

Assessment of social consideration on Neritic tuna in Iran fishery management

Working Party on Neritic Tuna (WPNT06)

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By: Reza Abbaspour Naderi

Head of Iranian Southern Fishery – Iran Fisheries Organization (IFO)

Email: R_Naderimail@yahoo.com

Abstract :

Marine aquatic species in Iran consists of two parts: aquaculture activities and marine fisheries activities. Each part of the activities appropriate to their specific requirements has social and technical considerations of its own. People involving with fishing community including a large percentage of the population in coastal areas of the Persian Gulf, Oman Sea and the Caspian Sea which has always been the focus of attention and sensitivity in fishing management plan.

Total volume of national aquatic production in 2014 was 947 thousand tonnes, of which 371 thousand tonnes belong to aquaculture production and around 576 thousand tonnes attributed to marine capture fisheries. Large pelagic catch volume was around 279 thousand tonnes, of which around 139 thousand tonnes belong to neritic tuna. The main neritic tuna species comprised of: longtail tuna, Kawakawa, frigate tuna, Narrow-barred Spanish Mackerel and indo-pacific king mackerel.

According to estimates, about 6120 fishing vessels (boats and dhows) are engaged in Neritic tuna fishing activities which led to creating 165184 direct and indirect job opportunity and their activities are distributed along coastal areas of Persian Gulf and Oman Sea.

The livelihood of major coastal communities in regard to neritic tuna fishing activities has been noteworthy in recent years and in addition to technical considerations related to fish stocks, measures has been taken to establish a balance in related social conditions.

To this end, localizing many IOTC rules and regulations with current country conditions, fishing community status and complying with the relevant resolutions of IOTC with the country's executive and administrative regulations several actions has been carried out, inter alia: collection of capture fisheries data, logbook and VMS data, fishing gear standardization, control and mitigating fishing efforts and so on. The details information will be described in full detail later.

Introduction:

According to official statistics of Islamic Republic of Iran in 2014, it can be said that 11563 of fishing crafts in different classes of (ship, dhows, and boats) are involved in fishing activities in our country. The production volume resulting from fishing activities in the sea is about 576 thousand tonnes, that's the result of exploitation from marine resources of Persian Gulf, Oman Sea and Caspian Sea.

Fishing activities and exploitation of tuna and tuna_like species are carried out in Iranian waters of Persian Gulf and Oman Sea in a longitude from 48° 30' to 61° 25' in East. Country fishing grounds are distributed among four coastal Provinces of Sistan and Baluchestan, Hormozgan, Bushehr and Khuzestan.

