

Executive Summary of the Status of the Longtail Tuna Resource

New document to be submitted for consideration by the SC in Nov06

BIOLOGY

Longtail tuna (*Thunnus tonggol*) is an oceanic species that forms schools of varying sizes. It is most abundant over areas of broad continental shelf.

Longtail tuna grows to around 145 cm FL or 35.9 kg, but the most common size in Indian Ocean ranges from 40 to 70 cm. Longtail tuna grows rapidly to reach 40 to 46 cm in FL in one year.

The spawning season varies according to location. Off the west coast of Thailand there are two distinct spawning seasons: January-April and August-September.

Longtail tuna feeds on a variety of fish, cephalopods, and crustaceans, particularly stomatopod larvae and prawns.

No information is available on the stock structure of longtail tuna in the Indian Ocean.

FISHERIES

Longtail tuna is caught mainly by gillnet and in a lesser extent by artisanal purse seiners and most of the catch is taken in the western Indian Ocean area (Figure 1). The catch estimates for longtail tuna were derived from very small amounts of information and are therefore highly uncertain¹ (Figure 2). The catches provided in Table 1 are based on the information available at the Secretariat and the following observations on the catches cannot currently be verified. Estimated catches of longtail tuna increased steadily from the mid 1950's, reaching around 9,000 t in the early 1970's and over 40,000 t by the mid-1980's. Peaks in catches occurred in 1980, 1987-88, 1995 and 2000. Current catches are around 61,000 t. In 2005, the countries attributed with the highest catches of longtail tuna were Iran (23,713 t or 44% of the total catch), Oman (7,484 t, 14%), Yemen (5,431 t, 10.2%) and Pakistan (5,113 t, 9.6%) (Table 1).

In 2005, twelve countries reported catches of longtail tuna in the IOTC region. Catches for other countries known to catch longtail tuna are estimated by the Secretariat according to the species composition per gear declared during the previous year or by the major fishing countries of the region (Figure 3).

AVAILABILITY OF INFORMATION FOR STOCK ASSESSMENT

There is no information on the stock structure of longtail tuna in the Indian Ocean.

Age and the growth are available for Longtail tuna in other oceans.

¹ The uncertainty in the catch estimates has been assessed by the Secretariat and is based on the amount of processing required to account for the presence of conflicting catch reports, the level of aggregation of the catches by species and or gear, and the occurrence of unreporting fisheries for which catches had to be estimated.

Possible fishery indicators:

1. **Trends in catches:** The catch estimates for longtail tuna are highly uncertain. There has been a steady increase in the catches from the mid-1950's (Figure 1). Peaks in catches occurred in 1980, 1987-88, 1995 and 2000.
2. **Nominal CPUE Trends:** data not available.
3. **Average weight in the catch by fisheries:** data not available.
4. **Number of squares fished:** CE data not available.

STOCK ASSESSMENT

While some localised, sub-regional assessments may have been undertaken, no quantitative stock assessment has been undertaken by the IOTC Working Party on Neritics.

MANAGEMENT ADVICE

No quantitative stock assessment is currently available for longtail tuna in the Indian Ocean, therefore the stock status is uncertain.

The SC notes the decline in the catches since 2000. However, the reasons for this are not clear: it may be problem related to reporting, or it may be a normal fluctuation in the fishery — similar declines occurred in the mid 1980's, early 1990's and mid 1990's. Nevertheless, the SC recommends that this species be reviewed by the WPN every 2-3 years.

