

Recent status of the Japanese albacore fisheries in the SPAR area

Hiroaki Matsunaga and Yuji Uozumi

National Research Institute of Far Seas Fisheries
Fisheries Agency of Japan, 5-7-1 Orido, Shimizu, 424 Japan

The Japanese albacore fishery in South Pacific Ocean was first developed by longline fishery in the first half of the 1950's. Catches of albacore were maximum in the 1960's when longline fishery targeted mainly on albacore and yellowfin. With the changing of the target species to southern bluefin and bigeye tunas, however the albacore catch has decreased year by year. The driftnet fishery which developed rapidly in the 1980's stopped its operation in the South Pacific since 1990 after the UN resolution. These facts were reviewed by Nishikawa et. al. (1989), Watanabe and Nishikawa (1990) and Uozumi (1993). Especially Uozumi (1993) already summarized the albacore fishery in the SPAR area until 1991, so in this report the description is focused on for 1992-94.

The extent of SPAR area used in this report is defined as an area delimited by 0-50° S and 140° E-70° W, and is divided into six sub-areas on the basis of the geographical distribution of the effort and albacore catch of the Japanese longline fishery in order to describe the status of the fishery in detail (Fig. 1).

1. Longline fishery

The Japanese albacore catch in tons by fisheries in the SPAR area are shown in Table 1. The catch in weight were estimated by the catch in number and mean weight. From the late 1950's till the middle 1960's when albacore was one of the major target species, the catch were about 20,000-30,000 tons. But in the 1970's when albacore became a by-catch species, the catch were only about 2,000 tons. After that with the increase of the effort, the catch recovered gradually, and then relatively stable around 5,000 tons since 1981 till 1992. However in 1993 and 94, the catch were estimated to be about 8,000 tons, which were more than twice the catch in 1992.

The historical change of albacore catch and effort by sub-area in 1980-94 are presented in Fig.2. The total effort decreased little by little from 1988 to 1992, and recovered in 1993 and 94. The increase of effort

was especially remarkable in sub-area 1. On the contrary, the effort in sub-area 4 continued to decrease. The catch of albacore in number in sub-area 1, 2, 3 and 5 occupied the major part of the total catch in 1993 and 94, while those numbers in sub-area 4, 6 became much minor. The increase of catch in sub-area 1 was remarkable as that of effort, which contributed to the increase in total catch. In sub-area 5, the catch was not many compared to the large quantity of effort. Conversely in sub-area 2, the catch was larger in spite of the little quantity of effort extended in that area.

The effort distribution in 1992-94 are shown in Fig.3. The effort has concentrated in the north-eastern area (sub-area 5), off the east coast of Australia (sub-area 2,3), north-western area (sub-area 1). In the north-western area, the effort was not large in 1992 while it increased considerably in 1993-94. Comparing the pattern of effort distribution with that during 1975-89 (Uozumi 1993), decrease around New Zealand and increase around Solomon Islands were noted.

The catch distribution of albacore in 1992-94 is shown in Fig.4. The catch in the area off south-east coast of Australia and in the Coral Sea - Solomon Islands area were noticeable, and the latter indicated the same trend as the effort.

2. Surface fisheries

Pole and line fishery has been very minor and made sporadic operations in the south Pacific. This fishery targets mainly on skipjack tuna, and there were some albacore catch in the Tasman Sea (sub-area 3). Driftnet fishery no longer exists since its closure in 1990.

Reference

- Nishikawa, Y., Y. Watanabe and H. Nakano 1989: A review of Japanese albacore fisheries in the Pacific and Indian Oceans. 2th SPAR meeting, 13pp.
- Watanabe, Y. and Y. Nishikawa 1990: A review of Japanese albacore fisheries in the South Pacific. 3th SPAR meeting, 5pp.
- Uozumi, Y. 1993; Recent status of the Japanese albacore fisheries in the SPAR area. 5th SPAR meeting, 10pp.

