RECENT STATUS OF THE JAPANESE LONGLINE FISHERY IN THE ATLANTIC OCEAN LAYING STRESS ON SWORDFISH CATCHES

SCRS/1996/147

Col.Vol.Sci.Pap. ICCAT, 46 (3) : 373-375 (1997)

Uozumi[1], *Y.*

SUMMARY

The recent status of the Japanese longline fishery in the 1990s was reviewed briefly. The annual fishing effort of the Japanese longline fishery increased to around 90 million hooks in the early 1990s from about 60 million hooks in the 1980s. Fishing effort concentrated mainly in the southeast Atlantic in the 1990s, where the most important bigeye fishing ground of the Japanese longline fishery is located. The Japanese catch of swordfish has occupied 5-6% of the total swordfish catch in the north and 20-40% in the south Atlantic. The catch fluctuated at around 1,000 metric tons in the north and at around 3,000 metric tons in the south. For the Japanese longline fishery, the percentage of swordfish in the weight of the entire catch in the north Atlantic has been less than 5% in the 1990s and the percentage of fish smaller than 25 kg in the total number of swordfish catch in the entire Atlantic has been lower than 3% in the 1990s.

RÉSUMÉ

L'état récent de la pêcherie palangrière japonaise au cours des années 1990 avait fait l'objet d'un bref examen. L'effort de pêche annuel de la pêcherie palangrière japonaise s'est accru jusqu'à environ 90 millions d'hameçons au début des années 1990 alors qu'il était d'environ 60 millions dans les années 1980. L'effort de pêche a été principalement concentré dans l'Atlantique Sud-Est dans les années 1990, où se trouve le lieu de pêche de thon obèse le plus important pour la pêcherie palangrière japonaise. La prise japonaise d'espadon a représenté 5-6 % de la capture totale d'espadon dans l'Atlantique Nord, et 20-40 % dans l'Atlantique Sud. La prise a fluctué à environ 1.000 TM dans le Nord, et environ 3.000 TM dans le Sud. Pour la pêcherie palangrière japonaise, le pourcentage d'espadon du poids de la prise totale dans l'Atlantique Nord a été dans les années 1990 inférieur a 5 %, et le pourcentage de poisson de moins de 25 kg du nombre total d'espadon pris dans l'Atlantique entier a été inférieur à 3 % au cours desdites années.

RESUMEN

Se realizó un breve examen de la situación de la pesquería de palangre japonesa durante los años 90. El esfuerzo de pesca anual de esta pesquería aumentó desde aproximadamente 60 millones de anzuelos a principios de los años 80, hasta aproximadamente 90 millones, a principios de los años 90. El esfuerzo de pesca se ha concentrado sobre todo en el Atlántico sudeste durante la década de los 90, donde la pesquería de palangre japonesa tiene su principal caladero de patudo. La captura japonesa de pez espada ha constituido el 5-6% de la captura total de esta especie en el norte del Atlántico y el 20-40% en el sur de dicho océano. La captura fluctuó alrededor de las 1.000 toneladas métricas en el norte y alrededor de 3.000 toneladas métricas en el sur. En la pesquería de palangre japonesa, el porcentaje de pez espada en el peso de la captura total en el Atlántico norte ha sido inferior al 5% en los años 90, y el porcentaje de peces de menos de 25 kg en el total de la captura de pez espada en todo el Atlántico ha sido inferior al 3% en esos mismos años.

Introduction

The Japanese longline fishery commenced in 1956 in the Atlantic Ocean at the western part of equatorial waters. Then the fishing ground had expanded into the whole tropical area in the mid-1960s. In the 1970s the Japanese longline fishery changed the strategy on target species from albacore to bigeye, bluefin, and southern bluefin tunas with the development of super cold freezer. As a consequence of the change of the targeting strategy, the fishing ground and gear configuration had been changed very quickly in the 1970s. The effort has been concentrated in some restricted area such as off Nova Scotia, off Morocco/Sahara, off Angora, and off South Africa. In the 1980s the distribution pattern of fishing effort has been stable in these four major fishing grounds. In this paper, the resent status of the Japanese longline fishery in the 1990s is described. The data in 1995 have been still preliminary one.

