

FISHERY IN IRAN WITH PARTICULAR REFERENCE TO NERITIC TUNAS

Present to 2nd session of the Working Party on Neritic Tuna (WPNT)
19-21 November 2012
Location: PENANG, MALAYSIA

By: Reza Abbaspour Naderi
Head of Iranian Southern Fishery – Iran Fisheries Organization (IFO)

Email: R_Naderimail@yahoo.com
Islamic Republic of Iran

Abstract:

Of important neritic tuna species in Iranian Fishing grounds in Persian Gulf and Oman Sea are consist of: Narrow-barred Spanish mackerel, Indo-Pacific king mackerel, Longtail tuna, Kawakawa and Frigate tuna which have a considerable effect in economical activities of coastal residents. Around 6,500 out of 12 thousand fishing crafts, are engaged in tuna activities. The Catch level of tuna and tuna-like species in 2011 was equal to 183 thousand tonnes, of which 105 thousand tonnes belongs to coastal waters and the rest (78 thousand tonnes) was belong to off-shore fishery. For better conservation and management actions on tuna fishes, necessary planning and programming have been carried out to improve the situation. The main management measures include: providing Logbook for tuna fishes, picking out Observer and trained them onboard, providing a guideline to identify the Bigeye and Yellowfin tuna, planning to gather information on Tuna By-catch and Discards, adapting IOTC regulation with national implementation condition and so forth. Length-weight frequency data for some tuna fishes are compiled, inter alia: Narrow-barred Spanish mackerel, Longtail tuna, Kawakawa, and Tropical tuna. Over the last few years there has been a dramatic increase in the number of tuna fish measured, so that the number of tuna and tuna-like fish measured in 2011 was in the region of 50000 fish.

Introduction:

All Iranian Fishing grounds in Persian Gulf and Oman Sea are located between the longitude of 48° 30' to 61° 25' East.

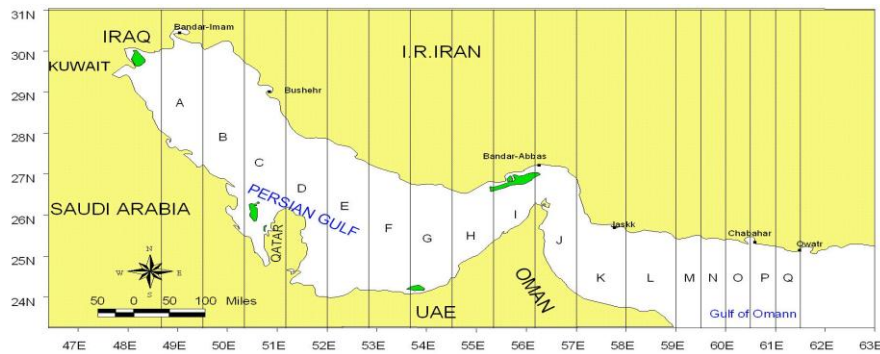


Fig 1. Persian Gulf & Oman Sea Map

The main fishing grounds for tuna fishes in Iran are located in the coastal sectors of Persian Gulf and Oman Sea and total volume of production in the Persian Gulf and Oman Sea fishing grounds in 2011 exceed 400 thousand tonnes, which is a significant part of the country's aquatic species production.

It includes Large Pelagic, Small Pelagic, Demersal species, Shrimp and Myctophids (Lanternfishes) and the total value of export is equal to 212 million USD (*Note: The value of catch in Persian Gulf & Oman Sea is estimated to be 851 million USD*).

The total aquatic species production in the country during the year 2011 exceeded over 730 thousand tonnes, this amount was about 400 thousand tonnes in 2001.

About 56 percent of the total aquatic species production contributed to the country fishing activities in Persian Gulf and Oman Sea, about 6 percent of production allocated to the Caspian Sea and the rest (38%) contributed to the aquaculture activities.

