

study the aspects of neritic tuna management in Iran fisheries

By: Reza Abbaspour Naderi

Iran Fisheries Organization (IFO)
R_NADERIMAIL@YAHOO.COM

Working Party on Neritic Tuna (WPNT05)

Date: 26–29 May 2015
Location: TBA, Tanzania
Venue: TBA, Tanzania

Chair: Dr. Prathibha Rohit; **Vice-Chair:** Dr. Farhad Kaymaram

Abstract :

Iran (Islamic Republic of) is located in an area encircled with Caspian Sea in North and Persian Gulf and Oman Sea in the south. fishing activities with its related occupations are considered as one of the main activities of coastal communities, so that based on annual statistic for 2013 around 143 thousand individuals are directly engaged in fishing activities .Per capita consumption is around 8.5 kg.

There are around 12,000 fishing crafts comprising of: Fishing boats, Dhows and Ships employing different types of fisheries including: Gillnet, purse seine, Angling (Hook and line, Trolling), Trawl and Wire-trap and engaged in fishing operation according to a time schedule during different fishing seasons. Total annual species production in 2013 was equivalent to 884,957 tonnes, of which around 514 thousand tonnes attributed to capture fisheries. The share of Large-pelagic species is about 240 thousand tonnes, of which 226 thousand tonnes are Tuna and Tuna-like species. Neritic tunas in Iran (Islamic Republic of) comprised of: longtail tuna, Kawakawa, frigate tuna, Narrow-barred Spanish Mackerel and indo-pacific king mackerel. All of these species have attach-importance in the livelihood of coastal communities. Total annual catch for neritic tuna in 2013 was around 127 thousand tonnes which account for 57% of total Tuna and Tuna-like species and also bycatch species.

Due to neritic tuna characteristics in the country fishing activities and according to its importance from socio-economic point of view, these groups of species have always priority in fisheries policy and management and related management measures led to improving and managing exploitation activities to enhance the fish stocks. To this end, coordination with IOTC secretariat and necessary

actions for complying IOTC resolutions and recommendations with enforcement condition of the country were carried out.

Among the approaches followed in the management and exploitation of neritic tuna stocks, several actions carried out inter alia: improving capture fishery data collection system and enhancing catch-and effort and length frequency data collection by grid area and geographical coordination, designing and implementing specific logbooks, educational programs for On-board Observers and crew members of numeral fishing crafts, formulating guidelines for identification of tuna and tuna-like species, and some other measures which will be addressed here.

In this paper, the details of active fishing vessels, fishing efforts, and trend of catch quantity for each species will be evaluated and analyzed over a period of 10 years.

Introduction:

The total Iran aquatic production in 2013 is equivalent to 885 thousand tonnes with the economic value of approximately 2.5 million US dollars, Of which, around 514 thousand tonnes attributed to marine water resources located in the Persian Gulf, Oman Sea and the Caspian Sea fishing grounds. Fish export is about 72 thousand tonnes, which its economic value equivalent to 304 million US dollars.

So, the fishing activities in the northern and southern fisheries of the country play an important role in people's lives and livelihoods especially coastal communities. In the meantime, large pelagic allocated a little more than 50% of the total catch and have a high-importance in the catch composition in terms of quantity and quality.

The classification of large pelagic predominantly consists of different species of tuna and tuna-like species. Different species of Neritic tunas are exploited with various fishing methods and are managed with due regard to stock status and necessary planning should be carried out to meet the IOTC mandate in accordance with country national fishery legislations.



