NORTH PACIFIC ALBACORE

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North Pacific Albacore: Description of the Fisheries, Status of the Stock, and Management Initiatives in the Eastern Pacific Ocean

Prepared by the Secretariat

Introduction

1. The current paper reviews fisheries for Northern albacore within the Area of application (Article 3) of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean and in the Eastern Pacific Ocean, scientific advice provided by the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) and conservation and management initiatives for North Pacific albacore adopted by the IATTC. This is presented against a background of limited discussion concerning North Pacific albacore at the first meeting of the Scientific Committee in August and the possibility that the Second Session of the Commission will discuss the formal establishment of the Northern Committee as provided for at Article 11 of the Convention.

Fisheries for North Pacific Albacore

2. Commercial fishing for albacore (*Thunnus alalunga*) in the North Pacific Ocean started in the early 1900s. There is a relatively long history of monitoring these fisheries, with catch data for the main fishing fleets available from the early 1950s (Table 1).

3. The highest estimated total annual catch of North Pacific (NP) albacore, at 125,400 metric tonnes (mt), was in 1976. Annual catches subsequently declined, reaching a low of 37,600 mt in 1991. Catches increased during the 1990s, peaking in 1999 at 121,500 mt. Estimated (provisional for 2002 and 2003) annual catches during 1999-2003 averaged 92,600 mt (Stocker 2005; see Table 1).

4. The main fishing nations for NP albacore are Japan, which accounted for 71% of the total catch during 1999-2003, the US (15%), Chinese Taipei (6%), and Canada (5%). Other fishing

nations, which together accounted for about 4%, include South Korea, Mexico, Tonga, Belize, Cook Islands, and Ecuador (Stocker 2005; see Table 1).

5. The main fishing gear types used to harvest NP albacore over the last five years were longline, which accounted for 39% of the total catch during the 1999-2003 period, pole-and-line (38%), and troll (18%). Other gear types used in recent years included purse seine, gill net, unspecified, and recreational gears, which together accounted for about 6% of the catch during the 1999-2003 period (Stocker 2005; see Table 1).

6. The two largest longline fisheries in terms of NP albacore catches are those of Japan and Chinese Taipei, and both have distinct "inshore" and "offshore" components (for further descriptions of NP albacore fisheries see the report of the 19th North Pacific Albacore Workshop (Stocker 2005) and the national reports presented at the 5th ISC, available at http://isc.ac.affrc.go.jp/). The longline fisheries catch albacore throughout much of the North Pacific, but relatively little south of about 10° N latitude. Albacore is targeted in certain areas and seasons in both the inshore and offshore components and is caught incidentally when bigeye and yellowfin tuna are being targeted.

7. NP albacore catches by pole-and-line have been made predominantly by Japan, and most catches are made in the western Pacific. Albacore is targeted in certain areas and periods and is caught incidentally to skipjack tuna in many components of the pole-and-line fisheries.

8. NP albacore catches by troll gear have been made predominantly by the US and Canada, both of which have fleets that target NP albacore seasonally (April through November). The fishing grounds extend from the North American coastline out to about 170°E longitude, between roughly 30° and 45° N latitude (Stocker 2005). These fisheries follow a seasonal migration of mostly juvenile tuna from the western to the eastern Pacific. Since the mid-1980s, relatively small portions of the US and Canadian troll fleets have also ventured south of the equator during the austral summer and fall to target the South Pacific stock of albacore. The southern fishing grounds extend roughly between 180° and 110° W longitude and between 25° S and 50° S latitude (Stocker 2005).

9. The longline fisheries that catch albacore, for the most part, fish relatively deep (greater than 100 m) and tend to catch substantially larger albacore than the surface fisheries. The pole-and-line and troll surface fisheries have been found to capture predominantly juveniles (fish 5 years of age and less; primarily 3- and 4-year-olds), while the longline fisheries capture predominantly adults (fish 5 years of age and greater) (Stocker 2005).

10. In Figure 1, estimated annual North Pacific albacore catches for the 1970-2003 period have been separated into the portions made west and east of 150° W longitude. The western portion falls within the area of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (Convention). The eastern portion falls within the area of the Antigua Convention. Most catches have been made in the western portion, which accounted for 60% to 90% of the total catch in any given year during 1970-2003. The average proportion of the annual catch taken from the western portion during 1999-2003 was approximately 82%.