Fishing Fleet:

Total number of fishing crafts are approximately about 12 thousand vessels, comprising: fishing boats: 8500, fishing Dhows: 3163, fishing vessels: 54 which their fishing activities are managed. There are 390 fishing cooperatives in the country with over 142 thousand fishermen which are involved in fishing activities.

Of 12 thousand fishing crafts, about 6,500 vessels are engaged in tuna activities.

In 2011, catch quantity of different aquatic species groups are as follows: Large Pelagic: 207 thousand tonnes, Demersal species: 147 thousand tonnes, Small Pelagic:

36 thousand tonnes, Shrimp: 7 thousand tonnes and Myctophids: 14 thousand tonnes. The catch trends for those species are shown on the following chart since 2001.

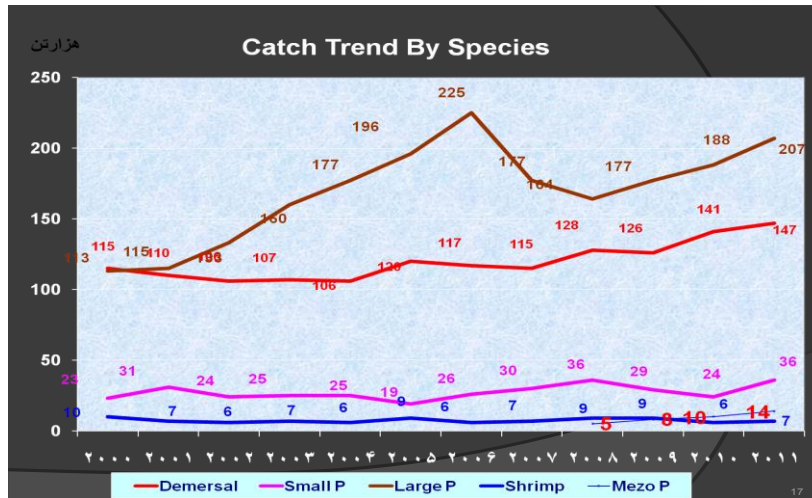


Fig 2. Catch Trend by Species

Tuna & Tuna-like Species Catch:

The Catch quantity of tuna and tuna-like species in 2011 was equal to 183 thousand tonnes, of which 105 thousand tonnes belongs to coastal waters and the rest (78 thousand tonnes) belongs to off-shore fishery. In 2005 and 2006, according to the chart below, the amount of catch from off-shore fishery were exceeded the coastal waters catch, but in recent years due to the piracy and insecurity related to this issue, the trend has completely reversed.

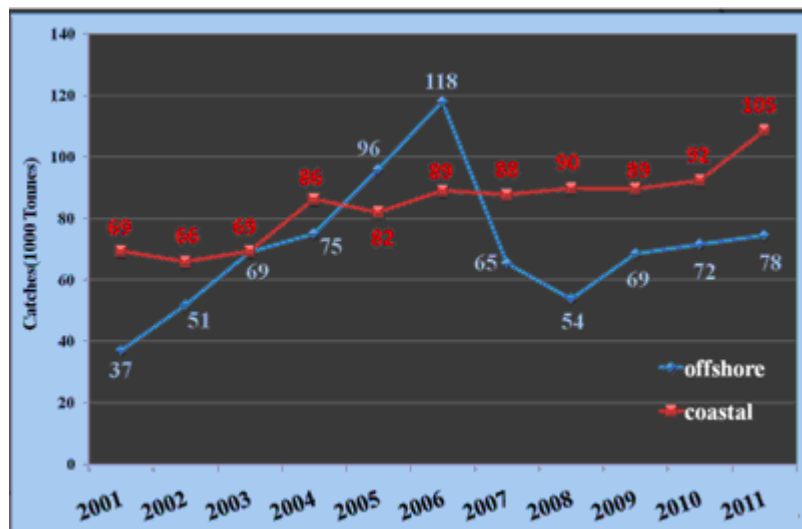


Fig 3. Annual Catch from Coastal & Non-Coastal Catch

The same issue is true for the catch level of Longtail & Skipjack tuna which is shown clearly in the chart below. Following the decline of tropical tuna catch which

was caused by the phenomenon of piracy; fishermen relocate their fishing grounds from offshore to nearshore and concentrate on traditional coastal fishing grounds. This shifting of fishing grounds caused increase in fishing efforts in coastal areas and leads to increase in longtail catch from 25000 tonnes in 2006 to 81000 tonnes in 2011 (224%).