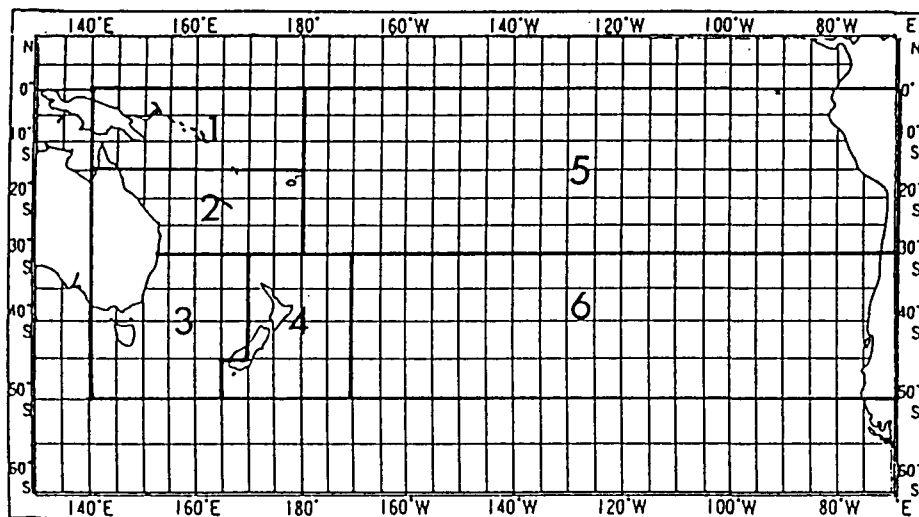


Fig. 1. Sub-area used in Fig. 2.

Table 1. Catches of albacore by Japanese fisheries in SPAR area.

Year	Longline (ton)	Pole & Line (ton)	Driftnet* (ton)	total (ton)
1952	154			154
1953	803			803
1954	9,578			9,578
1955	8,625			8,625
1956	7,281			7,281
1957	8,757			8,757
1958	18,490			18,490
1959	17,385			17,385
1960	21,638		45	21,683
1961	23,412			23,412
1962	34,620			34,620
1963	29,120		16	29,136
1964	19,390			19,390
1965	17,793			17,793
1966	21,627			21,627
1967	15,104			15,104
1968	6,659			6,659
1969	4,894			4,894
1970	5,297			5,297
1971	3,472			3,472
1972	3,027			3,027
1973	2,550			2,550
1974	1,868			1,868
1975	1,333			1,333
1976	2,054			2,054
1977	2,328			2,328
1978	2,845			2,845
1979	2,274			2,274
1980	2,216		19	2,235
1981	4,203		8	4,211
1982	4,899		1	4,932
1983	5,723		2	5,732
1984	3,804			3,804
1985	3,868			3,868
1986	4,426			4,426
1987	4,490			4,490
1988	7,469			7,469
1989	5,365			5,365
1990	6,428			6,428
1991	4,401		49	4,450
1992	3,708		5	3,713
1993	8,255			8,255
1994	8,101			8,101