1) Fishing effort

Total fishing effort in terms of number of hooks used for the Japanese longline fishery in the Atlantic Ocean fluctuated at around 60 millions hooks in the 1980s (Fig. 1). It increased to around 90 millions hooks in the beginning of the 1990s and fluctuated at this level until 1994, except for higher number of hooks in 1995. Before the mid-1980s, the amount of fishing efforts in both north and south Atlantic

[1] National Research Institute of Far Seas Fisheries, 7-1 Orido, 5-chome, Shimizu-shi, 424 Japan.

were similar to each other, but the effort in the south Atlantic has become larger than that in the north Atlantic since the mid-1980s. This tendency became clearer in the 1990s. The fishing effort in the east Atlantic Ocean has dominated than that in the west Atlantic since the early 1970s and this trend has become clearer in the 1990s. In the 1990s, the effort in the west Atlantic has continued to decrease gradually, but it has increased in the east Atlantic.

Fig. 2 shows the geographical distribution of fishing effort from 1991 to 1994. The general distribution patter of fishing effort is similar to that in the 1980s. The fishing effort has been concentrated in some restricted areas. One is the waters from off east coast of Canada to off the Strait of Gibraltar where is the fishing ground for bluefin tuna, another is the waters off the west coast of Africa ranged between 20° N and 20° S where is the fishing ground for bigeye tuna, and the waters off South Africa where is the one for southern bluefin tuna. This distribution pattern has been stable for the four years shown in Fig. 2.

2) Catch and CPUE of swordfish

The Japanese catch of swordfish in the north Atlantic has been very stable at around 1,000 tons in the 1990s and occupied only 5-7% of the total swordfish catch (Table 1). The catch in the south Atlantic fluctuated at 2,500-6,000 metric tons in the 1990s and occupied 22-38% of the total south Atlantic catch. The percentage of the Japanese catch became smaller in the 1990s than 1980s, because the catch of the other countries increased significantly in the 1990s.

The geographical distributions of catch and CPUE are shown in Fig. 3. Although the catch has been obtained from whole Atlantic Ocean where the operations occurred, large portion of the catch was obtained from the tropical waters in the south Atlantic. There is no big difference in CPUE among the areas observed, but the some relatively higher CPUEs were obtained from the tropical area and also from the coastal waters off South America.

3) Effect of current regulation

ICCAT recommendations for swordfish took effect in July 1991. They include specific measures, namely to reduce F of fish larger than 25 kg in the north Atlantic, to reduce catch of smaller fish than 25 kg in the entire Atlantic and to limit incidental catch to no more than 10% of the total weight in the north Atlantic for the countries which catch swordfish as incidental one. In this section, the situation of the Japanese swordfish catch is reviewed in comparison with these regulation.

Fig. 4 shows the historical changes on the percentage of swordfish in the total weight of the catch for the Japanese longline fishery in the north Atlantic. The percentage has been very stable at around 5% in the 1990s. Fig. 5 shows the historical changes on the percentage of smaller fish than 25 kg in the total number of swordfish catch in the entire Atlantic. The percentage has been stable at the very lower level (1%) in the 1990s.

Table 1. Catch in metric tons of swordfish in the Atlantic Ocean. % denotes the percentage of the Japanese catch in the total. The Japanese catch in 1995 is preliminary.

