

STATUS OF TAIWANESE LONGLINE FISHERIES IN THE ATLANTIC, 1991*Hsu, C. C., H. C. Liu**Institute of Oceanography, National Taiwan University, Taipei, Taiwan, Rep. of China***SUMMARY**

The Taiwanese tuna fishery which operated in the Atlantic uses only longline gear. The number of vessels in 1991 was 135, which was slightly less than in 1990 (145). Most of these vessels apparently operated in the south Atlantic. There has been no significant change in fishery pattern since 1989 and no new gears were introduced in 1991. Total catches decreased from 34,300 MT in 1990 to 30,619 MT in 1991. This decrease corresponds mostly to the north Atlantic (from 7,256 MT in 1990 to 3,531 MT in 1991).

For the north Atlantic, 1991 catches were estimated at about 3,531 MT, which resulted in a significant decrease of about 51 percent from 1990 catches. This decline corresponded to catches of species targeted by deep longline. The albacore catch (1,574 MT) was similar to that of 1990 (1,512 MT). The bigeye catch decreased from 2,803 MT in 1990 to 440 MT; yellowfin catches decreased from 2,117 MT in 1990 to 689 MT in 1991. In the south Atlantic, 1991 catches were estimated to be about 27,088 MT (22,129 MT in 1990), which were similar to those in 1990 (27,048 MT). Albacore was the predominant species (20,345 MT), and represented about 75 percent of the total. The bigeye catch decreased sharply from 2,096 MT in 1990 to 301 MT, and yellowfin dropped from 998 MT in 1990 to 541 MT in 1991. Catches of billfishes and other species increased to sustain the total in the south Atlantic at the 1990 level.

RESUME

La pêcherie thonière taiwanaise qui pêche dans l'Atlantique utilise uniquement la palangre. En 1991, le nombre de bateaux s'est élevé à 135, chiffre légèrement inférieur par rapport à 1990 (145). La plupart de ces bateaux ont apparemment pêché dans l'Atlantique sud. Il ne s'est pas produit de changements importants dans le schéma de pêche depuis 1989, et en 1991 aucun nouvel engin n'a été introduit.

En 1991, la prise globale a légèrement baissé, passant de 34.300 TM en 1990 à 30.619 TM. Ce déclin correspond surtout à l'Atlantique nord (7.256 TM en 1990 à 3.531 TM en 1991).

Dans l'Atlantique nord, les prises de 1991 ont été estimées à environ 3.531 TM, ce qui a entraîné une baisse importante d'environ 51% par rapport aux prises de 1990. Et le déclin correspond aux prises de espèces visées par la palangre profonde. La prise de germon (1.574 TM) était semblable à celle de 1990 (1.512 TM). La prise de thon obèse a baissé de 2.803 TM en 1990 à 440 TM et celle d'albacore, de 2.117 TM en 1990 à 689

TM. Dans l'Atlantique sud, les prises de 1991 ont été estimées à environ 27.988 TM (22.129 TM en 1990), semblables à celles de 1990 (27.048 TM). Le germon était l'espèce principale (20.345 TM) et représentait environ 75% du total. Les prises de thon obèse ont brusquement chuté, passant de 2.096 TM en 1990 à 301 TM, et celles d'albacore, de 998 TM en 1990 à 541 TM. Les prises d'istiophoridés et d'autres espèces se sont accrues pour équilibrer le total de l'Atlantique sud au niveau de 1990.

RESUMEN

La flota atunera de Taiwan que operaba en el Atlántico sólo utiliza el arte de palangre. El número de barcos en 1991 era de 135, una cifra ligeramente inferior a la de 1990 (145). Aparentemente, la mayor parte de estos barcos faenaba en el Atlántico sur. No se han producido cambios significativos en el esquema de la pesquería desde 1989 y no se introdujo el uso de nuevos artes en 1991.

En 1991, las capturas totales descendieron ligeramente, de 34.300 t en 1990 a 30.619 t. Este descenso corresponde en su mayor parte al Atlántico norte (7.256 t en 1990 a 3.531 t en 1991).

En el Atlántico norte, las capturas de 1991 se estimaron en unas 3.531 t, lo que significó un descenso significativo de aproximadamente el 51% frente a las capturas de 1990. El declive correspondió a la captura de especies perseguidas con palangre profundo. La captura de atún blanco (1.574 t) fue similar a la de 1990 (1.512 t). La captura de patudo disminuyó de 2.803 t en 1990 a 440 t, y la de rabil, de 2.117 t en 1990 a 689 t. En el Atlántico sur, las capturas para 1991 se estimaron en unas 27.088 t (22.129 t en 1990), similar a la de 1990 (27.048 t). El atún blanco fue la especie predominante (20.345 t) y representó aproximadamente el 75% del total. La captura de patudo descendió bruscamente de 2.096 t en 1990 a 301 t, y la de rabil, de 998 t en 1990 a 541 t. Las capturas de marlinas y otras especies aumentaron hasta llegar a mantener el total del Atlántico sur al nivel de 1990.

INTRODUCTION

Traditionally, the Taiwanese tuna fishery operating recently in the Atlantic is only longline gear. The Institute of Oceanography, National Taiwan University was granted to be charged in responsibility for Taiwan catch statistics of all deep sea tuna longline fisheries, and researches of tunas and tuna-like species are limited mainly by manpower. The 1991 activities related to those responsibilities are described in this report.

FISHING ACTIVITIES

Fishing vessels

The number of Taiwanese longliners operating in the Atlantic in 1991 was 135, which is slightly less than that of 1990, but more than those of 1988 and 1989 (Table 1). Most of those vessels apparently operated in the south Atlantic since 1987.