* For the driftnet fishery, Year denotes the fishing year from August to July

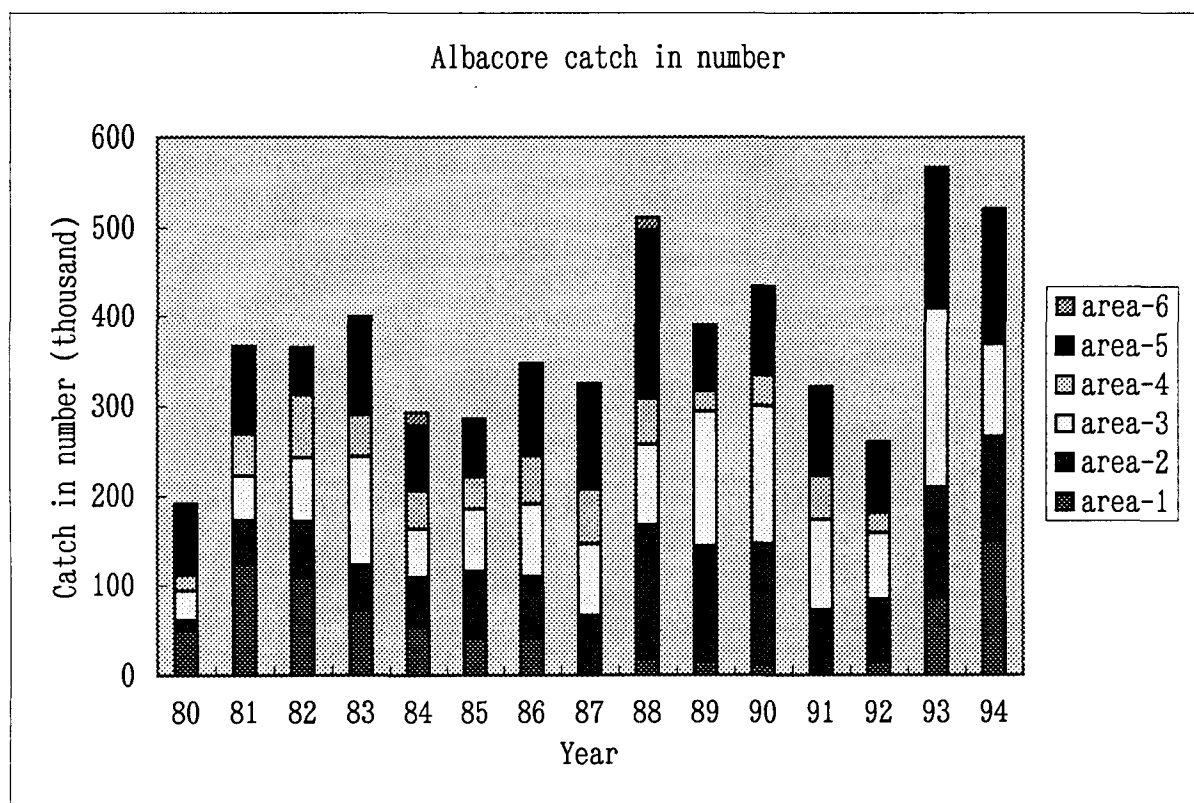
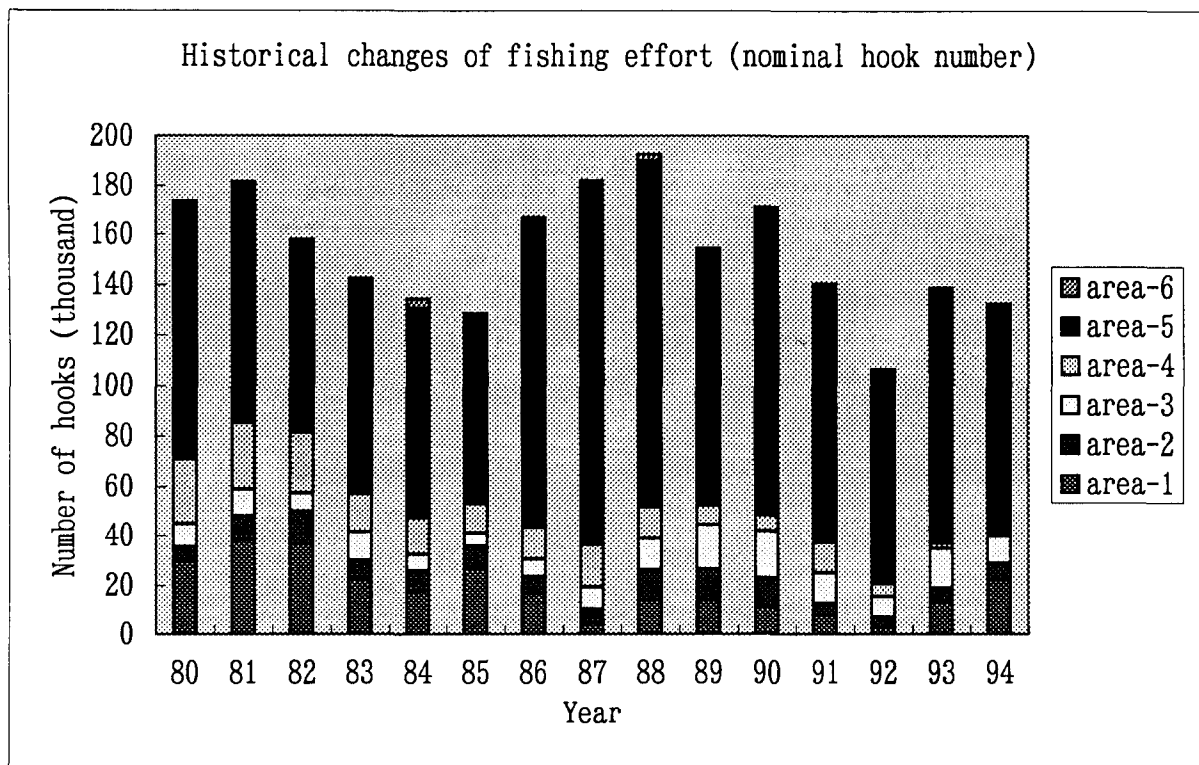


Fig. 2 Historical changes in catch and effort of Japanese longline fishery since 1980.