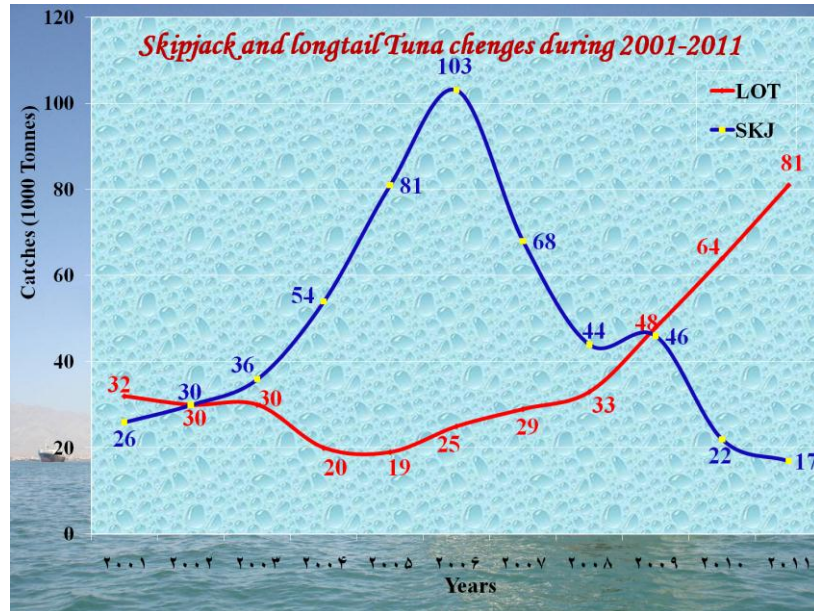


Fig 4. Skipjack & Longtail Tuna Catches (2001-2011)

In this article, the catch trends for different neritic tuna from 2001 to 2011 are shown and described. Also the catch quantity of these tuna species are presented in the break down of 4 coastal provinces including: Khozestan, Bushehr, Hormozgan and Sistan-bluchistan.

Following chart shows the nominal catches of different neritic tuna species over a period of 11 years from 2001 to 2011. As it can be seen from the chart, except longtail and skipjack tuna, all other tuna species have almost the steady catch trends over the mentioned period. The skipjack had its peak in 2006 and least amount in 2011, as the skipjack catch delined, the longtail tuna catch inceased since 2007 and has it peak in 2011, this is due to piracy in the offshore fishing grounds and fishermen had to shift to coastal fishing grounds.

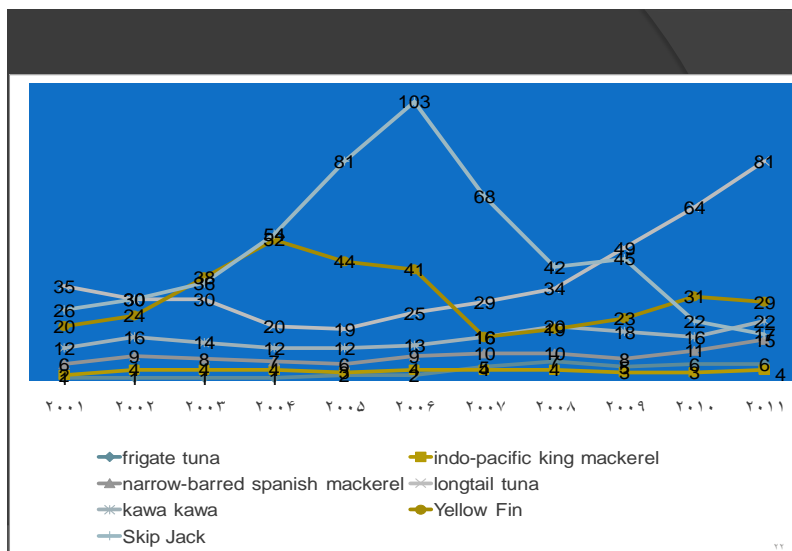


Fig 5. Nominal Catches of Tuna & Tuna-like Species

Neritic Tuna Catch:

Tuna fishing trend during the mentioned period, shows a growing trend which then increased with a higher slope since 2006 and is directly associated with the decline in tuna fishing activities in distant waters due to the piracy and insecurity. Therefore, it is necessary to manage the exploitation of Neritic tuna properly, and with due regard to various aspects of the issue, ensure the long-term and sustainable use of resources.

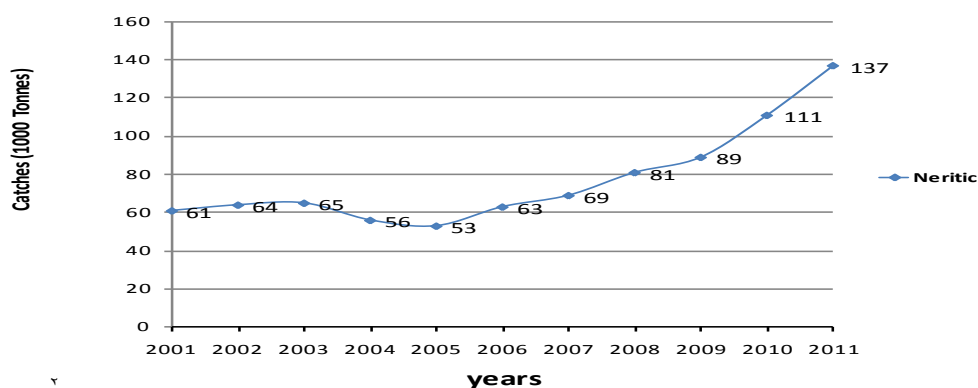


Fig 6. Nominal Catches of Neritic Tuna

Figure 7 shows the annual distribution of neritic tuna catch in 2011. As it can be seen, exploitation of the mentioned resource throughout the year have almost had a steady trend which suggest appropriate management policies and a balance between the fishing effort and the amount of resource and also suggest that, the operations of active fishing vessels in this part with a clear and proper plan is in progress. Also there are two peaks for the neritic tuna catch during first and last quarter. Only in June

and July which coincide with monsoon Season in the Sea of Oman, we are facing with decline in fishing fleet activities and consequently reduction in catch quantity.