11. Some fisheries (e.g. as defined by nation and gear type) that catch NP albacore have historically been largely limited to either the Convention Area or the Antigua Convention Area. For example, NP albacore catches in Japan's pole-and-line fishery have been made virtually entirely west of 150° W longitude. Other fisheries, including the high seas albacore troll fisheries of Canada and the US and the longline fisheries, not only straddle the two areas, but the distribution of fishing effort between the two areas varies substantially from year to year.

Status of North Pacific Albacore

12. Most scientists who have studied albacore in the Pacific Ocean have concluded that there are two stocks, one occurring in the northern hemisphere and the other in the southern hemisphere. Some of the main effects of oceanic conditions with respect to the distribution of albacore and fishing patterns in the North Pacific are summarized by IATTC (2005a:1):

> *The juveniles and adults are caught mostly in the Kuroshio Current, the North Pacific Transition Zone, and the California Current in the North Pacific….*
>
> *Movements of NP albacore are strongly influenced by oceanic conditions, and migrating albacore tend to concentrate along oceanic fronts in the North Pacific Transition Zone. The great majority are caught in waters between 15° and 19.5° C. Details of the migration remain unclear, but juvenile fish (2- to 5-year-olds) are believed to move into the eastern Pacific in the spring and early summer, returning to the western and central Pacific, perhaps annually, in the late fall and winter, and tending to remain there as they mature. It has been hypothesized that there are two subgroups of North Pacific albacore, separated at 40° N in the EPO, with the northern subgroup more likely to migrate to the western and central Pacific Ocean.*

13. The latest assessment of the North Pacific stock of albacore, based on virtual population analyses, was carried out at the 19th North Pacific Albacore Workshop in November-December 2004. The assessment results as presented in Stocker (2005) are summarized in paragraphs 14 through 17.

14. Estimated stock biomass decreased from about 360,000 mt in 1975 to about 270,000 mt in the late 1980s, increased to about 460,000 mt by the early 2000s, and has remained at about that level, likely in part due to recent improved recruitment (Figure 2). The point estimate of biomass in 2004 was 438,000 mt. The estimates of stock biomass in the more recent years are relatively imprecise because the cohorts contributing to the catch have been fished for few years. For example, the point estimate of the 2004 stock biomass has 80% confidence limits ranging from roughly 329,000 to 563,000 mt.

15. Estimated spawning stock biomass (SSB) is believed to have remained relatively stable during the last two decades at close to 90,000 mt. The historically high estimate of 165,000 mt in 2004 was largely the outcome of a very successful year class in 1999 (Figure 3). Recruitment

levels in subsequent years were considerably lower than the 1999 level and thus, projections of future SSB declined to levels more typical of the historical time period.

16. The status of the stock was assessed in the Workshop with respect to several candidate biological reference points, three F-based maximum sustainable yield (MSY) proxies, $F_{40\%}$, $F_{30\%}$, and $F_{0.1}$, and two F-based limit proxies, $F_{20\%}$ and F_{max}. The stock was assessed relative to the candidate reference points under the four combinations of assumptions as to recruitment and fishing mortality: low and high productivity (recruitment for the periods 1975-1989 and 1990-2000, respectively) and low and high fishing mortality (F=0.43 and 0.68, respectively). Under the high productivity hypothesis, the estimate of stock biomass in 2004 was 22% below the range of B_{msy} that corresponded to the F_{msy} proxies considered. Under the low productivity hypothesis, the estimate of stock biomass in 2004 was within that range.

17. If the assumed current fishing mortality rate continues, under the high fishing mortality hypothesis, the levels of stock biomass and SSB in 2010 were projected to decrease substantially from current levels. Under the low fishing mortality hypothesis, the stock biomass and SSB in 2010 were projected to either increase or decrease slightly from current levels (Table 2).

18. In their report to the 5th Interim (now "International") Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC), the participants in the 19th North Pacific Albacore Workshop concluded (ISC 2005:7):

> *A primary focus of the 2004 Workshop was assessing the albacore stock using the age-structured model, VPA-2BOX. Stock assessment results indicated that the point estimate of the 2004 stock biomass is roughly 429,000 t with 80% confidence limits ranging from roughly 329,000 to 563,000 t. The 2004 level of spawning stock biomass of 165,000 t (24% less than SSB_{MSY} relative to $F_{30\%}$) is largely reflective of a very strong 1999 year-class that eventually became a major contributor in 2004 as part of 'mature' (spawning) biomass. However, subsequent recruitment (R) declined to levels more typical of the extended historical time series, which translated to reduced levels of forecasted SSB, particularly, assuming 'high F' scenarios within the overall uncertainty analysis. This coupled with a current fishing mortality rate (F_{2003}) that is high relative to commonly used reference points, may be cause for concern regarding the stock status of North Pacific albacore. Future conditions are less well-known, but if F continues at assumed levels, it is unlikely that SSB will rebuild to SSB_{MSY} levels within 5-year time horizon.*