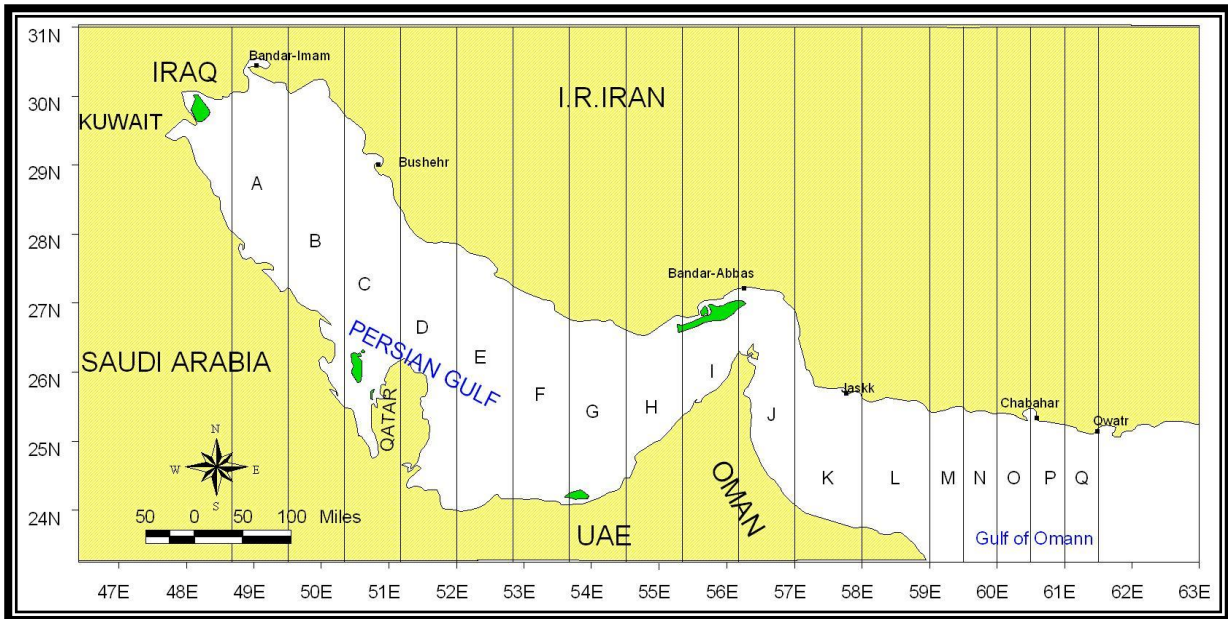


Fig. 1: Fishing grounds of Persian Gulf and Oman Sea

The livelihoods of coastal inhabitants in the southern provinces of the country is highly dependent on fishing activities. Fishing profession and presence in the sea and also other affiliated careers to fishing in the fishing industries before and after the fishing have continuously been observed by coastal communities and play an important role in the social consideration of the life (lives) of the coastal.





Fig. 2: Fishing activities

In order to provide appropriate management in exploitation process of tuna and tuna-like species, Iran fisheries organization provided efficient management measures in line with the IOTC approaches and policies which led to improvement in fishing management activities in the country.

Fishing statistics:

The amount of tuna and tuna_like species catch in 2014 is equivalent to 267 thousand tonnes compared to the previous year shown a growth rate of around 18 percent. Neritic tunas in Iran (Islamic Republic of) comprised of: longtail tuna, Kawakawa, frigate tuna, Narrow-barred Spanish Mackerel and indo-pacific king mackerel.

Total marine production volume in Northern waters of Iran (Caspian Sea) and southern waters (Persian Gulf and Oman Sea) in 2014, is equivalent to 576 thousand tonnes, of which around 536 tonnes attributed to Persian Gulf and Oman Sea fishing grounds. The major part of it is related to large pelagic with an equivalent to 279 thousand tonnes which account for 52% of total catch in Persian Gulf and Oman Sea. Also small pelagic, demersal species, shrimp and Lanternfish (Myctophidae) allocate the remaining catch to itself. (See the diagram)

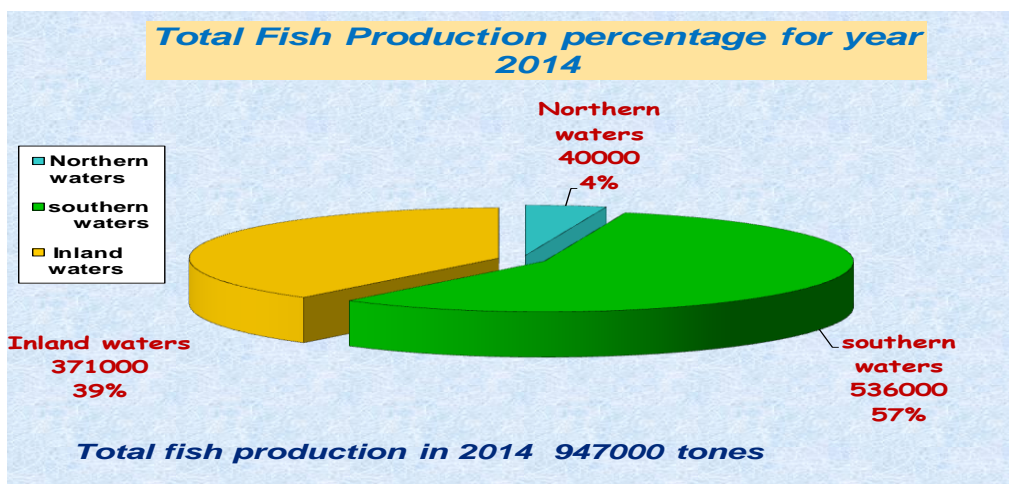
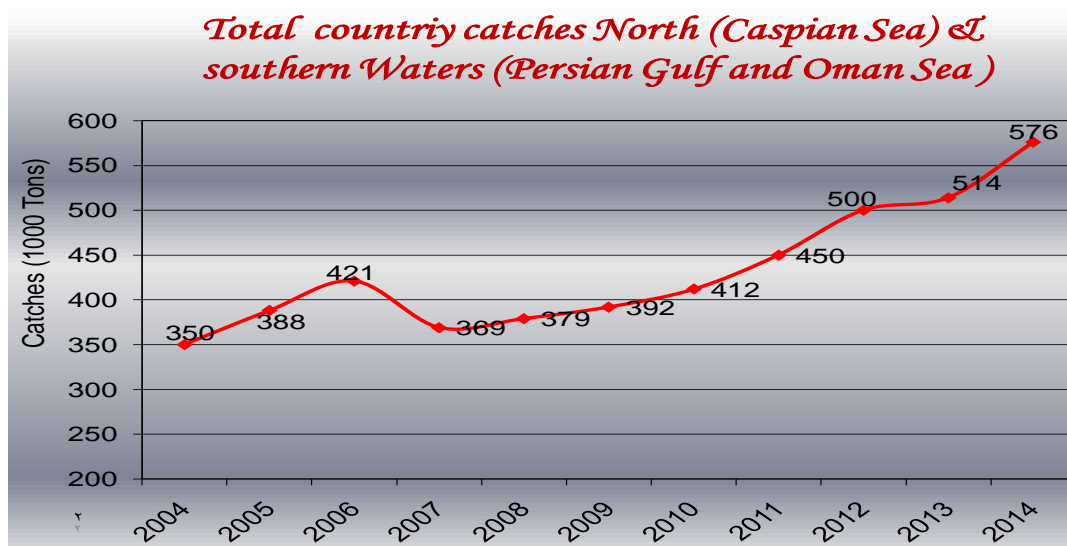