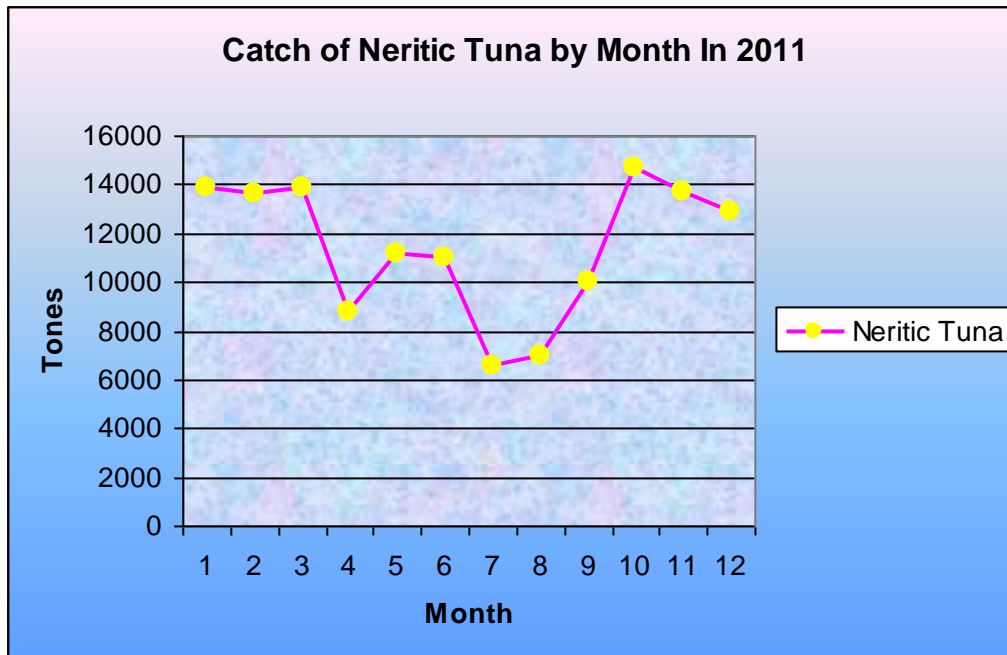


Figure 7. Annual distribution of neritic tuna catch in 2011

Gillnet is a dominated fishing method used in Iranian waters to catch tuna species, however, Planning and measures to gradually change the current fishing practice has been performed. Most of neritic tuna catch by gillnet fishery, attributed to the fishing boats and fishing dhows less than 50 GRT (*around 5000 fishing crafts*), also around 850 fishing boats using trolling method which is a appropriate and high value-added product fishing method.

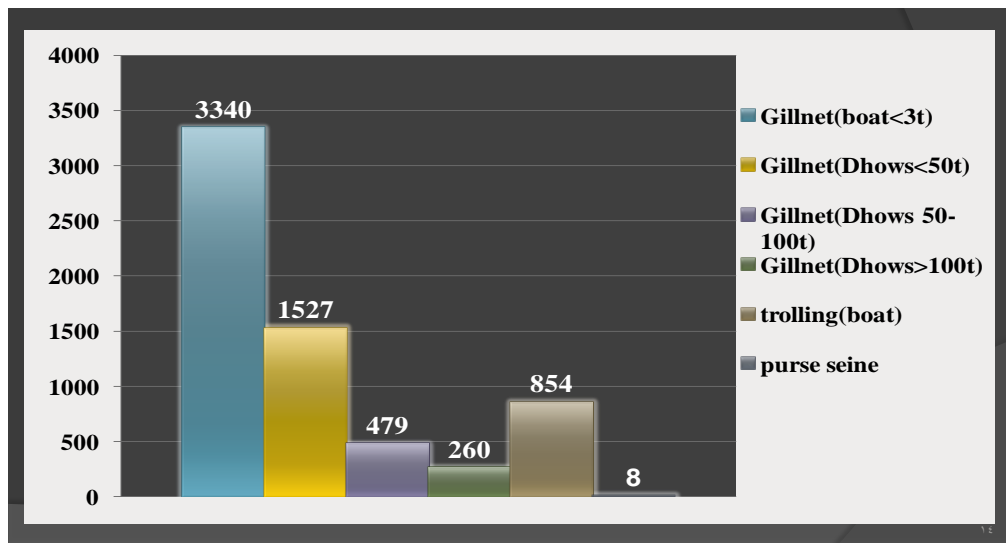


Fig 8. Fishing fleet by gear type in 2011

Fishing efforts of different fishing vessels per day shows that, most fishing efforts for tuna and tuna-like species attributed to fishing boats (around 515 thousand day) in 2011, followed by fishing dhows less than 50 GRT with around 277 thousand day, also fishing efforts for those fishing boats engaged in trolling activities was around 140 thousand day.