19. In February 2005 the fishing industries and governments of Japan and the US met to discuss their concerns over the status of North Pacific albacore. In a letter to the ISC the governments of Japan and the US stated (ISC 2005:24):

> *It is clear to both governments that, at a bare minimum, fishing mortality should not be increased and, perhaps, it should be decreased. Part of our concern stems from the lack of an agreed upon reference point upon which to determine the appropriate target for managing fishing mortality over the long term.*

20. The two governments requested the 5th ISC to provide advice in response to the question (ISC 2005:24):

> *What is the level (or dynamic range) of fishing mortality (F) that will maintain the stock within the range of spawning stock biomass (SSB) that we have experienced over the assessment period (1975-2003)?*

21. The 5th ISC, in March 2005, reviewed the 19th North Pacific Albacore Workshop results and the preliminary SSB simulation analysis provided in a proposal that sought to introduce "a straightforward, fishing mortality-based, reference point designed to ensure that SSB in future years remains within the range of the historically 'observed' SSB" (Conser et al. 2005:3). In response to the request from Japan and the US, the 5th ISC offered the following advice (ISC 2005:11):

> *Future SSB can be maintained at or above the minimum 'observed' SSB (43,000 t in 1977) with F's slightly higher than the current F range. However, the lowest 'observed' SSB estimates all occurred in late 1970's and may be the least reliable estimates of SSB. A more robust SSB threshold could be based on the lower 10th or 25th percentile of 'observed' SSB. If so done, current F should maintain SSB at or above the 10th percentile threshold but a modest reduction from current F may be needed to maintain SSB at or above the 25th percentile threshold.*

22. With respect to the status of North Pacific albacore, the 5th ISC concluded (ISC 2005:11):

> *Stock assessment results indicated that the current level of spawning stock biomass (i.e., SSB_{2004} = 165,000 t) is largely reflective of a very strong 1999 year-class that eventually became a major contributor in 2004 as part of 'mature' (spawning) biomass. However, the assessment also indicated that more recent recruitment declined to levels more typical of the extended historical time series. These lower recruitments result in reduced levels of forecasted SSB, particularly, when assuming high F scenarios within the overall uncertainty analysis. Lower recruitment coupled with a current fishing mortality rate (F_{2003}) that is high relative to commonly used reference points, may be a cause for concern regarding the future stock status of North Pacific albacore. Thus, the ISC noted the critical need to closely monitor the population over the coming years, and recommends that the Albacore Working Group carry out another stock assessment in 2006.*

23. The 5th ISC also acted to assume the North Pacific Albacore Workshop, which will continue to function as the Albacore Working Group in the ISC (ISC 2005).

Management initiatives in the Eastern Pacific Ocean

24. Under the 1949 Convention between the United States of America and the Republic of Costa Rica, tunas and tuna-like species in the EPO have been managed under the authority of the IATTC. The Antigua Convention (adopted in 2003 but not yet entered into force) seeks to strengthen the IATTC, and specifies that the Convention applies in the area that extends from the

coastline of the Americas west to 150° W longitude and between 50° N and 50° S latitude. Until its 73rd Meeting, in 2005, the IATTC had not adopted any resolutions or conservation or management measures that applied specifically to albacore.

25. In May 2005, the IATTC's Working Group on Stock Assessments reviewed the assessment results from the 19th North Pacific Albacore Workshop and reported the following (IATTC 2005a:2):

> *We consider the higher level for current fishing mortality (0.68) to be more likely* [than the alternative, lower, level that was also used in the assessment, 0.43], *based on the methods used to calculate the estimates. Furthermore, even the high estimate may be too low, given the retrospective bias shown by the model. Current fishing mortality of 0.68 implies an equilibrium spawning stock biomass at 17% of unfished levels. Projections assuming fishing mortality of 0.68, under low and high scenarios of future recruitment, suggest that the biomass may decline if current levels of fishing mortality persist.*

26. The IATTC staff conservation recommendations to the 73rd Meeting of the IATTC with respect to NP albacore were as follows (IATTC 2005b:2):

> *The stock assessment for northern albacore suggests a need for management measures to avoid increases in fishing mortality. Northern albacore migrate between the eastern and western north Pacific, and management will require complementary measures by the IATTC and the Western and Central Pacific Fisheries Commission.*
>
> *The estimated spawning stock biomass is at or below the AMSY* [average MSY] *level. The current fishing mortality may lead to further reductions in biomass, and a modest reduction in fishing mortality is thus necessary to ensure that the biomass is maintained above the lowest levels recently observed.*
>
> *Comprehensive management requires action by both Commissions, but pending that, the staff recommends that measures be taken to ensure that there is no increase in fishing effort in the eastern Pacific for this stock*