Figure 1: Picture of fishing activities

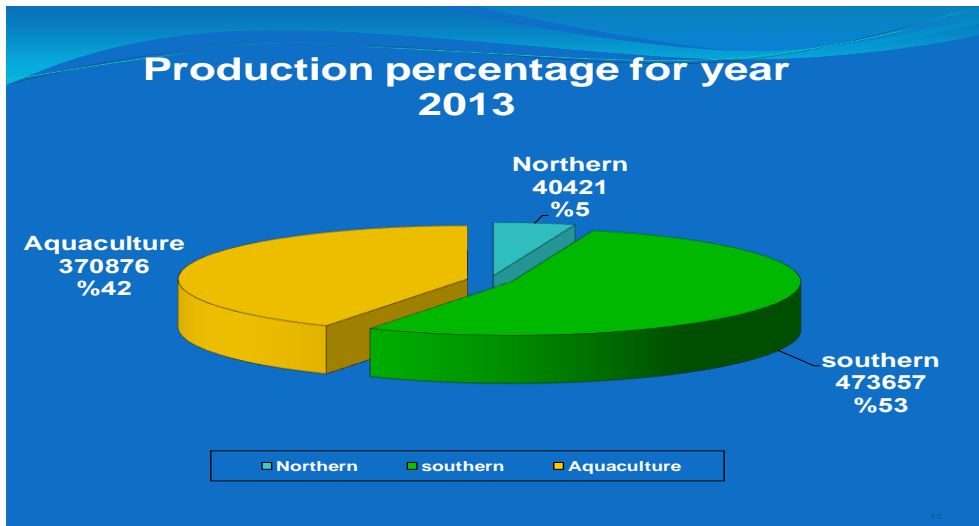


Figure 2: Diagram for catch quantity 2013

Data collection system:

Catch data for Tuna and tuna-like species will be collected and recorded in the capture fishery data collection system routinely. % 10 of fishing crafts is under the coverage of sampling system.

Capture data collection approach carried out by sampling 10 % of fishing. Sampling carried out randomly for picking out 10 % of fishing vessels from different landing centers. Total catch-and-effort data for these fishing vessels will be collected in form of questionnaire.

Also number of fishing days at Sea will be recorded in the Data Collection Software for all active fishing vessels and based on total fishing efforts; these data will then be raised. Also there are specific Scientific Committees (SC) both in

provincial and national level and fishery research experts and administration officers are members of these committees. In these committees, trends of data collection and raising will be evaluated and finally approved.



Figure 3: Picture of fishing vessels

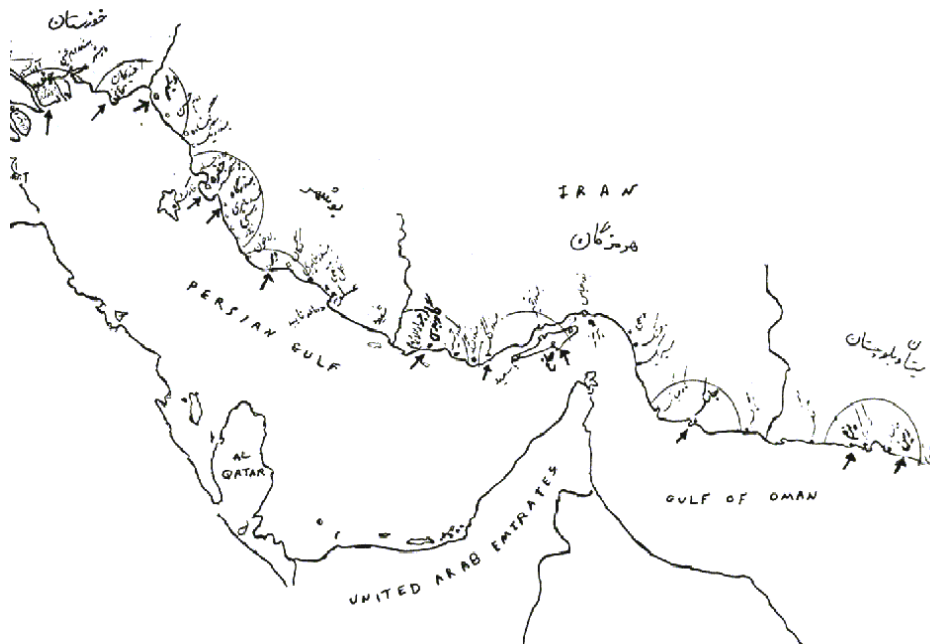


Figure 4: Distribution pattern for data collection



Figure 5: picture of tuna catch volume

Catch quantity:

Total no. of fishing crafts is about 12000, of which, about 6,500 fishing crafts are engaged in tuna fishing activities.

The total fishing efforts for tuna and tuna-like species in 2013 is equivalent to 1.040 thousand days which gillnet fishery contribute the major effort among other fisheries. For gillnet fishery, the efforts for fishing boats are much more than other fishing crafts.