LONGTAIL TUNA SUMMARY

Maximum Sustainable Yield :	-
Current (2005) Catch:	53,400 tonnes
Mean catch over the last 5 years (2001-05)	60,600 tonnes
Current Replacement Yield :	-
Relative Biomass ($B_{\text{current}}/B_{\text{MSY}}$) :	-
Relative Fishing Mortality ($F_{\text{current}}/F_{\text{MSY}}$):	-

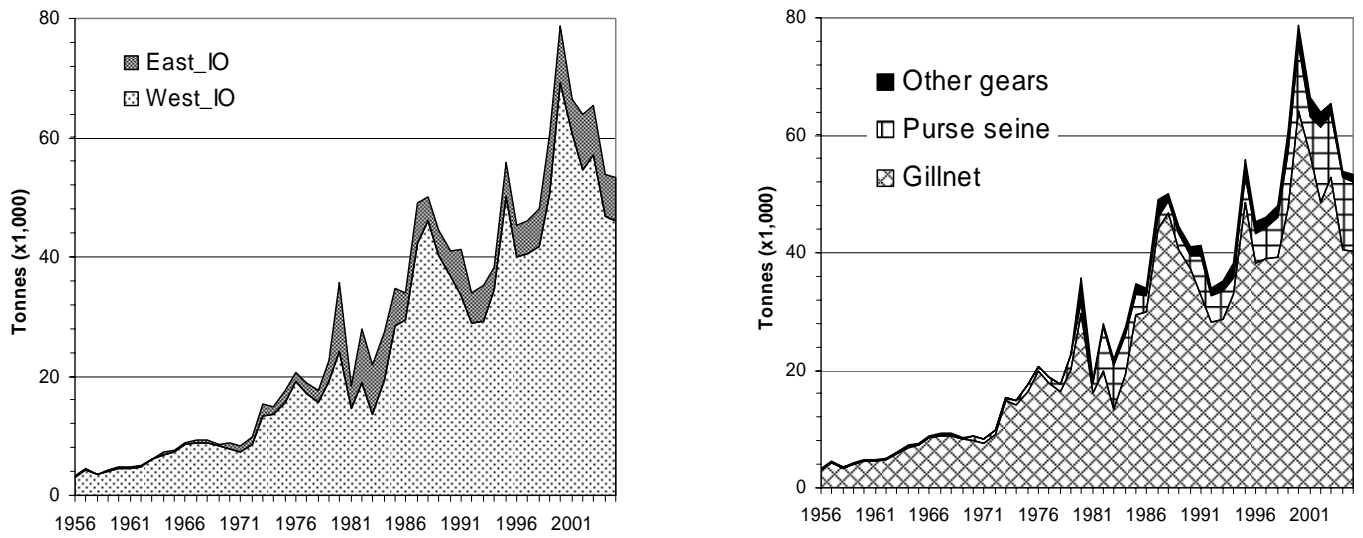


Figure 1. Longtail tuna: annual catches from 1956 to 2005 by area (left) and gear (right). Data s per October 2006

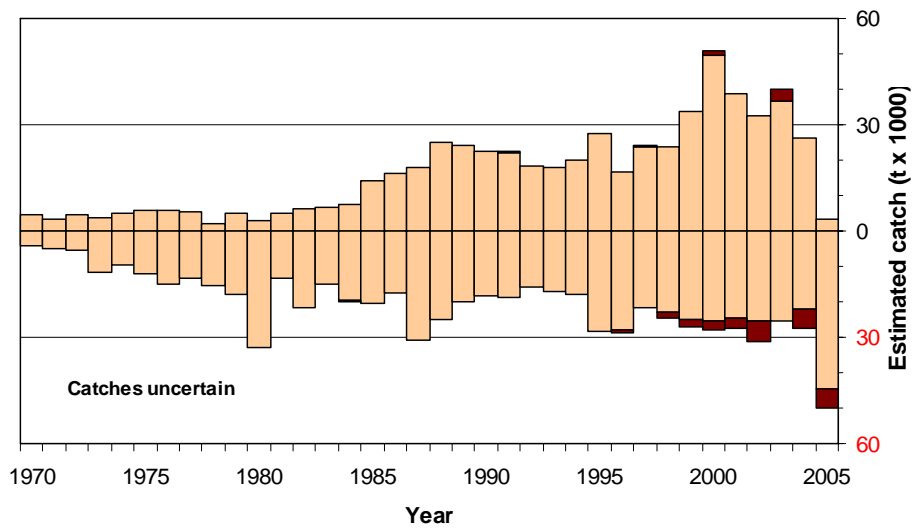


Figure 2. Longtail tuna: uncertainty of annual catch estimates. The amount of the catch below the zero-line has been categorised as uncertain according to the criteria given in the text. Dark sections represent estimates of catches by industrial fleets. Data as of October 2006

