	45885	38920	18306	2707	37	0	
1977	1	223	462	5493	19717	34341	61594	47567	7128	684	70	4	
1978	0	595	4226	20574	70250	115605	96857	45404	12171	1330	0	0	
1979	0	20	13439	147552	206176	210012	208192	180490	120831	48163	4206	904	
1980	2152	3996	8314	128820	322829	356395	311998	166713	78325	17706	686	995	
1981	0	2419	8973	83655	392031	696981	627159	326988	99193	23220	3581	800	
1982	1324	4221	8899	118067	618244	826235	877968	626789	224844	57471	10391	13914	
1983	1624	98937	191076	314984	749070	1084641	1113032	548218	207964	30697	3760	1259	
1984	98	7977	190091	357918	447250	985396	1175198	851961	292315	38931	7977	394	
1985	53	889	39763	372792	621888	1131123	1405139	725890	182303	21926	2839	2111	
1986	7703	32892	50408	254334	720436	1125301	1563727	833125	141461	12640	1048	651	
1987	8538	240224	509673	459902	311739	907439	1929691	1290613	257500	39754	3890	922	
1988	442	23756	228313	1415721	1662909	665913	1203766	1215469	405628	50539	6623	114	
1989	0	5570	34610	283575	1634407	2293278	1376907	1070507	406813	64106	1490	0	
1990	248	5228	1826	31608	506751	1598666	2003162	1148443	668436	128313	8666	130	
1991	54	30081	134146	122717	56100	419889	1682863</						

# Acousti Northern Chile												
2006	87	117	404	273	155	22	0	0	0	0	0	0
2007	0	0	69	241	756	292	20	3	0	0	0	0
2008	0	15	1664	1623	42	46	16	0	0	0	0	0
2009	0	0	55	56	21	0	1	0	0	0	0	0
2010	0	0	10	175	1672	402	79	21	0	0	0	0
2011	0	0	764	351	1429	104	144	38	2	0	0	0
2012	0	1	539	66	286	326	61	6	0	0	0	0
# Acousti Central-Southern Chile												
1997	74	265	7857	8492	2422	668	131	115	128	75	76	95
1998	3	119	10599	9851	912	236	142	241	166	24	4	6
1999	0	365	5368	7891	1963	1014	377	194	500	357	212	63
2000	0	0	2529	11296	7864	2787	567	113	42	20	16	20
2001	0	280	6596	14354	7124	1792	428	241	177	103	44	7
2002	0	1	498	2217	1833	2363	565	280	80	21	7	2
2003	0	1	276	2132	3089	2343	680	200	156	115	54	41
2004	0	0	120	662	1833	2277	1709	1128	910	893	320	62
2005	0	0	0	1210	2670	5250	2377	701	320	64	82	188
2006	0	0	0	12	1799	4266	2625	511	322	188	110	70
2007	0	0	0	0	1	339	1113	1058	976	869	439	411
2008	0	0	0	0	0	96	317	256	117	87	34	49
2009	0	0	0	0	0	0	7	265	169	143	127	98
# DEPM Central-Southern Chile												
2001	0	3787	8944	9208	1436	700	420	401	182	58	14	9
2003	0	54	529	837	336	563	398	400	219	84	35	6
2004	0	122	1217	2801	1511	719	405	584	376	168	66	9
2005	0	0	0	21	1115	718	485	336	136	94	57	0
2006	0	0	6	216	1232	1892	1473	849	304	114	78	0
2008	0	0	0	146	419	778	982	716	323	194	9	9

## **LENGTH-AGE KEY 2012: CENTRAL-SOUTHERN ZONE 2012**

Length (cm)	numbers	AGE																									
		O	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV	
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
24	1406378	0	0	0	0	0	1406378	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
25	4677692	0	0	0	0	0	0	4677692	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
26	10651351	0	0	0	0	0	10465656	185695	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
27	12861446	0	0	0	0	0	10870581	1632662	358203	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
28	29701314	0	0	0	0	0	2619204	26785420	296690	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
29	66390678	0	0	0	0	0	3689709	57545011	5155958	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
30	64925814	0	0	0	0	0	10571	42129890	22785354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
31	47446534	0	0	0	0	0	37023	15080689	31887896	440926	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
32	39698053	0	0	0	0	0	56071	2323584	32022200	5296197	0	0	74875	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	41820145	0	0	0	0	0	0	933524	28924377	11887370	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
34	40507699	0	0	0	0	0	0	507940	25747155	14252604	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
35	32838964	0	0	0	0	0	4454458	2956242	19824727	5316267	287270	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
36	26596322	0	0	0	0	0	0	49908	964624	22082178	3499612	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
37	21401053	0	0	0	0	0	0	0	171405	10343373	10886275	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
38	13505695	0	0	0	0	0	0	0	273896	1320620	8741725	3169453	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
39	9591111	0	0	0	0	0	0	0	0	118475	3976410	5496226	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
40	6271723	0	0	0	0	0	0	0	0	26723	1760889	4201744	282367	0	0	0	0	0	0	0	0	0	0	0	0	0	
41	3865095	0	0	0	0	0	0	0	0	19704	327410	3114032	403948	0	0	0	0	0	0	0	0	0	0	0	0	0	
42	2726378	0	0	0	0	0	0	0	0	0	115716	2379230	223376	8056	0	0	0	0	0	0	0	0	0	0	0	0	
43	2134457	0	0	0	0	0	0	0	0	0	0	1350614	519578	132133	132133	0	0	0	0	0	0	0	0	0	0	0	
44	1046785	0	0	0	0</td																						

