

Evaluation of the 2004  
Resolution on the Conservation  
of Tuna in the eastern Pacific  
Ocean (Resolution C-04-09)

# 2004 Resolution on the Conservation of Tuna in the eastern Pacific Ocean (Resolution C-04-09)

- a 6-week closure during the third OR fourth quarter of the year for purse-seine fisheries
- Longline catches are not to exceed 2001 levels.

# Change in purse seine effort from 2003 (BET fisheries)

Year	Quarter	Fishery 2	Fishery 3	Fishery 4	Fishery 5	Total
2004	1	1.38	1.13	1.00	0.87	1.14
	2	1.28	0.51	0.39	0.95	0.83
	3	0.96	0.45	0.31	0.75	0.54
	4	0.77	0.91	0.53	0.97	0.83
2004 Total		1.11	0.70	0.55	0.86	0.79
2005	1	1.08	2.15	1.22	1.67	1.33
	2	1.04	2.69	1.76	1.64	1.65
	3	0.80	0.60	0.97	0.83	0.77
	4	0.95	0.89	1.51	1.33	1.06
2005 Total		0.99	1.02	1.32	1.23	1.12

# Change in purse seine effort from 2003 (YFT fisheries)

Year	Quarter	Fishery 5	Fishery 6	Fishery 7	Fishery 8	Fishery 9	Fishery 10	Un-associated	Dolphin-associated
2004	1	0.83	0.97	0.56	1.18	2.38	42.12	0.93	1.17
	2	1.10	1.23	1.08	1.44	2.38	2.70	1.19	1.51
	3	1.22	0.97	1.13	1.13	1.51	0.82	1.10	1.18
	4	0.62	0.95	0.87	0.59	1.09	0.21	0.82	0.76
Total 2004		0.96	1.05	0.92	1.08	1.90	0.56	1.02	1.15
2005	1	1.48	1.08	1.17	0.70	0.42	3.92	1.18	0.68
	2	0.92	0.70	1.18	0.96	0.33	1.21	0.76	0.81
	3	1.10	0.58	0.56	0.82	0.20	2.87	0.87	0.63
	4	1.03	1.94	1.06	1.65	0.25	1.05	1.66	1.13
Total 2005		1.11	1.02	0.93	0.93	0.32	1.94	1.05	0.78