Table 1. Catches of Longtail tuna by gear and main fleets for the period 1956-2005 (in thousands of tonnes). Data as of 9 October 2006

Gear	Fleet	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82
Purse seine	Malaysia	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.7	0.5	0.5	0.3	0.4	0.7	0.5	0.5	0.9	0.6	1.4	0.6	0.5
	Thailand															0.0	0.2	0.2	0.3	0.2	0.5	0.3	0.3	0.4	1.8	0.6	1.1	6.9
	Other Fleets	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.7	0.7	0.7	0.6	0.6	1.2	0.8	0.8	1.3	2.4	2.0	1.7
Gillnet	Iran, Islamic Republic															0.6	0.1	0.7	0.9	0.9	0.9	1.4	1.6		0.8	1.0	2.2	2.9
	Oman	0.7	0.7	0.7	0.9	0.7	0.7	0.7	0.7	0.8	0.8	1.0	1.0	1.0	0.9	1.0	1.1	1.2	3.8	4.4	5.0	5.3	5.8	5.4	6.6	6.3	4.6	
	Pakistan	0.8	2.0	1.0	1.0	1.2	1.1	1.7	2.5	3.5	3.8	5.1	4.9	4.9	4.5	4.0	3.3	3.9	3.1	4.2	4.7	4.4	3.9	2.3	4.0	1.8	2.8	3.5
	Yemen	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.5	1.1	1.3	1.5	1.5	1.7	1.5	1.7	1.4	1.2	
	India	0.5	0.4	0.5	0.4	0.8	1.1	0.3	0.6	0.6	0.5	0.4	0.6	0.6	0.5	0.9	1.8	1.8	8.2	2.4	3.1	5.4	3.6	5.0	6.6	16.7	1.7	2.6
	United Arab Emirates	0.7	0.9	0.9	1.3	1.3	1.3	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	0.9	0.9	0.9	0.9	1.5	1.5	1.4	1.4	1.4	1.4	1.4	0.4	4.0
	Other Fleets	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.3	0.2	0.4	0.1	0.3	0.4	0.9	0.6	0.3	0.4	0.5	1.4	1.1
	Total	3.0	4.3	3.4	4.0	4.4	4.6	4.7	5.8	6.8	7.2	8.5	8.9	8.8	8.2	8.0	7.7	9.1	14.9	14.2	16.4	19.9	18.0	16.4	20.1	29.8	16.2	19.9
Other gears	India																									3.8	0.4	0.6
	United Arab Emirates	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3														
	Other Fleets	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	3.8	0.4	0.6
All	Total	3.2	4.5	3.6	4.3	4.7	4.9	5.0	6.1	7.2	7.6	8.9	9.4	9.3	8.6	8.8	8.4	9.9	15.4	14.9	17.6	20.7	18.8	17.7	22.6	35.6	18.3	27.9

