

Tuna Fishery in the Indian Ocean by Thai longliners during 2007-2011

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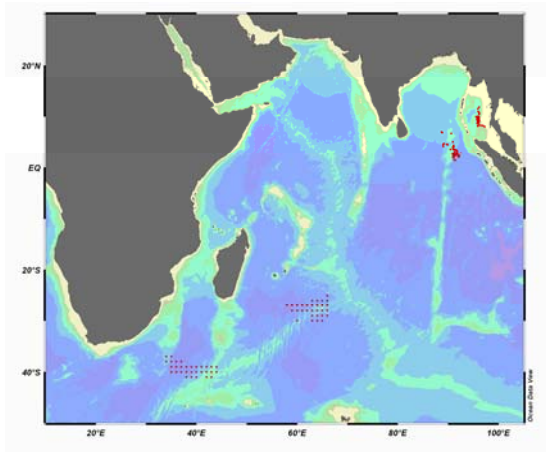
Summary

Thailand began to development tuna longline fisheries in the Indian Ocean since 2007. Thai tuna longliners that composed of 3 tuna longliners in 2007 and 2 tuna longliners during 2008-2011. Their main fishing ground was located in the southern part of the Indian Ocean. The operations targeted Yellowfin, Skipjack and Bigeye tuna for tuna canneries. Data collection from their logbooks displayed important information of catch, fishing operation and effort. During 2007-2011, 2276 days fishing operation were recorded. The highest total catch was in 2010 with 607.69 tones followed by 2007, 2011, 2009 and 2008, respectively (461.75, 370.39, 295.23 and 265.57 tones). The highest CPUE was found in 2010 with 13.62 fish 1000 hooks followed by 2007 and 2011, respectively (10.20 and 9.36 fish/1,000 hooks)

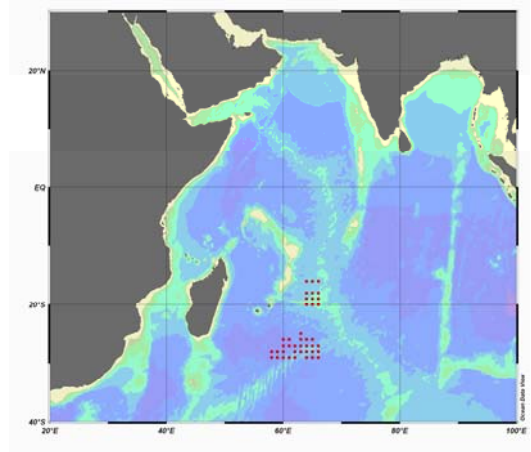
During 2007-2011, albacore tuna was caught with the highest proportion or catch composition (32.80) followed by yellowfin, bigeye, swordfish, other fishes and sharks. In 2011 bigeye tuna was caught with the highest proportion or catch composition (61.4%)

Fishing grounds for tuna longlines fishery

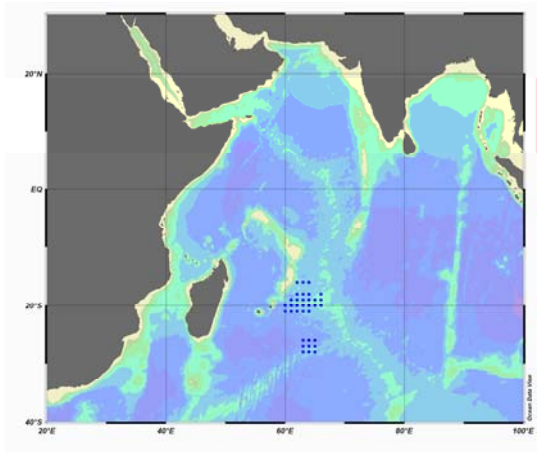
The study on Thai tuna longline fisheries in the Indian Ocean was based on data collection from logbooks of tuna longline vessels which included information of fishing operation. Three Thai tuna longline vessels operated in the Western Indian Ocean in 2007, while in 2008-2011 only two Thai tuna longliner vessels remained on fishing there. The main fishing grounds in 2011 were distributed around central and southern part of Indian Ocean (Figure 1).