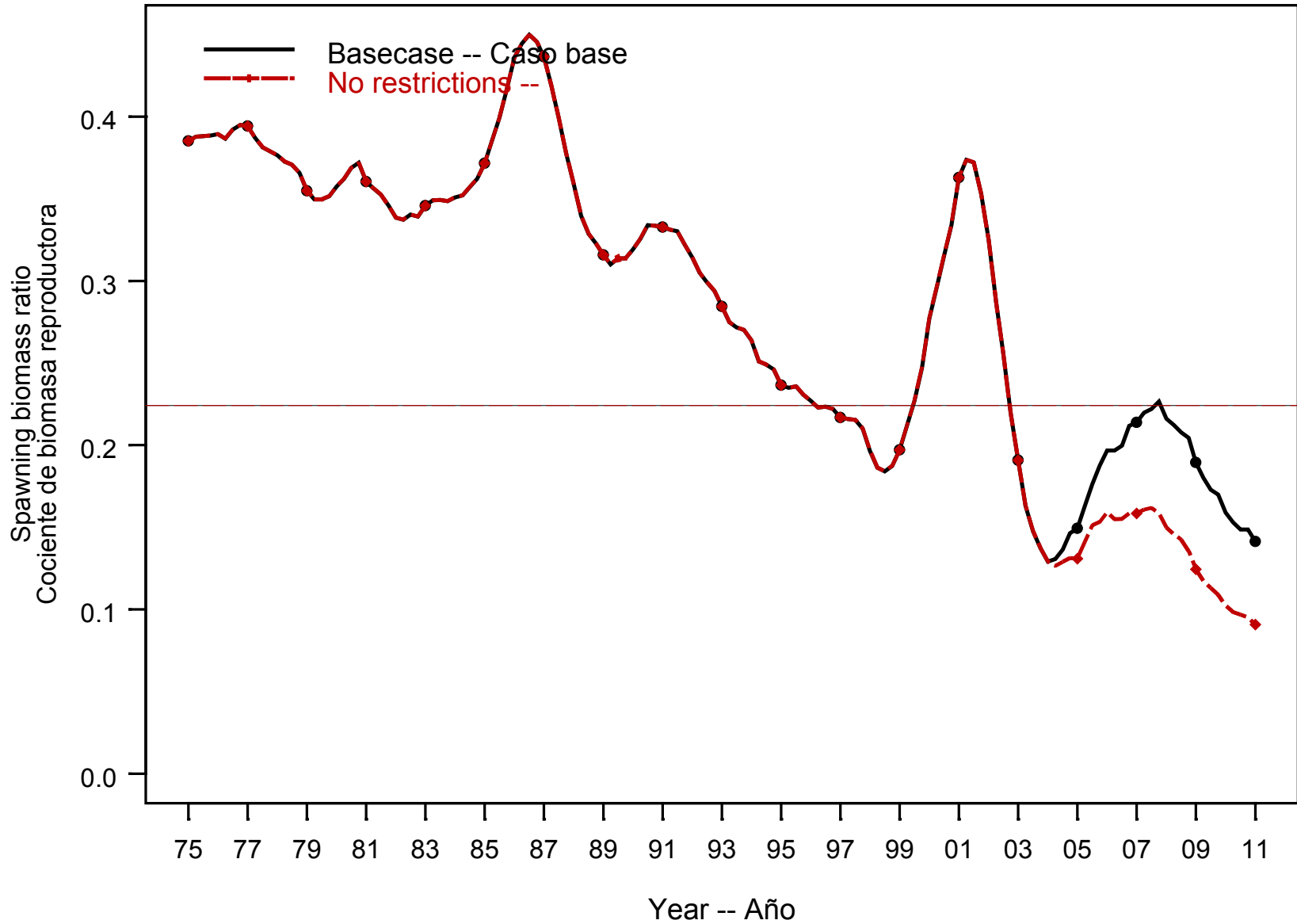
# Change in longline effort

Year	Catch in thousands of fish	Difference from 2001	Difference from previous year
2001	1577		
2002	1644	1.04	1.04
2003	1398	0.89	0.85
2004	945	0.60	0.68
2005	713	0.45	0.75