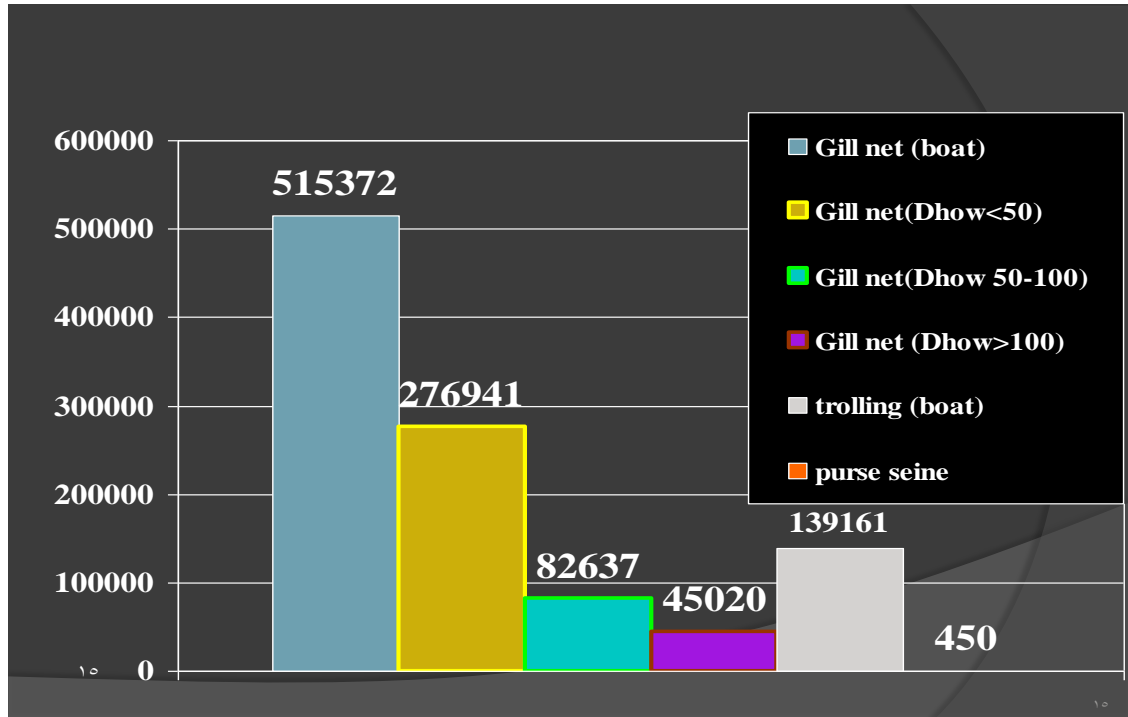


Fig 9. Fishing efforts per Day for Tuna & Tuna-like by different vessel classes in 2011

Size Frequency Data:

During 2011, number of tuna and tuna-like fish measured was in the region of 50000 fish. Length and weight frequency data for some tuna species are collected, such as Narrow-barred Spanish mackerel and Longtail tuna. The registered length frequency data shows that the average size for Narrow-barred Spanish mackerel by Gillnet fishery in 2011 was equivalent to 82.6 cm, while the Length maturity (LM 50) for this species is 85 cm.

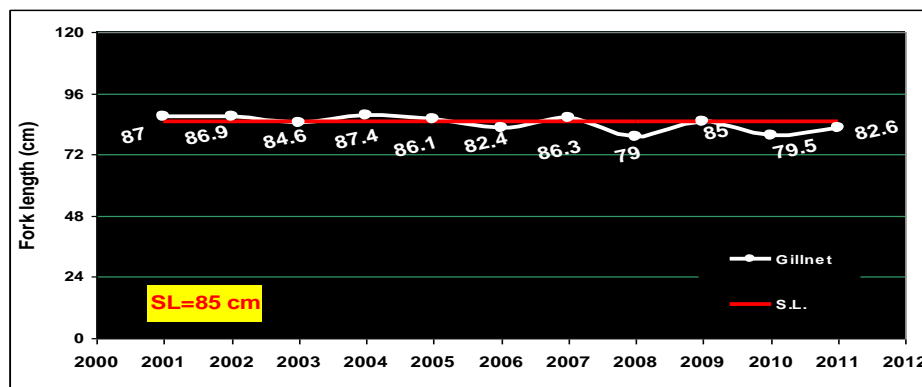


Fig 10. Length frequency for Narrow-barred Spanish mackerel (2001-2011)

Also the average size for Longtail tuna by Gillnet fishery during recent years is always less than that of length maturity which is 73 cm and needs more attention to assess the state of these two species.