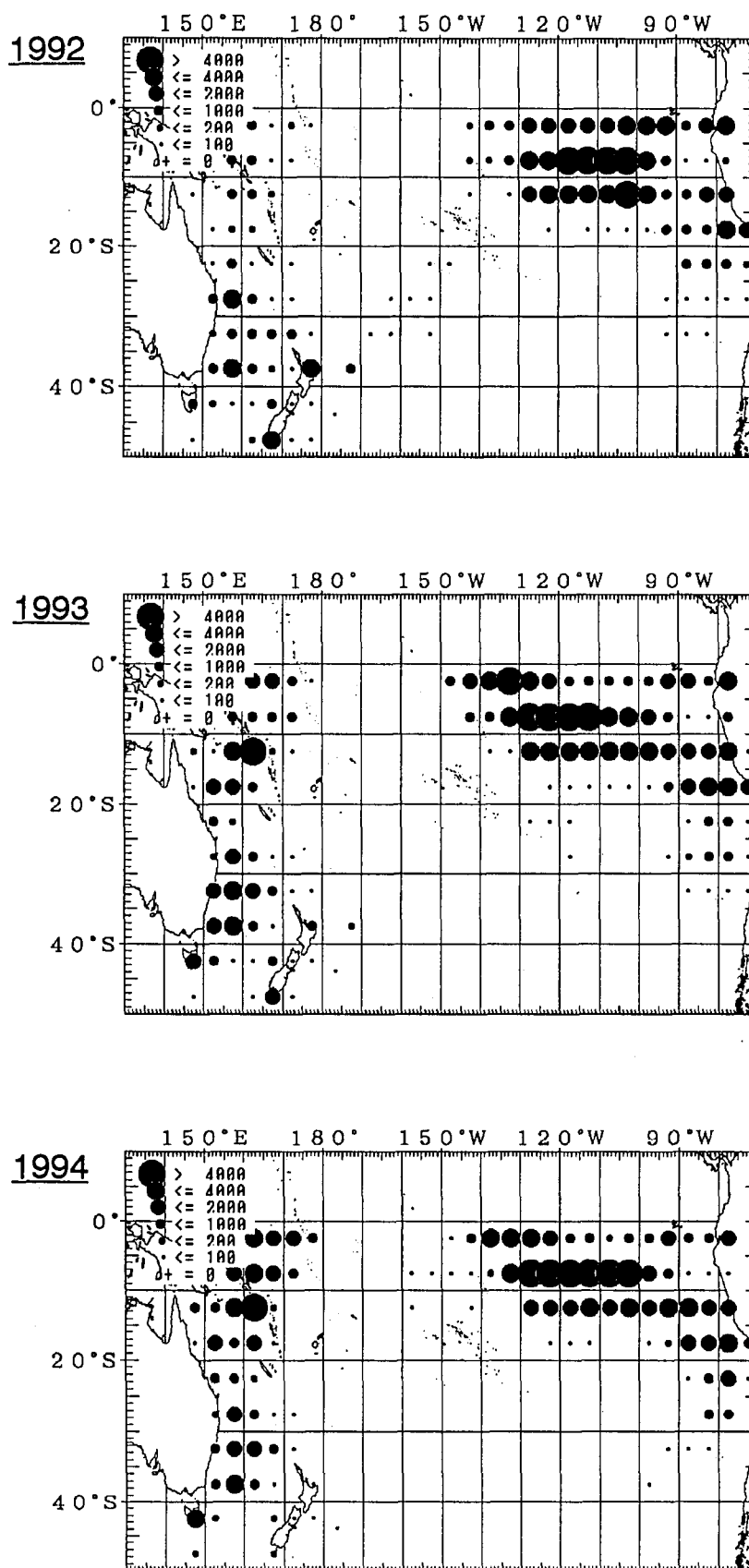


Fig. 3. Geographical distributions of fishing effort of Japanese longline fishery in 1992-94. Keys indicate the number of hooks (thousand) in each year.