	North			South		
	ll Countries	Japan	%	ll Countries	Japan	%
1965	8,652	1,025	11.8	2,578	1,845	71.6
1966	9,338	658	7.0	1,930	1,300	67.4
1967	9,084	280	3.1	1,539	474	30.8
1968	9,137	262	2.9	2,335	859	36.8
1969	9,138	130	1.4	4,290	2,143	50.0
1970	9,425	298	3.2	5,130	2,877	56.1
1971	5,198	914	17.6	1,986	662	33.3
1972	4,727	784	16.6	2,394	1,023	42.7
1973	6,001	518	8.6	2,823	480	17.0
1974	6,301	1,178	18.7	2,568	191	7.4
1975	8,776	2,462	28.1	2,846	805	28.3
1976	6,587	1,149	17.4	2,640	105	4.0
1977	6,352	793	12.5	2,699	514	19.0
1978	11,797	946	8.0	2,622	503	19.2
1979	11,859	542	4.6	2,996	782	26.1
1980	13,527	1,167	8.6	5,161	2,029	39.3
1981	11,138	1,315	11.8	3,853	2,170	56.3
1982	13,155	1,755	13.3	6,327	3,287	52.0
1983	14,464	537	3.7	5,342	1,908	35.7
1984	12,753	665	5.2	9,121	4,395	48.2
1985	14,348	921	6.4	9,528	4,613	48.4
1986	18,450	807	4.4	5,853	2,913	49.8
1987	20,224	413	2.0	5,218	1,877	36.0
1988	19,614	621	3.2	11,740	3,426	29.2
1989	17,298	1,572	9.1	16,610	4,019	24.2
1990	15,871	1,051	6.6	16,357	6,254	38.2
1991	15,018	992	6.6	12,535	3,696	29.5
1992	15,370	1,064	6.9	12,210	2,475	20.3
1993	16,982	917	5.4	13,413	5,184	38.6
1994	15,642	932	5.8	17,174	4,699	22.0
1995	-	1,072	-	-	3,725	-

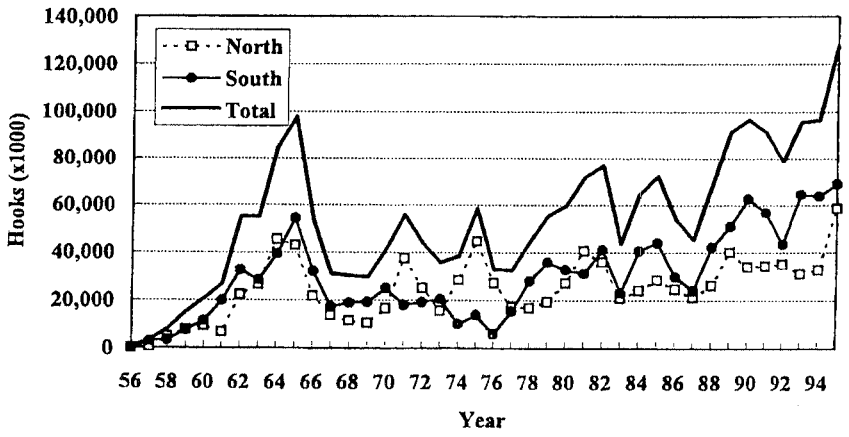

Fig 1. Historical changes of the Japanese longline effort in the Atlantic from 1956 to 1995. The values in 1995 are preliminary.