Fig. 3: Volume of marine productions of the country.



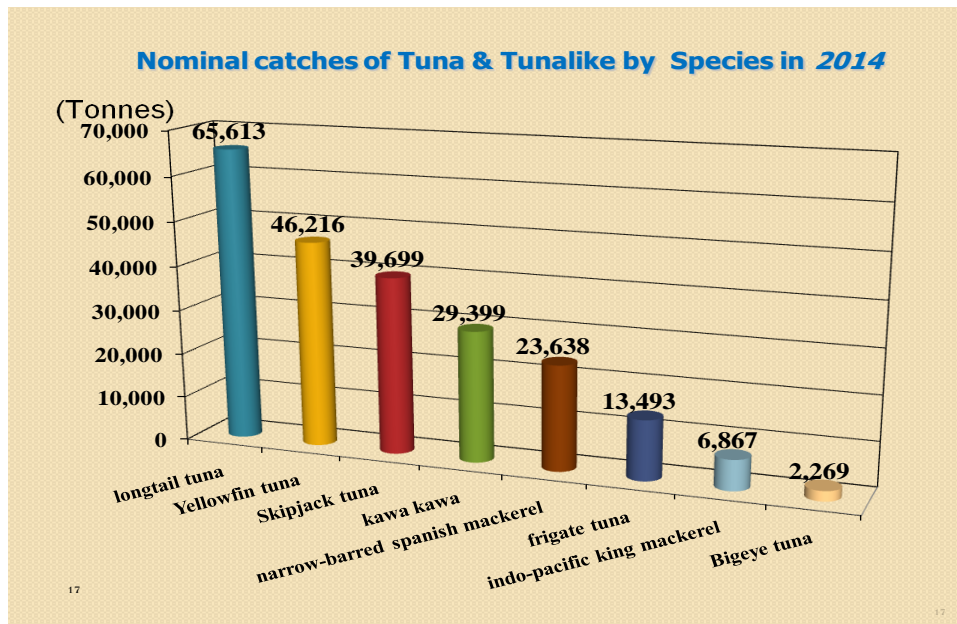


Fig 5: Catch quantity of species composition.

Number of total country fishing fleet in 2014 is equivalent to 11563 classified as fishing boats, Dhows and fishing vessels. There are 8288 fishing boats, 3224 fishing dhows and 51 ships.

Of those fishing crafts, around 6928 are active in tuna and tuna-like fishing operation, of which around 5069 are fishing boats, 1851 dhows and 8 ships.

A number of fishing boats, around 1914 using hook n line and tolling method to fish tuna species.