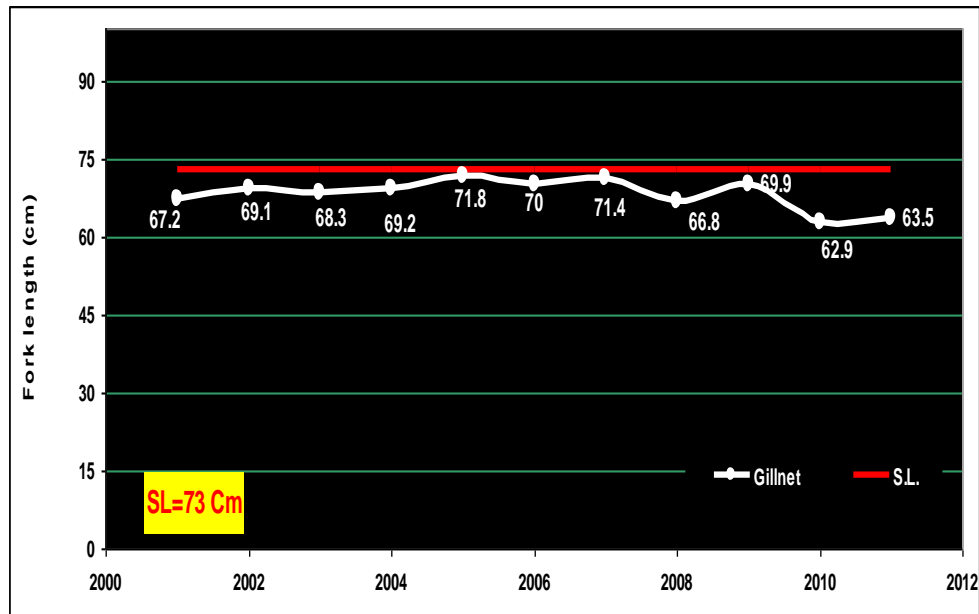


Fig 11. Length frequency for Longtail tuna (2001-2011)

Significant management measures:

For better conservation and management action on tuna fishes, necessary planning and programming are carried out to improve the situation in the country. The main management measures include: designing and providing of Log book specific for tuna fishes and disseminating them among 400 fishing vessels. All crew and Captains of those fishing crafts were trained on how to fill out and note accurate information in the logbook.

Meanwhile, observers were picked out from each fishing vessel and trained them.

A comprehensive data collection software called AMAR Software and now it has been updated and various items has been added to the software to meet IOTC & FAO demanded outputs with a suitable reporting.

A guideline was Translated in Persian language and disseminated among port samplers and fishermen to identify Bigeye and Yellowfin tuna.

Planning to gather information on Tuna fishing vessels By-catch and Discards is carried out.

One of the notable approaches in our country in the field of tuna fishery is how to fulfill the IOTC regulations and adapting it with national implementing condition and complying with the IOTC approvals.

Vessel Monitoring System:

Regarding Vessel Monitoring System (VMS) Iran has some experiences from 2006. IFO has equipped 50 vessels with on line VMS system. Also at this time we equipped 300 vessels by offline system which all of them are active in the Persian Gulf and Oman Sea. In order to develop these experiences in 2010 we started a study to choose the best available system in our country. According to the results we are going to equip all the vessels to On-line or Off-line VMS. We also have carried out feasibility study on some cases to remove the probability problems. Based on our plan all the active vessels in Tuna fishing activities must be equipped from 2013.

To sum up, I pointed out all important issues relating the fishery status of Neritic tuna species and will elaborate them in the forthcoming meeting.