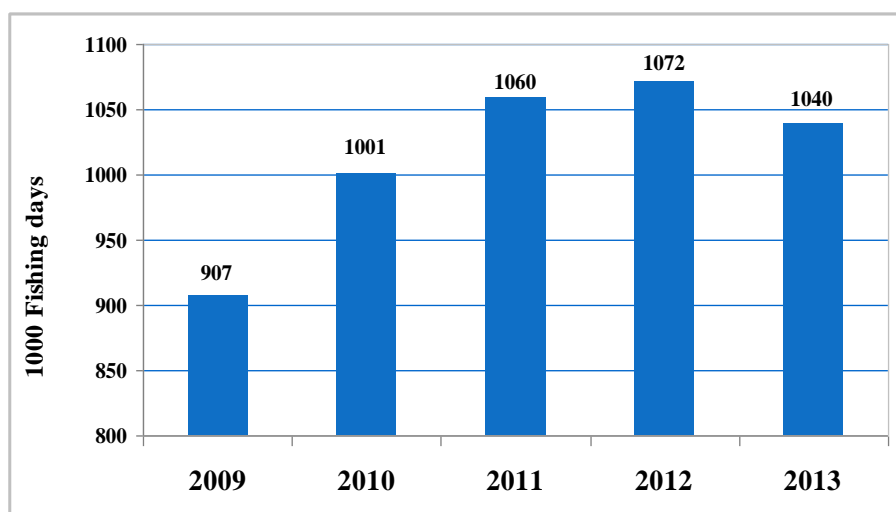


Figure 6: Picture of fishing efforts in recent years

Neritic tuna fishes in Iranian waters comprised of: Longtail tuna, Kawakawa, Frigate tuna, Narrow-barred Spanish mackerel, Indo-pacific king mackerel. Neritic tuna fishes have attach importance in the livelihood of coastal communities or small-scale and is considered as one of the valuable Opportunities for developing employment and income so that around 35000 individuals are engaged directly in tuna fishing operation.

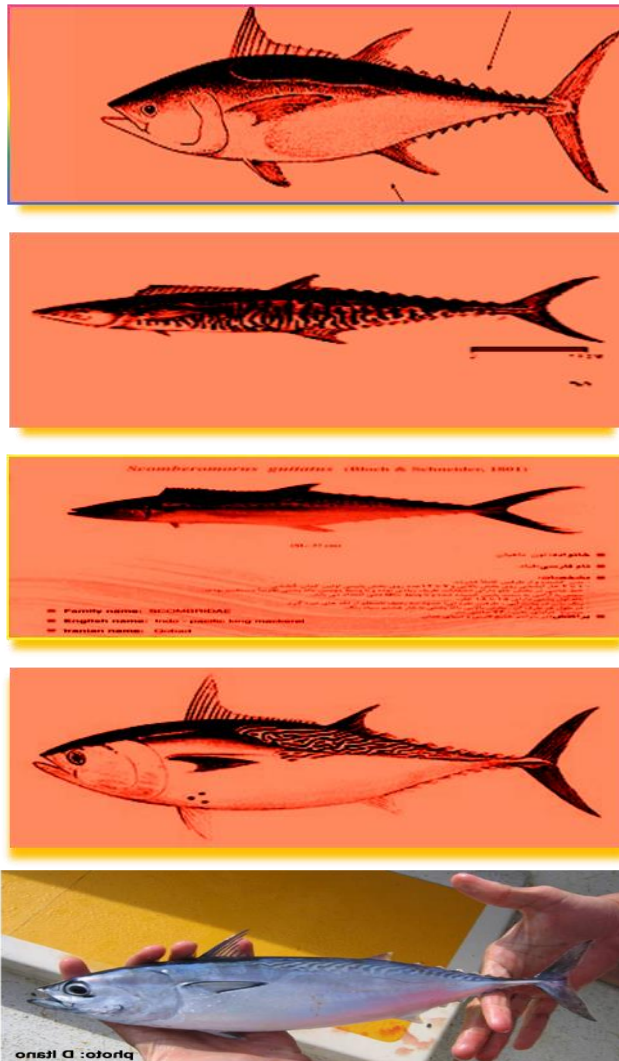


Figure 7: Picture of neritic tuna species

Of around 885 thousand tonnes of national aquatic production in 2013, around 42% was attributed to aquaculture and the rest allocated to marine capture fisheries. The marine production in Persian Gulf and Oman Sea fishing grounds include large scale species which contribute 51% and other group of species comprised of: Demersal, Small Pelagic, Shrimp and Myctophids, share 37%, 8%, 2% and 2% respectively.