27. At its 73rd meeting, in June 2005, the IATTC resolved that the total level of fishing effort for North Pacific albacore in the eastern Pacific Ocean not be increased beyond then-current levels. The resolution also called for the IATTC contracting parties to call upon the members of the WCPFC to consider taking such action as may be necessary to ensure that fishing effort on the stock of albacore in the WCPFC area does not increase and, as necessary, is reduced to levels commensurate with the long-term sustainability of the resource (IATTC Resolution C-05-02; see Appendix).

References

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Table 1. North Pacific albacore catches (in metric tons) by fisheries, 1952-2003[1]. Blank indicates no effort. -- indicates data not available. 0 indicates less than 1 metric ton. Provisional estimates in ().

YEAR	CANADA[2]		JAPAN[3]						KOREA[4]		MEXICO[5]
	TROLL	PURSE SEINE	GILL NET	LONG LINE	POLE & LINE	PURSE SEINE	TROLL	UNSP. GEAR	GILL NET	LONG LINE	UNSP. GEAR
1952	71			26,687	41,787	154		237			
1953	5			27,777	32,921	38		132			
1954				20,958	28,069	23		38			
1955				16,277	24,236	8		136			
1956	17			14,341	42,810			57			
1957	8			21,053	49,500	83		151			
1958	74			18,432	22,175	8		124			
1959	212			15,802	14,252			67			
1960	5	136		17,369	25,156			76			
1961	4			17,437	18,639	7		268			0
1962	1			15,764	8,729	53		191			0
1963	5			13,464	26,420	59		218			0
1964	3			15,458	23,858	128		319			0
1965	15			13,701	41,491	11		121			0
1966	44			25,050	22,830	111		585			0
1967	161			28,869	30,481	89		520			
1968	1,028			23,961	16,597	267		1,109			
1969	1,365			18,006	31,912	521		935			0
1970	390			16,283	24,263	317		456			0
1971	1,746			11,524	52,957	902		308			0
1972	3,921		1	13,043	60,569	277		623			100
1973	1,400		39	16,795	68,767	1,353		495			0
1974	1,331		224	13,409	73,564	161		879			1
1975	111		166	10,318	52,152	159		228		2,463	1
1976	278		1,070	15,825	85,336	1,109		272		859	36
1977	53		688	15,696	31,934	669		355		792	0
1978	23		4,029	13,023	59,877	1,115		2,078		228	1
1979	521		2,856	14,215	44,662	125		1,126	0	259	1
1980	212		2,986	14,689	46,742	329		1,179	6	597	31
1981	200		10,348	17,922	27,426	252		663	16	459	8
1982	104		12,511	16,767	29,614	561		440	113	387	7
1983	225		6,852	15,097	21,098	350		118	233	454	33
1984	50		8,988	15,060	26,013	3,380		511	516	136	113
1985	56		11,204	14,351	20,714	1,533		305	576	291	49
1986	30		7,813	12,928	16,096	1,542		626	726	241	3
1987	104		6,698	14,702	19,082	1,205		155	817	549	7
1988	155		9,074	14,731	6,216	1,208		134	1,016	409	15
1989	140		7,437	13,104	8,629	2,521		393	1,023	150	2
1990	302		6,064	15,789	8,532	1,995		249	1,016	6	2
1991	139		3,401	17,046	7,103	2,652		392	852	3	2
1992	363		2,721	19,049	13,888	4,104		1,527	271	(15)	10
1993	494		287	29,966	12,797	2,889		867		(32)	11
1994	1,998		263	29,612	26,389	2,026		799		(45)	6
1995	1,720		282	29,080	20,981	1,177	856	81		440	5
1996	3,591		116	32,492	20,272	581	815	117		333	21
1997	2,433		359	38,988	32,238	1,068	1,585	123		319	53
1998	4,188		206	35,813	22,926	1,554	1,190	88		(288)	8
1999	2,641		289	33,365	50,369	6,872	891	127		107	23
2000	4,465		67	30,032	21,549	2,408	645	171		414	428
2001	4,985		117	28,809	29,430	974	416	96		82	18
2002	4,996		332	23,642	48,454	4,303	787	135		(146)	0
2003	(6,736)	(0)	(332)	(25,684)	(35,222)	(683)	(787)	(135)	(0)	(146)	(29)

[1] Data are from North Pacific Albacore Workshop meetings except as noted.