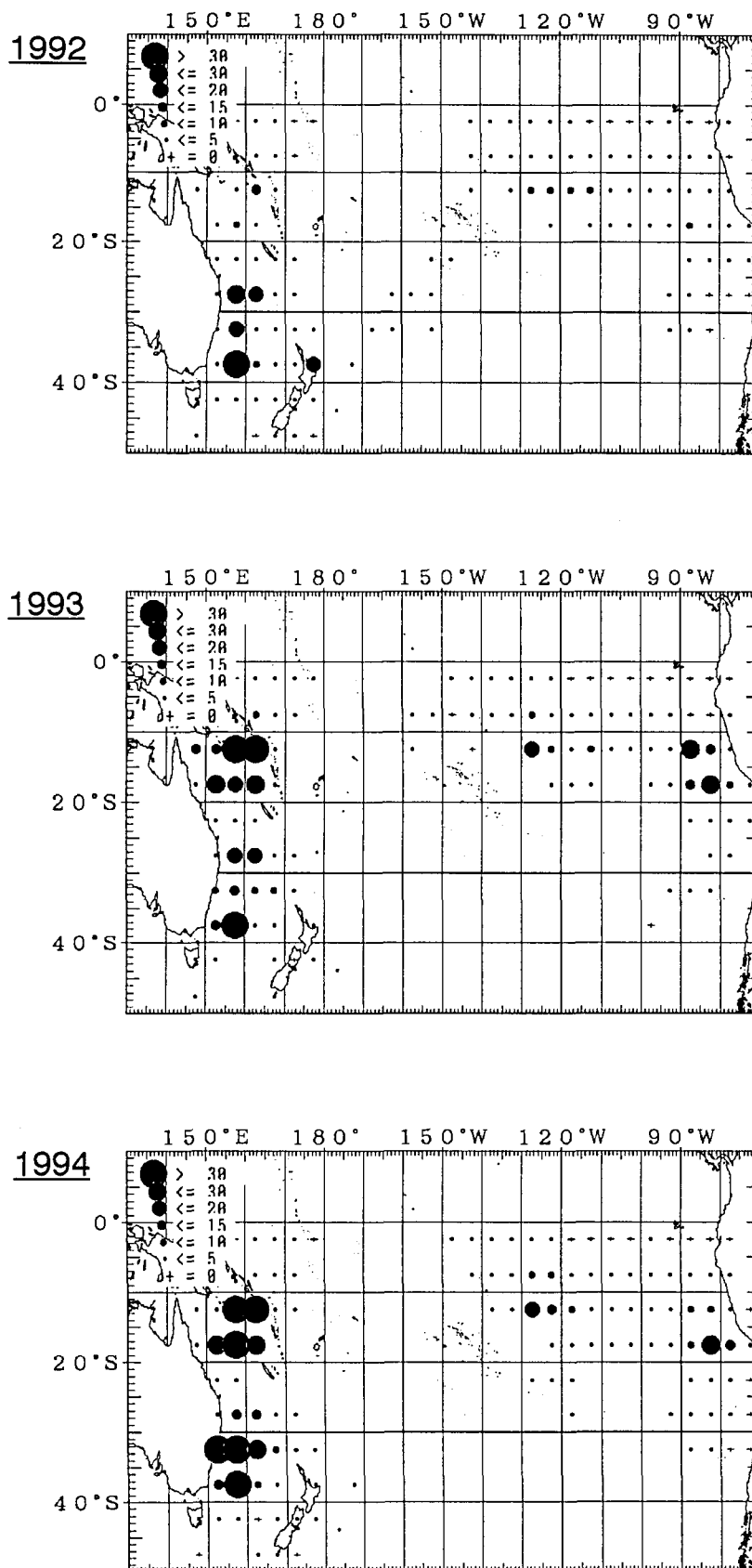


Fig. 4. Geographical distributions of albacore catch by Japanese longline fishery in 1992-94. Keys indicate the catch in number (thousand) in each year.