Gear	Fleet	Av01/05	Av56/05	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05
Purse seine	Iran, Islamic Republic	4.7	0.6														0.7	0.8	1.5	2.1	2.7	3.0	5.8	3.6	5.7	5.7
	Malaysia	3.5	1.1	0.8	1.0	1.5	1.3	0.8	0.8	1.1	1.3	1.5	2.4	1.5	0.8	1.0	1.7	1.8	2.6	2.3	3.0	2.6	4.3	3.7	3.6	3.4
	Thailand	2.5	1.6	6.8	5.9	2.2	1.5	1.4	1.2	1.4	1.0	5.3	2.0	3.2	2.0	3.4	2.6	2.6	2.5	5.1	4.4	1.0	2.7	3.2	2.8	2.9
	Other Fleets	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.3	0.1	0.0
	Total	10.9	3.3	7.6	6.9	3.7	2.8	2.2	2.0	2.5	2.3	6.7	4.4	4.7	2.8	4.5	5.0	5.1	6.6	9.6	11.2	6.6	12.9	10.8	12.3	11.9
Gillnet	Iran, Islamic Republic	23.7	8.3	5.6	6.1	11.8	11.7	12.1	16.9	19.4	14.9	14.6	9.8	8.2	11.5	27.2	16.5	17.9	18.2	21.3	38.7	31.9	24.1	26.7	18.0	18.0
	Oman	7.3	4.4	2.1	6.1	6.6	7.5	17.3	15.8	8.8	7.0	4.3	5.2	6.9	5.6	4.2	5.4	5.1	4.4	4.8	5.5	6.1	6.9	8.0	8.2	7.5
	Pakistan	5.3	4.0	1.2	1.3	2.1	4.4	6.0	6.3	4.9	6.2	6.1	5.8	4.5	5.8	5.0	4.7	5.6	5.5	6.4	6.1	5.2	4.9	5.9	5.1	5.1
	Yemen	5.0	1.5	0.4	1.0	1.1	0.5	0.6	0.7	0.6	1.4	0.7	1.4	1.8	2.4	2.3	2.6	3.0	3.3	3.7	4.0	4.4	4.7	5.1	5.4	5.4
	India	3.4	2.9	1.2	1.8	4.5	1.6	3.3	2.4	2.8	3.6	2.9	1.9	2.9	3.0	4.2	3.1	3.3	3.7	6.6	7.3	6.5	4.6	3.0	1.4	1.4
	United Arab Emirates	2.1	2.1	2.6	2.6	2.4	3.4	3.1	3.4	3.4	3.4	3.3	3.4	3.4	3.8	4.9	5.0	3.2	3.2	3.2	1.5	1.5	1.9	2.9	2.0	2.0
	Other Fleets	1.0	0.6	0.4	0.5	0.8	0.9	1.4	1.3	0.7	0.7	0.8	0.7	1.0	0.8	0.8	1.0	0.9	1.0	1.4	1.2	1.1	1.4	1.2	0.3	0.8
	Total	47.7	23.8	13.4	19.3	29.3	30.0	43.9	46.7	40.6	37.2	32.7	28.3	28.8	32.9	48.6	38.2	39.0	39.3	47.5	64.2	56.6	48.5	52.8	40.5	40.3
Other gears	India	1.4	0.7	0.3	0.4	1.2	0.4	0.8	0.7	0.7	0.9	1.2	0.8	1.2	1.2	1.7	1.3	1.3	1.5	2.7	3.0	2.6	1.9	1.3	0.5	0.5
	United Arab Emirates	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.8	0.8	0.8	0.5	0.5	0.5	0.2	0.2	0.3	0.5	0.3	0.3
	Other Fleets	0.2	0.1	0.3	0.5	0.1	0.1	1.6	0.0	0.1	0.1	0.1	0.1	0.0	0.6	0.2	0.0	0.1	0.2	0.2	0.1	0.3	0.2	0.2	0.2	0.3
	Total	1.9	1.1	1.0	1.3	1.7	1.1	2.9	1.3	1.3	1.5	1.8	1.4	1.8	2.4	2.7	2.1	2.0	2.2	3.4	3.3	3.1	2.4	1.9	1.1	1.2
All	Total	60.6	28.3	22.0	27.5	34.7	33.9	49.0	50.0	44.5	41.0	41.2	34.1	35.2	38.1	55.8	45.3	46.1	48.2	60.5	78.8	66.4	63.8	65.5	53.9	53.4