[2] 1960 Canadian purse seine catch from Shaver (1962). 1994 troll catch from Shaw, 2001.

[3] Japanese pole & line catches include fish caught by research vessels. Longline catches for 1952-1960 exclude minor amounts taken by vessels under 20 metric tons.

[4] Korean longline catches for 1975 to 1986 calculated from Y. Gong (pers. comm.) using the ratio of catches in numbers, from the North Pacific. Gillnet catches for 1979-1990 are calulated by multiplying the 1991 CPUE (# fish per pok) by effort (# poks) then multiplying by average weight (1991, 1992: 4.13 kg/fish). 1987 - 1991 catches provided by Inter-American Tropical Tuna Commission (M. Hinton, pers.com.). 1992 - 2002 catches provided by D. Moon (pers. com.)

[5] 1998-2002 Mexico catch from purse seine and bait boats. Catches provided by Inter-American Tropical Tuna Commission (M. Hinton, pers.com.)

Table 1. Continued

YEAR	TAIWAN		U.S.							OTHERS		GRAND TOTAL
	GILL NET	LONG LINE	POLE & LINE	GILL NET	LONG[6] LINE	PURSE SEINE	SPORT	TROLL[7]	UNSP. GEAR	LONG[8] LINE	TROLL[9]	
1952					46		1,373	23,843				94,198
1953					23		171	15,740				76,807
1954					13		147	12,246				61,494
1955					9		577	13,264				54,507
1956					6		482	18,751				76,464
1957					4		304	21,165				92,268
1958					7		48	14,855				55,723
1959					5		0	20,990	0			51,328
1960					4		557	20,100	0			63,403
1961			2,837		5		1,355	12,055	1			52,608
1962			1,085		7		1,681	19,752	1			47,264
1963			2,432		7		1,161	25,140	0			68,906
1964		26	3,411		4		824	18,388	0			62,419
1965		261	417		3		731	16,542	0			73,293
1966		271	1,600		8		588	15,333	1			66,421
1967		635	4,113		12		707	17,814	0			83,401
1968		698	4,906		11		951	20,434	0			69,962
1969		634	2,996		14		358	18,827	0			75,568
1970		1,516	4,416		9		822	21,032	0			69,504
1971		1,759	2,071		11		1,175	20,526	0			92,979
1972		3,091	3,750		8		637	23,600	0			109,621
1973		128	2,236		14		84	15,653	0			106,964
1974		570	4,777		9		94	20,178	0			115,197
1975		1,494	3,243		33		640	18,932	10			89,950
1976		1,251	2,700		23		713	15,905	4			125,381
1977		873	1,497		37		537	9,969	0			63,100
1978		284	950		54		810	16,613	15			99,100
1979		187	303		--		74	6,781	0			71,110
1980	--	318	382		--		168	7,556	0			75,195
1981	--	339	748		25		195	12,637	0			71,238
1982	--	559	425		105		257	6,609	21			68,481
1983	--	520	607		6		87	9,359	0			55,039
1984	--	471	1,030		2	3,728	1,427	9,304	0			70,729
1985	--	109	1,498	2	0		1,176	6,415	0			58,279
1986	--	--	432	3			196	4,708	0			45,344
1987	2,514	--	158	5	150		74	2,766	0			48,986
1988	7,389	38	598	15	308		64	4,212	10			45,592
1989	8,350	544	54	4	249		160	1,860	23			44,644
1990	16,701	287	115	29	177	71	24	2,603	4			53,966
1991	3,398	353	0	17	313	0	6	1,845	71			37,594
1992	7,866	300	0	0	337	0	2	4,572	72			(55,096)
1993		494		0	440		25	6,254	0			(54,556)
1994		586	0	38	546		106	10,978	213		158	(73,763)
1995		2,504	80	52	883		102	8,045	1		137	66,426
1996		3,594	24	83	1,187	11	88	16,938	0	1,735	505	82,503
1997		4,199	73	60	1,652	2	1,018	14,252	1	2,824	404	101,651
1998		4,797	79	80	1,120	33	1,208	14,410	2	5,871	286	(94,147)
1999		4,768	60	149	1,540	48	3,621	10,060	1	6,307	261	121,499
2000		5,866	69	55	940	4	1,798	9,645	3	3,654	490	82,702
2001		4,641	139	94	1,295	51	1,635	11,210	0	1,471	127	85,591
2002		6,545	378	30	525	3	(2,357)	10,387		(700)	(127)	(103,848)
2003		(5,973)	(59)	(15)	(521)	(44)	(2,212)	(17,237)	(2)	(2,400)	(127)	(98,345)

[6] Hawaii catches for 1987 through 1999 are from Ito and Machado, 2001. Hawaii catches for 2000 through 2003 are from Ito (pers. Comm.).