Fishing pattern

There are not any greatly substantial changes of fishing pattern and target species since 1989 for the Taiwanese tuna longline fisheries, and none of new fishing gear was introduced in the Atlantic in 1991 by Taiwan fishermen. Since 1987, a dramatic decline of Taiwanese longline vessels appeared in the north Atlantic due to economic viewpoint, this problem is still maintained. And the vessels stayed in traditional fishing grounds gradually moderated their fishing pattern after 1988. Since 1990, most of Taiwanese longline fisheries shifted obviously their target on albacore to bigeye and yellowfin tunas in the north Atlantic. Although reduction of vessels were sustained. The movements of Taiwanese longline vessels operated in the north Atlantic Ocean have clearly shown in changing fishing pattern and target by investigating the catches of major species, such as albacore, bigeye tuna and yellowfin tuna, those tendency are still clear in 1991. The fishing pattern was changed to deep longline setting, and the fishing grounds moved from traditional fishing regions (middle to north of north Atlantic) southward to tropical areas.

In the south Atlantic the main species caught by Taiwanese longline fishery still targets on albacore, although the fishing pattern and fishing grounds had a significant difference in comparison with those before 1986. The fishing pattern changed results in increasing catches of bigeye and yellowfin tunas; and the fishing grounds has moved northward to tropical areas for targeting on tropical species.

Catches

In 1991, as listed in Table 2, total catches of tunas and tuna-like species was slightly decreased from 34,304 MT in 1990 to 30,619 MT. Those decreased amounts were mostly from north Atlantic (7,256 MT in 1990 to 3,531 MT in 1991).

In the north Atlantic, The catches in 1991 were estimated to be about 3,531 MT, which resulted in significant decrease of about 51% from 1990 catches (7,256 MT). The catches by deep longline vessels in 1991 were significantly higher than the catches of regular longline vessels (Table 2), but showing dramatic decline from 1990. In other words, the decline of 1991 catches was resulted from catches and number of deep longline vessels. The albacore catch of 1,574 MT sustained the same level of 1990 (1,512 MT). The bigeye tuna catch decreased from 2,803 MT in 1990 to 440 MT in 1991. The yellowfin tuna decreased from 2,017 MT in 1990 to 689 MT in 1991.

In the south Atlantic, the catches in 1991 were estimated to be about 27,088 MT, which sustained the same level of 1990 (27,048 MT). The albacore catch of 20,345 MT was the predominant species in catches, and about 8% decline in comparison with that of 1990 (22,129 MT). The bigeye tuna catch decreased sharply from 2,096 MT in 1990 to 301 MT in 1991. The yellowfin tuna decreased from 998 MT in 1990 to 541 MT in 1991. And the catches of billfishes, sharks and other species were obviously increased to sustain the total catches in the south Atlantic in 1991 as the level in 1990.

The catch variations of albacore, bigeye tuna and yellowfin tuna in the Atlantic from 1986 to 1991 were shown in Table 3. And the annual catch of sharks are tabulated in Table 4.

RESEARCH ACTIVITIES

The Institute of Oceanography, National Taiwan University has been in charge of the collection and compilation of Atlantic, Indian and Pacific tuna and billfishes longline fishery data necessary to conduct scientific researches. All budgets of data collection and compilation are granted by the Council of Agriculture; And research grants are sponsored by the National Science Council and the Council of Agriculture depending on the submission of projects. The statistical data has been routinely submitted to the ICCAT Secretariat, and scientific researches have been presented accordingly at the relative meetings and intersessional workshops.

Table 1 Annual number of Taiwanese tuna longline vessels operating in the Atlantic Ocean from 1986 to 1991

Type of Fishery	1986	1987	1988	1989	1990	1991
Longline (>50 GRT)	190	140	111	114	149	135

Table 2 Catches of tunas and tuna-like species by fishing pattern of Taiwanese longline fisheries in the Atlantic, 1991. (Unit: Metric tonnes)

Region	Fishing Pattern	Species												TOTAL
		ALB	BET	YFT	BFT	SWF	WHH	BUN	BAH	BIL	SKJ	SHK	OTH	
NORTH	Regular LL	1385	20	66	0	9	0	18	0	0	0	35	0	1355
	Deep LL	189	420	623	1	73	13	308	1	11	0	287	72	1998
Subtotal		1574	440	689	1	82	13	326	1	11	0	322	72	3531
SOUTH	Regular LL	11670	65	210	5	163	291	242	21	19	0	427	1901	15022
	Deep LL	8675	236	331	7	706	265	185	4	107	77	737	736	12066
Subtotal		20345	741	1230	12	869	556	427	25	126	85	1164	2637	27088
Total		21219	741	1230	13	951	569	753	26	137	85	1486	2709	30619

* : About 36 MT young tunas were included in the category, and about 1 MT from Deep longline fishery in the north Atlantic; 8 MT from regular longline fishery and 27 MT from deep longline fishery in the south Atlantic.

Table 3 Comparison of catches of three main species caught by Taiwanese longline fisheries in the Atlantic during recent six years.

Region	Species	Y E A R					
		1986	1987	1988	1989	1990	1991
NORTH	ALBACORE	19646	6636	2117	1294	1512	1574
	BIGEYE	436	243	28	39	2803	440
	YELLOWFIN	1165	440	2	150	2017	689
SOUTH	ALBACORE	27592	28790	20746	18386	22129	20345
	BIGEYE	938	2052	1260	1207	2096	301
	YELLOWFIN	558	926	1348	757	998	541

Table 4 The sharks catches in the Atlantic Ocean from 1986 to 1991

Fishing pattern	Unit: Metric Tonnes					
	1986	1987	1988	1989	1990	1991
Deep longline		2	610		293	462
Regular Longline		900	838	395	291	1024
Total	405	902	1448	395	584	1164