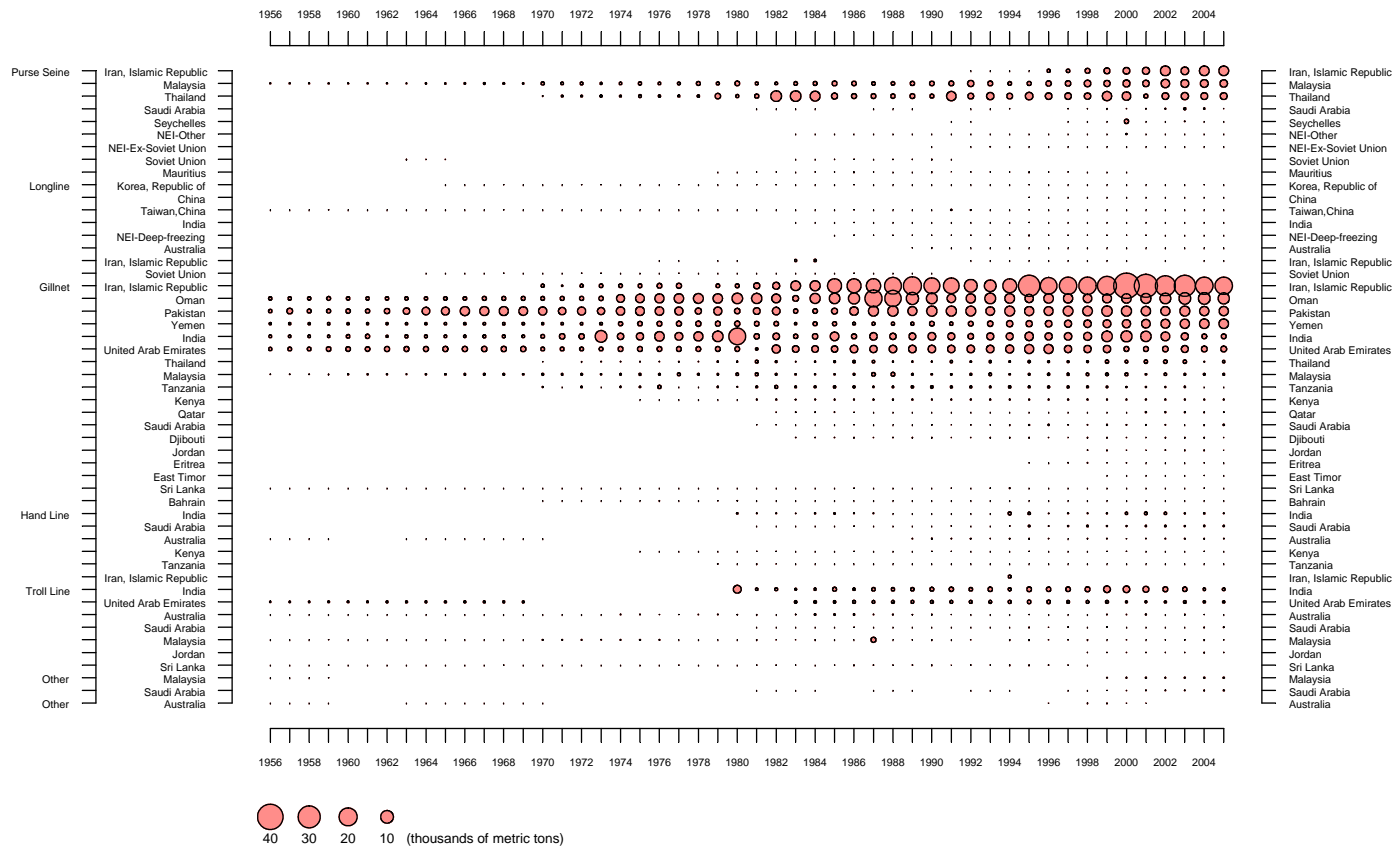


Figure 3. Longtail tuna: catches by gear and main fleets for the period 1956-2005 (in thousands of tonnes). Data as of October 2006