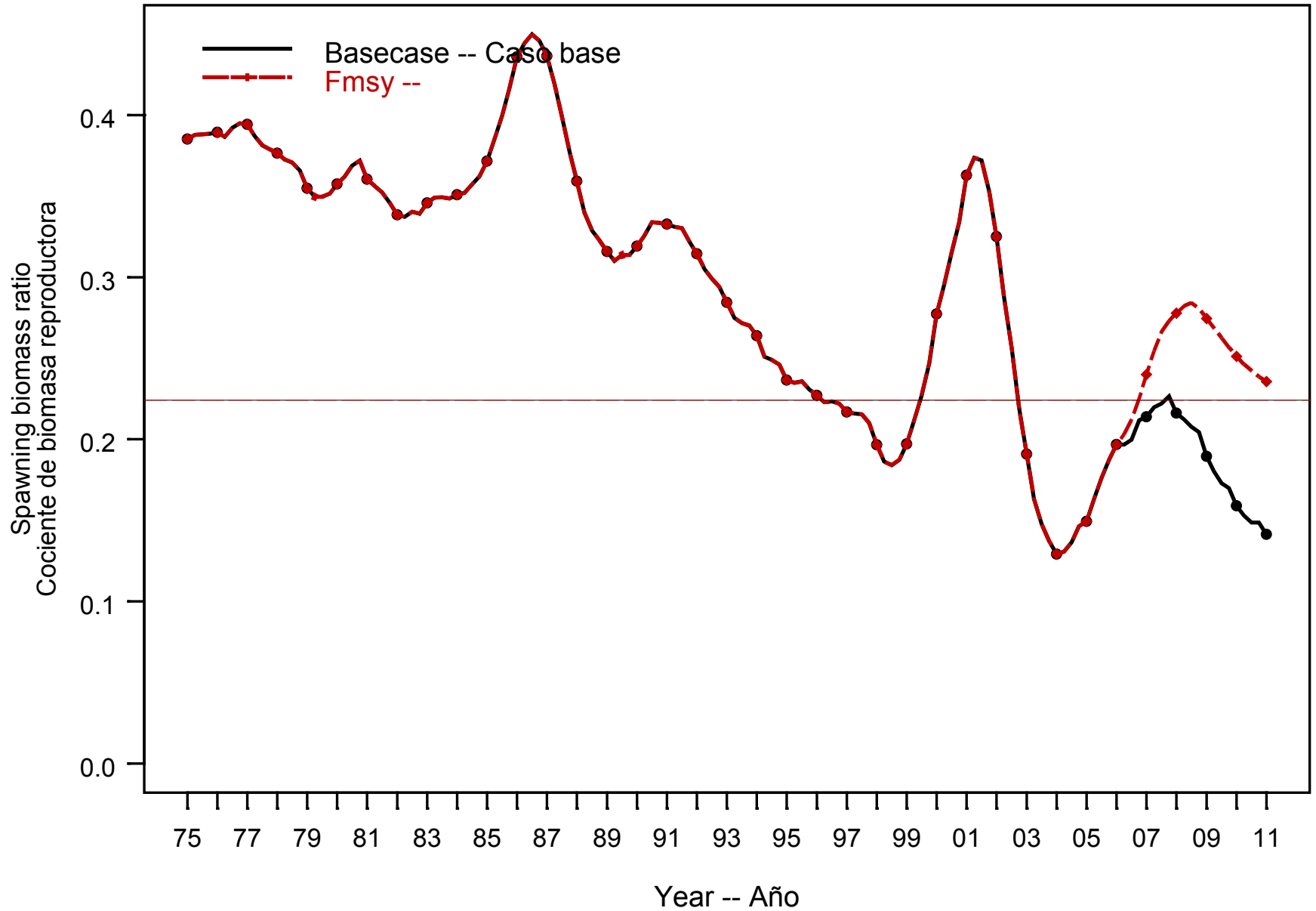
# Methods

- Projected the population forward 7 years, starting in 2004, assuming that the conservation measures were not implemented
- 6-week closure occurred in the third quarter for bigeye tuna; increased effort by 86%
- 6-week closure occurred in the fourth quarter for yellowfin tuna; increased effort by 86%
- Longline: ratio of catch in 2003 to catch in 2004 was used to increase the effort for restricted countries. southern longline fishery effort was increased by 39% for all quarters

# Bigeye results



# Bigeye Fmsy





# Bigeye results

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	<b>End of year spawning biomass</b>		<b>Base case catch</b>		<b>No restrictions catch</b>	
<b>Year</b>	<b>Base case</b>	<b>No restrictions</b>	<b>Purse seine</b>	<b>Longline</b>	<b>Purse seine</b>	<b>Longline</b>
2004	360378	315925	68074	43534	76686	56960
2005	474916	384199	71370	34213	76654	40408
2006	515982	382390	95863	60049	95875	65507
2007	521575	361783	85470	60149	82402	61314
2008	457185	300359	66136	54371	63535	52093
2009	383554	246227	57862	46317	55871	42621
2010	340907	218966	57179	40837	55463	37256