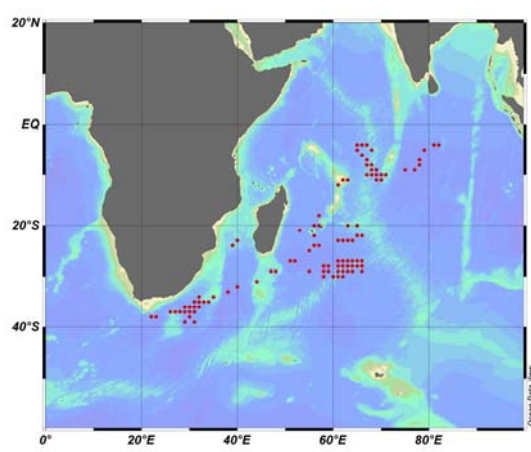
2007



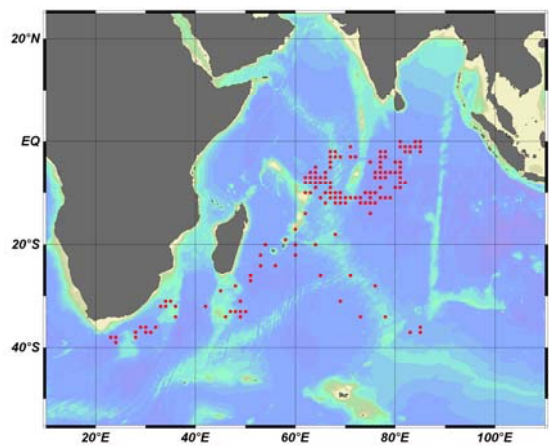
2008



2009



2010



2011

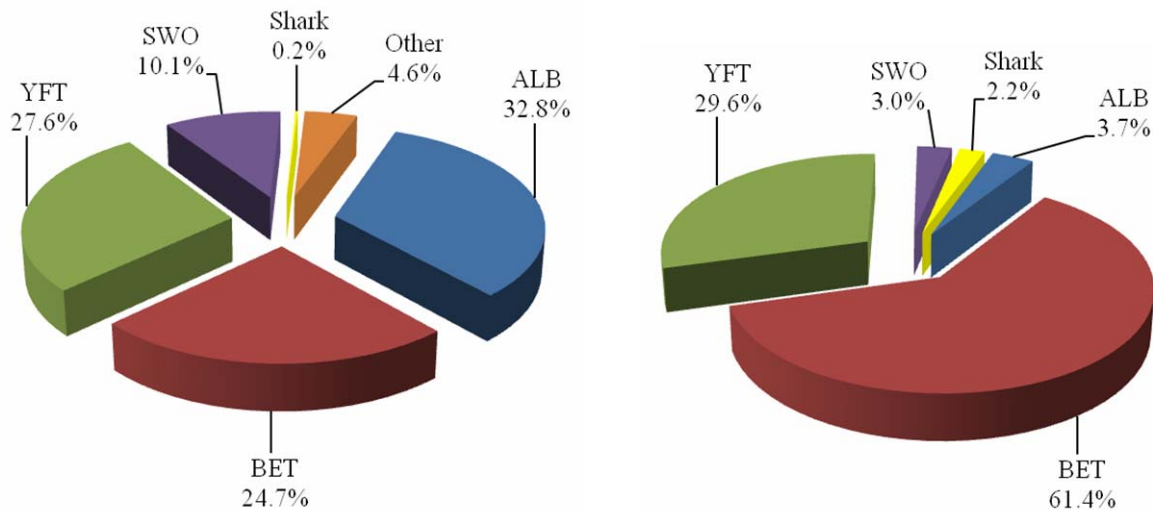
Figure 1 Fishing ground by Thai tuna longliners operated in Indian Ocean during 2007-2011

Fishing Effort catch. Percentage compositions and CPUEs between 2007-2011

Fishing efforts during 2007-2011 were shown in table 1. In 2007, Thai tuna longliners exerted the highest fishing effort 1,503,600 hooks (537 fishing days). On the other hand, fishing efforts in 2011 were decreased to the lowest as 1,041,600 hooks (372 fishing days).

Annual catches in 2007-2011 were estimated to 461.64, 269.53, 295.23, 607.69 and 370.39 tonnes, respectively. The major species caught during 5 years were albacore tuna, bigeye tuna (*T. obesus*), yellowfin tuna (*T. albacares*) and swordfish (*Xiphias gladius*). Their catches were 115.07, 138.61, 111.18 and 8.23 tonnes, respectively in 2007. Those species yield lower catches during 2008-2009, but their catches were increased in 2010. Although the total catch of those species in 2011 was lower than 2010, bigeye tuna was attained the highest catch with 248.60 tonnes (Table 1).

During 2007-2010, the average percentage composition by number of albacore tuna, bigeye tuna, yellowfin tuna and swordfish were 32.8%, 24.7%, 27.6% and 10.1%, respectively. In contrast, catch composition in 2011 of albacore, bigeye tuna, yellowfin tuna, and swordfish were 3.7%, 61.4%, 29.6% and 3.0%, respectively. Showing the distinct change of catch composition from the past, albacore tuna was decreased from 32.8% (2007-2010) to 3.7% in 2011 that composition of albacore tuna was nearly 9 times lower than 4 years ago (Figure 2).



Average catch composition during 2007-2010

Catch composition in 2011

Figure 2 Catch composition by number

The CPUEs of Thai tuna longliners in 2007-2011 ranged between 5.16 and 13.62 fish/1,000 hooks, and the average CPUE was 8.93 fish/1,000 hooks. The lowest CPUE was in 2009, and the highest CPUE was in 2010. In 2011, the CPUE decreased from 13.62 fish/1,000 hooks in 2010 to 9.36 fish/1,000 hooks (Table 1).

Table 1 Fishing efforts, catches and CPUEs of Thai tuna longliners in the Indian Ocean during 2007-2011

Year	Fishing days	No. of Hooks	Total no. of fish	Catches weight (tonnes)							CPUE (fish/1,000 hooks)
				ALB	BET	YFT	SWO	Sharks	Other	Total	
2007	537	1,503,600	15,334	115.07	138.61	111.18	8.23	0.71	87.84	461.64	10.20
2008	417	1,167,600	6,863	22.84	69.74	89.76	59.35	-	27.84	269.53	5.88
2009	477	1,335,600	6,897	23.57	152.07	64.96	54.63	-	-	295.23	5.16
2010	473	1,324,400	18,044	263.41	170.10	93.60	80.58	-	-	607.69	13.62
2011	372	1,041,600	9,746	11.44	248.60	92.12	16.00	2.22	-	370.39	9.36
Total	2,276	6,372,800	56,884	436.33	779.12	451.62	218.79	2.93	115.68	2,004.48	8.93

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