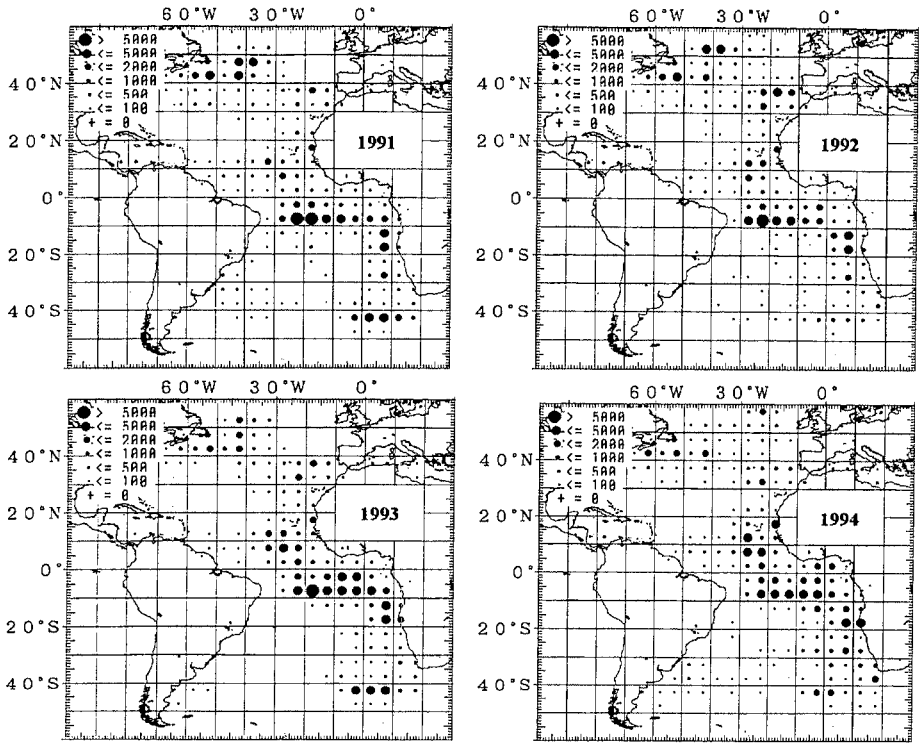

Fig. 2. Distribution of fishing effort (number of hooks in thousand) for the Japanese longline fishery in the Atlantic Ocean from 1991 to 1994.

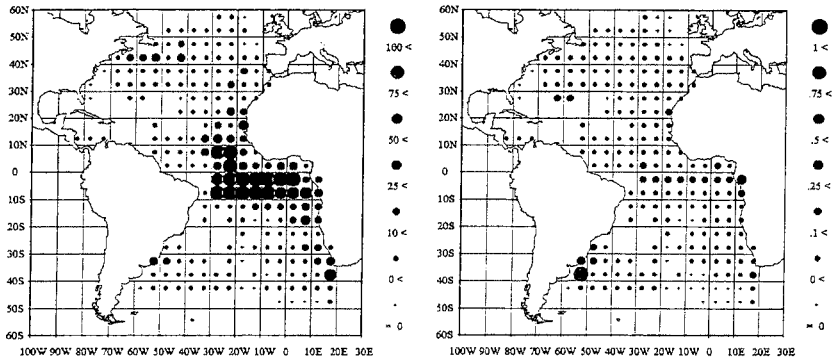

Fig. 3. Distribution of annual catch of swordfish in tons (left) and CPUE in ton per 1000 hooks (right) in the 1990s

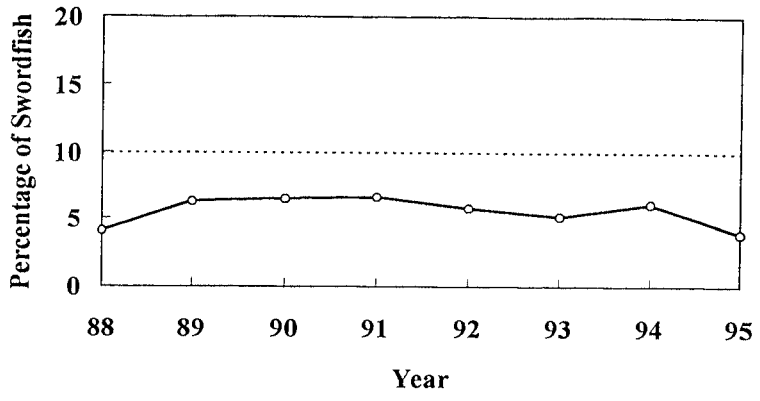

Fig. 4. Historical change of percentage of swordfish in the total weight of entire catch in the North Atlantic.

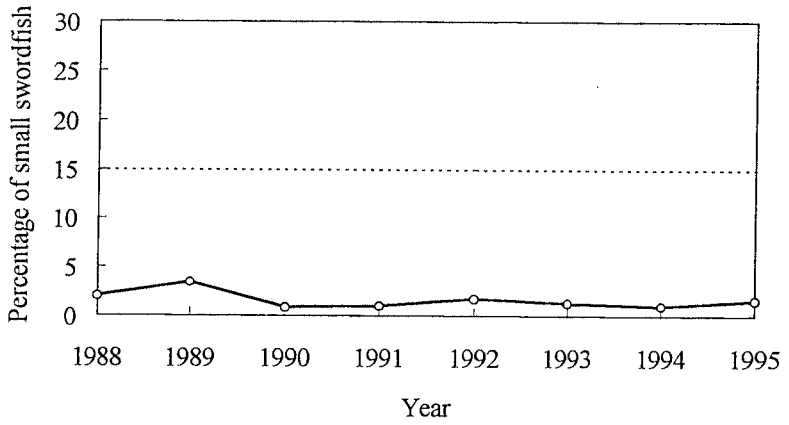

Fig. 5 Percentage of smaller swordfish than 25 kg in the total number of swordfish in the entire Atlantic.