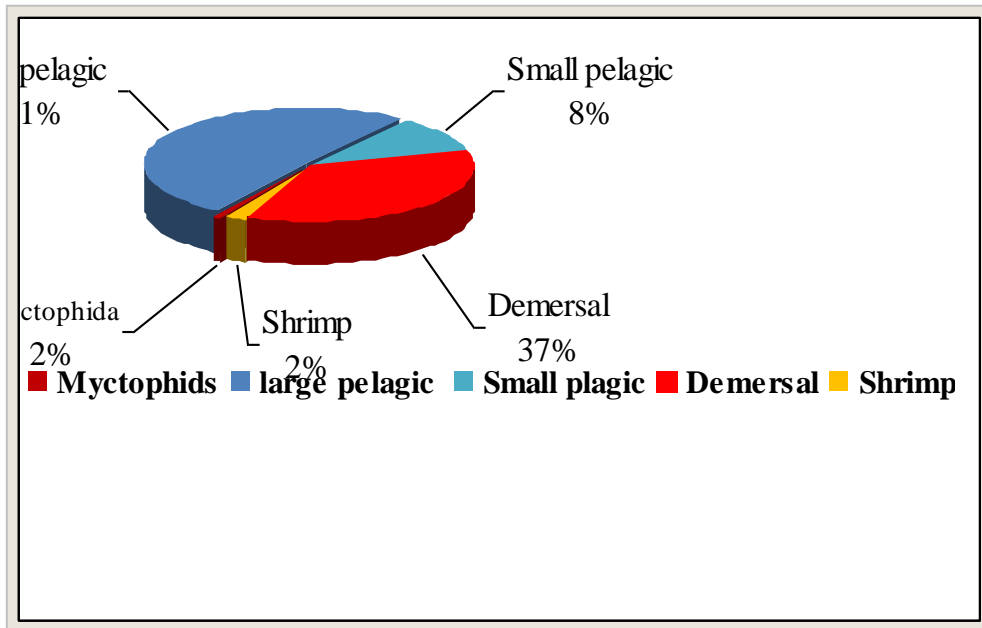


Figure 8: Picture of species group

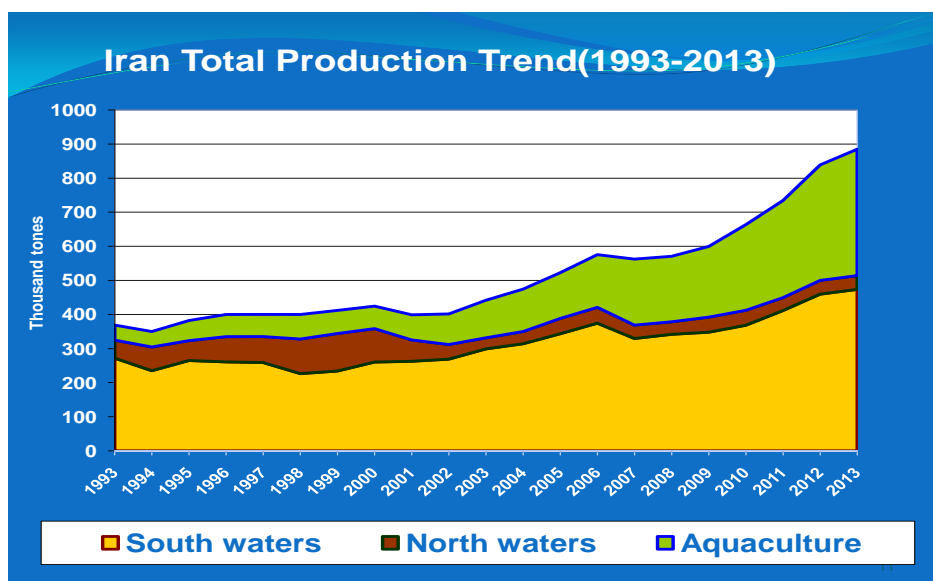


Figure 9: Picture of production trend during previous years

Neritic tunas:

Neritic tuna catches in 2013 is equivalent to 128 thousand tonnes which shows a slight decrease in compare to previous year and from an increasing trend in recent years reached a stable situation which is the result of fishery management approaches and policy. Among neritic tuna species, longtail tuna contribute major catches of the group, so that, its catch value in 2013 was equivalent to 67 thousand tonnes which in compare to 2012, shows 10% decline. The least catch volume of neritic tuna attributed to Indo-Pacific king mackerel in 2013 with around 6 thousand tones.

A review on tuna catch trend during different month of the year in 2013 shows a peak of catch on May with 23 thousand tonnes and for the next months of the year i.e. July, August and September, it faces a decrease in catch quantity. This decline of catch mainly stem from monsoon season in coastal area of Oman Sea and fishing vessels have no activity during this period.

Also an evaluation on fishing fleet activities in 2013 for tuna and tuna-like species shows that major no. of fishing crafts are fishing boats (3741 vessels) using gillnet fishery with a fishing effort of 539 thousand days and no. of active vessels using Trolling method is about 805 with a fishing efforts of 123 thousand days recorded in data collection system and as one of the suitable fishing method with a high selectivity and high quality of target species.

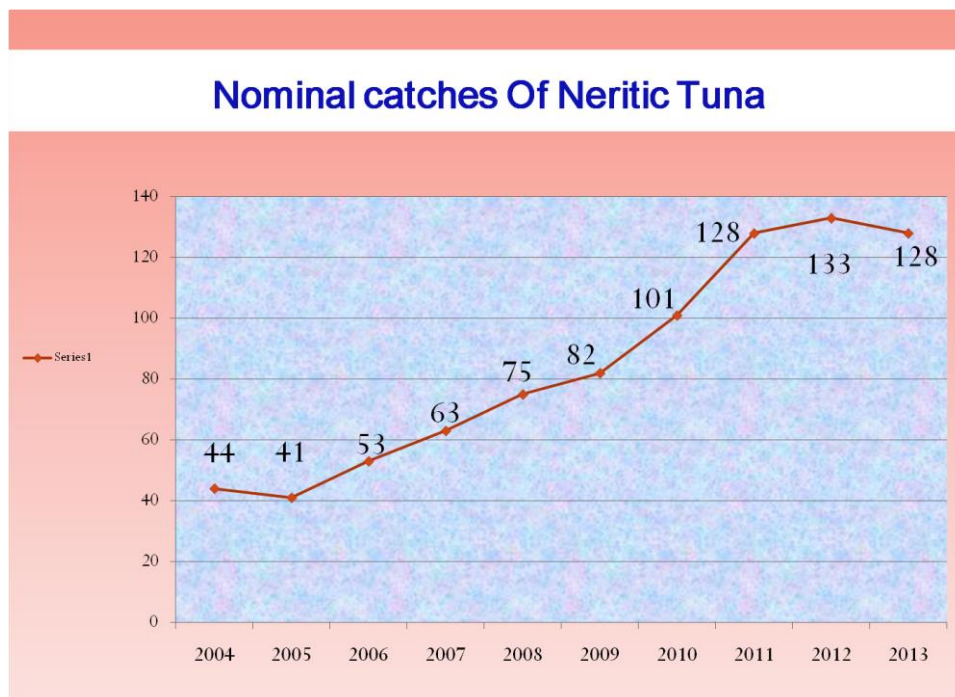


Figure 10: Trends for neritic tuna catch during recent years (2004-2013)