[7] U.S. troll catches for 1952-1960 include fish caught by pole & line vessels. U.S. troll catches for 1984-1988 include gillnet catches.

[8] Other longline catches from vessels flying flags of convenience being called back to Taiwan.

2002 and 2003 values based on SPC logbook landings (from the north Pacific landed in southern ports) assuming 50

[9] Other troll catches from vessels registered in Belize, Cook Islands, Tonga, and Ecuador

Table 2. Annual catch (C), stock biomass (ages >1, on January 1) (B), and spawning stock biomass (at mid-year) (SSB) for North Pacific albacore estimated for 2004 under "Model Scenario 1" from the 19th North Pacific Albacore Workshop and projected for 2010 under four sets of assumptions regarding recruitment (R) and fishing mortality rate (F). "High productivity" was defined as the mean R for the period 1990-2000, or 31 million recruits; "low productivity" was defined as the mean R for the period 1975-1989, or 22.5 million recruits. Under "low F" the fishing mortality rate was assumed to be 0.43; under "high F" it was assumed to be 0.68. Table adapted from Stocker (2005).

	C (1,000 mt/year)		**B (1,000 mt)**		**SSB (1,000 mt)**	
	2004	**2010**	**2004**	**2010**	**2004**	**2010**
High prod., low F	98	92	438	534	165	190
High prod., high F		104		432		117
Low prod., low F		76		419		162
Low prod., high F		83		332		98

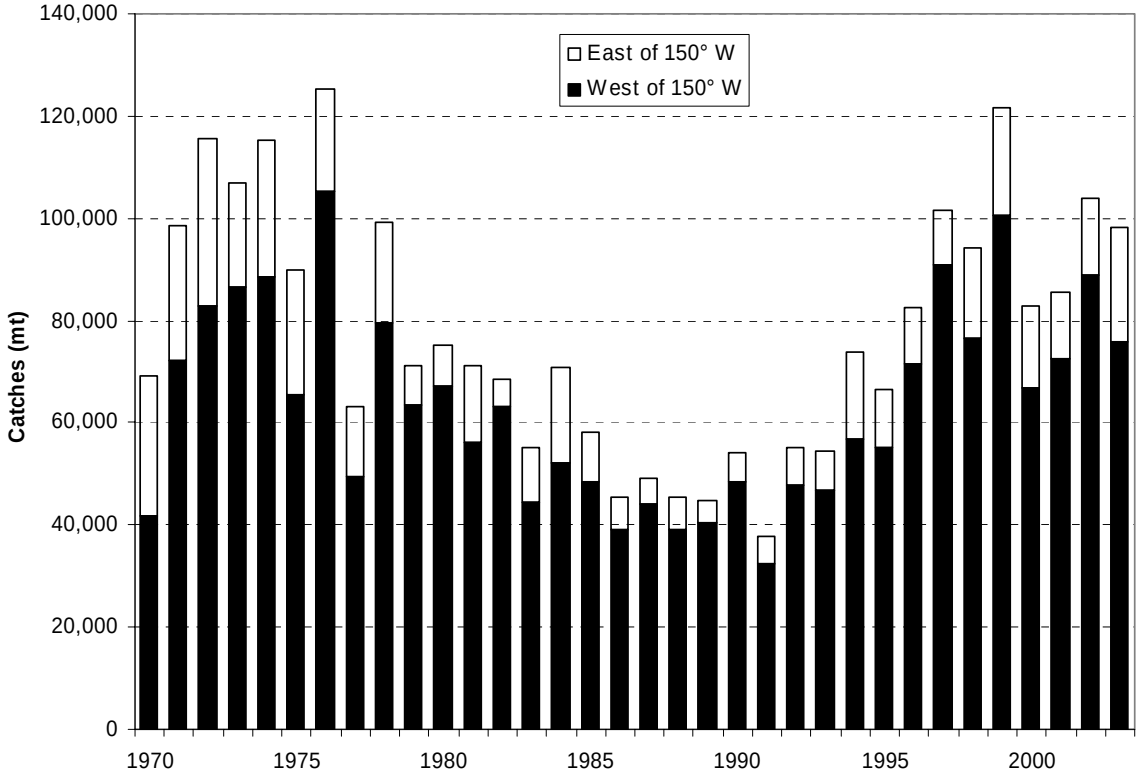

Figure 1. Estimated annual catches of North Pacific albacore taken in the eastern (east of 150° W longitude) and western (west of 150° W longitude) regions of the North Pacific Ocean, 1970-2003, based on logbook information.