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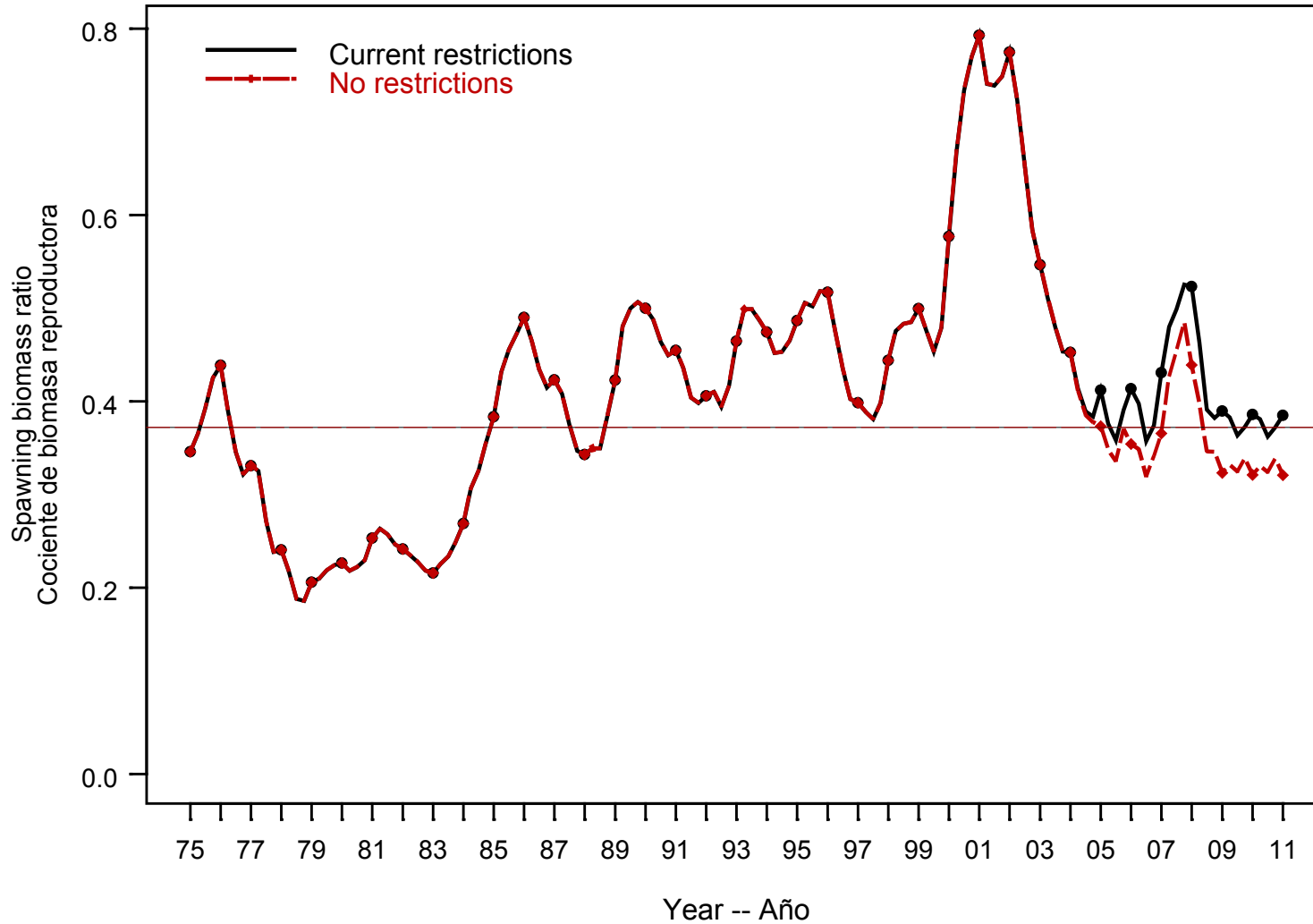
# Bigeye results: restricted/unrestricted

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<b>Year</b>	<b>End of year spawning biomass</b>	<b>Purse-seine catch</b>	<b>Longline catch</b>
2004	0.88	1.13	1.31
2005	0.81	1.07	1.18
2006	0.74	1.00	1.09
2007	0.69	0.96	1.02
2008	0.66	0.96	0.96
2009	0.64	0.97	0.92
2010	0.64	0.97	0.91

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# Yellowfin results



# Yellowfin Fmsy

# Yellowfin results

	<b>End of year spawning biomass</b>		<b>Base case catch</b>		<b>No restrictions catch</b>	
<b>Year</b>	<b>Base case</b>	<b>No restrictions</b>	<b>Purse seine</b>	<b>Longline</b>	<b>Purse seine</b>	<b>Longline</b>
2004	5283	4789	271742	34989	295523	45658
2005	5305	4543	269761	32562	278404	38101
2006	5525	4689	268794	32259	272707	35804
2007	6712	5633	293050	30485	294543	33180
2008	4999	4145	301003	44171	289785	48007
2009	4949	4120	248184	31926	244211	33941
2010	4939	4114	246747	31296	243409	33512

# Yellowfin results: restricted/unrestricted

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<b>Year</b>	<b>End of year spawning biomass</b>	<b>Purse-seine catch</b>	<b>Longline catch</b>
2004	0.91	1.09	1.30
2005	0.86	1.03	1.17
2006	0.85	1.01	1.11
2007	0.84	1.01	1.09
2008	0.83	0.96	1.09
2009	0.83	0.98	1.06
2010	0.83	0.99	1.07

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