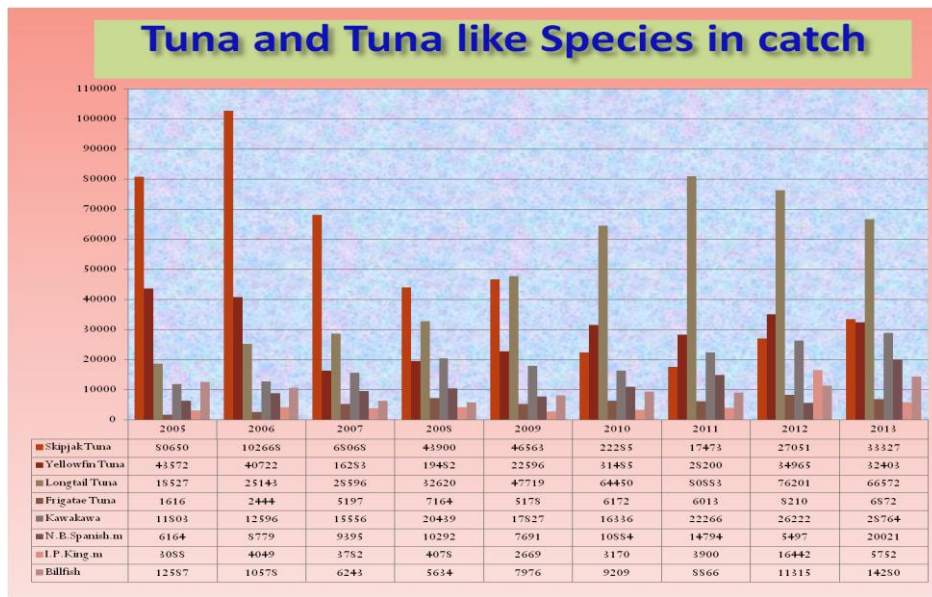


figure 11:Catches for different species during recent years

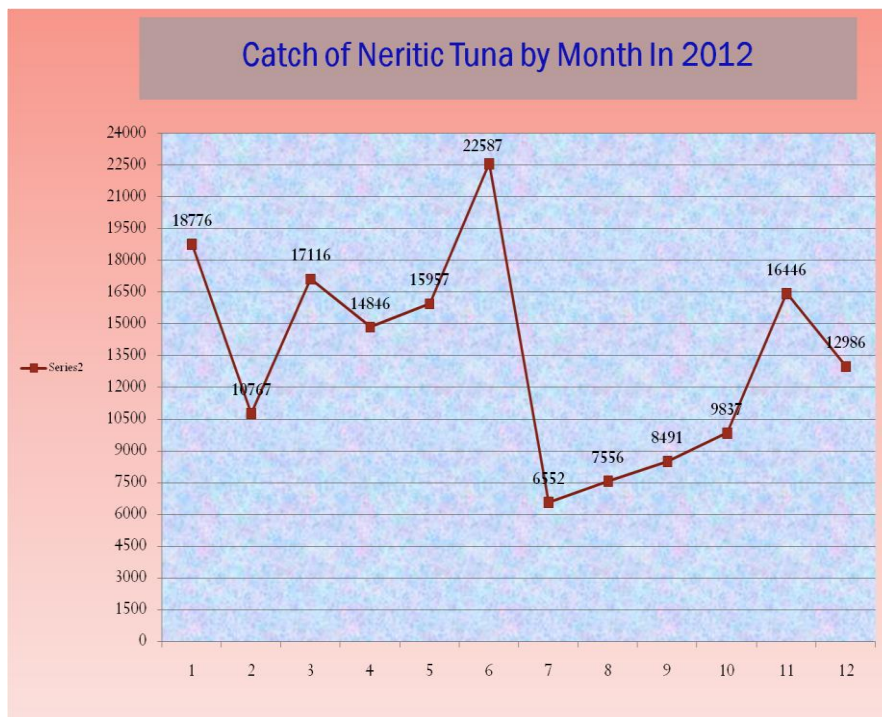


figure 12:Neritic tuna catch volume by different month

Management measures:

As exploitation of large pelagic and specifically neritic tuna fishes is important for livelihood of people and so the stocks of these species are under control and surveillance by variety of fishery management measures and there are suitable management and operational programs in line with collecting and registering capture fishery data, fishing efforts and CPUE comprehensively to follow long term and sustainable exploitation of fishery resource proportional with responsible fishery goals. The major management measures taken include coordination for recording fishery statistics based on relevant indicators and biometric data for some species and upgrading fishery data collection system in accordance with the IOTC and FAO parameters/mandate.

It also planned to collect tuna fishing bycatch and discards as a pilot plan from some fishing vessels which have been selected randomly to determine catch composition and proportion of species collected in those fishing vessels during unloading.

The end