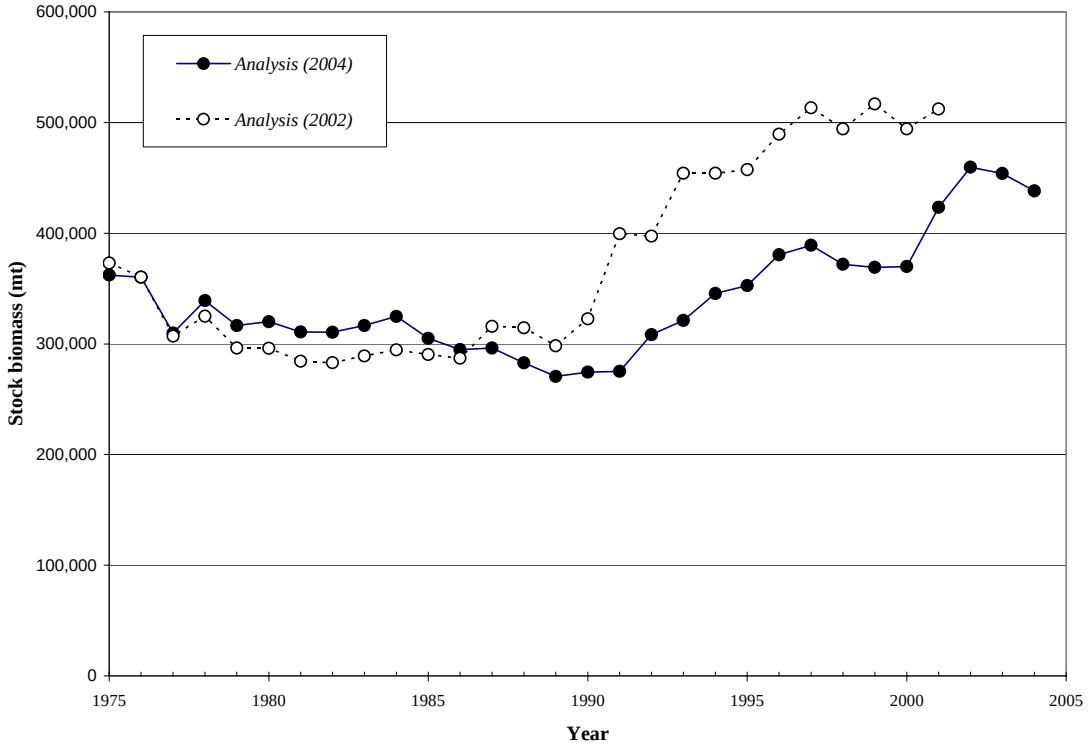

Figure 2. Estimated total stock biomass (mt) time series (1975-2004) for North Pacific albacore generated from "Model Scenario 1" from the 19th North Pacific Albacore Workshop (Analysis 2004). Final estimated stock biomass time series from the previous North Pacific Albacore Workshop, in 2002, is also presented (Analysis 2002). Time series are based on January 1 estimates. From: Stocker (2005).

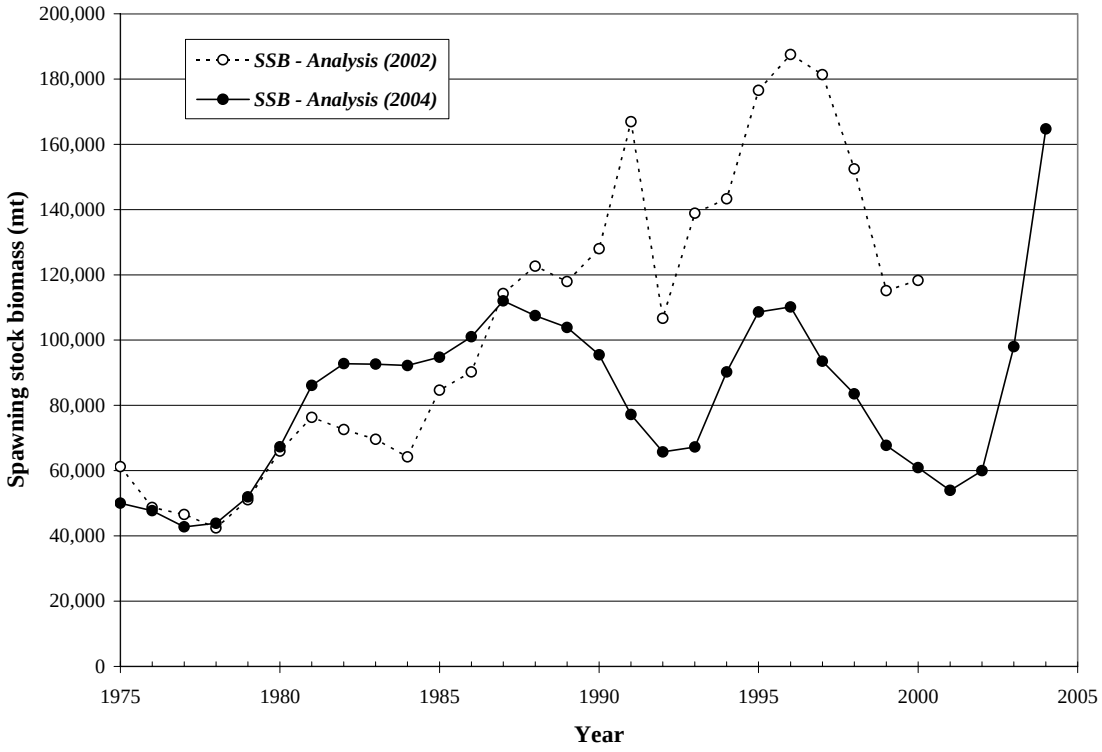

Figure 3. Total spawning stock biomass (mt) time series (1975-2004) for North Pacific albacore generated from "Model Scenario 1" from the 19th North Pacific Albacore Workshop (Analysis 2004). Final estimated spawning stock biomass time series from the previous North Pacific Albacore Workshop, in 2002, is also presented (Analysis 2002). Time series are based on January 1 estimates. From: Stocker (2005).

Appendix

IATTC Resolution on North Pacific Albacore

INTER-AMERICAN TROPICAL TUNA COMMISSION
COMISIÓN INTERAMERICANA DEL ATÚN TROPICAL

73RD MEETING

LANZAROTE (SPAIN)
20-24 JUNE 2005

RESOLUTION C-05-02

RESOLUTION ON NORTHERN ALBACORE

The Inter-American Tropical Tuna Commission (IATTC), having responsibility for the scientific study of tunas and tuna-like fishes of the eastern Pacific Ocean, and for the formulation of recommendations to the Contracting Parties, cooperating non-Parties, fishing entities and regional economic integration organizations (CPCs) with regard to the conservation and management of these resources,

Observing that the best scientific evidence on North Pacific albacore from the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean indicates that the species is either fully exploited, or may be experiencing fishing mortality above levels that are sustainable in the long term, and

Taking note that the IATTC staff has said that the stock assessment for Northern Pacific albacore suggests a need for management measures to avoid increases in fishing mortality, and

Recognizing the importance of working with the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC), as provided for in Article XXIV of the Antigua Convention, in order to manage North Pacific albacore throughout its migratory range, and

Recalling further Article 22(4) of the WCPFC Convention that provides for cooperation with the IATTC regarding fish stocks that occur in the convention areas of both organizations;

The IATTC therefore resolves that:

1. The total level of fishing effort for North Pacific albacore in the Eastern Pacific Ocean not be increased beyond current levels.
2. The CPCs shall take necessary measures to ensure that the level of fishing effort by their vessels fishing for North Pacific albacore is not increased;
3. All CPCs shall report all catches of North Pacific albacore by gear type to the IATTC every six months.
4. The Director shall, in coordination with other scientific bodies conducting scientific reviews of this stock, monitor the status of North Pacific albacore and report on the status of the stock at each annual meeting;
5. The CPCs shall consider future actions with respect to North Pacific albacore as may be warranted based on the results of such future analysis.

6. The CPCs call upon the members of the WCPFC to consider, at the earliest opportunity, taking such action as may be necessary to ensure the effective conservation and management of North Pacific albacore throughout its range including, in particular, measures to ensure that fishing effort on the stock in the WCPFC area does not increase and, as necessary, measures to reduce fishing effort to levels commensurate with the long-term sustainability of the resource.

7. The Commission through the Director shall communicate with the WCPFC and request them to take similar measures.

8. The provisions of paragraph 2 shall not prejudice the rights and obligations under international law of those coastal CPCs in the EPO whose current fishing activity for northern Pacific albacore is limited, but that have a real interest in, and history of, fishing for the species, that may wish to develop their own fisheries for northern Pacific albacore in the future.