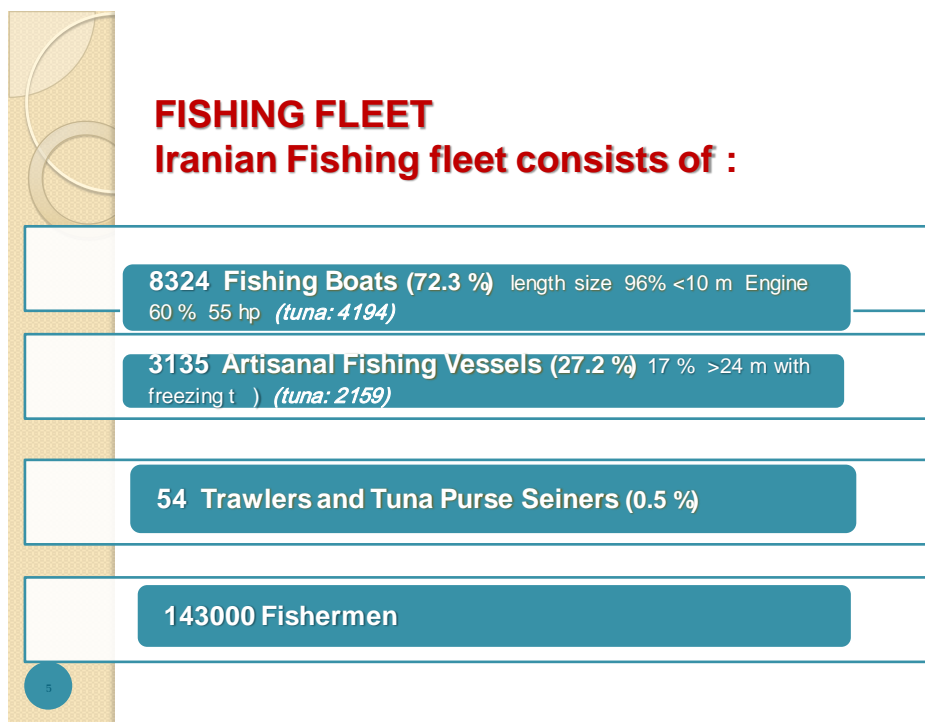


Fig. 6: No of fishing fleet.



Fig. 7: Picture of fishing



Fig. 8: Picture of fishing crafts.



Fig. 9: Picture of fishing crafts.

Fishery data will be collected by sampling. There are a no of enumerators deployed across 43 Landing Centers to compile and register catch statistics in questionnaire accompanied with measuring several fish species.



Fig. 10: Picture of fishing landing centre.

Neritic tuna fishes:

Neritic tuna fishes along Iranian southern coastal waters have suitable species diversity comprised of: long tail tuna, Kawakawa, frigate tuna, Narrow-barred Spanish Mackerel and indo-pacific king mackerel.

These species have attach-importance in vessels catch composition. The size of neritic tuna catch in 2014 is equivalent to 139 thousand tonnes which share 52% of total volume of tuna and tuna-like catch quantity.

Some main species of Neritic Tunas in the Iran

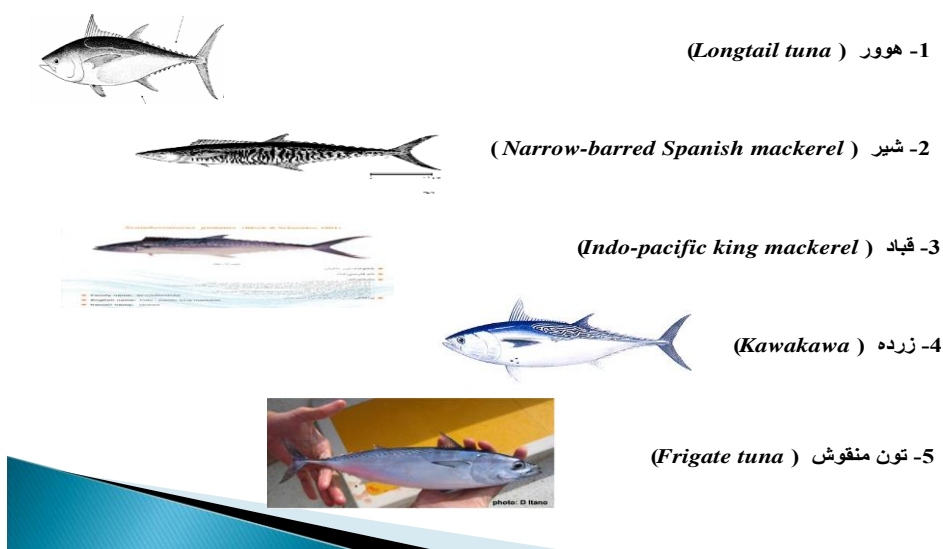


Fig. 11: Neritic tuna species.

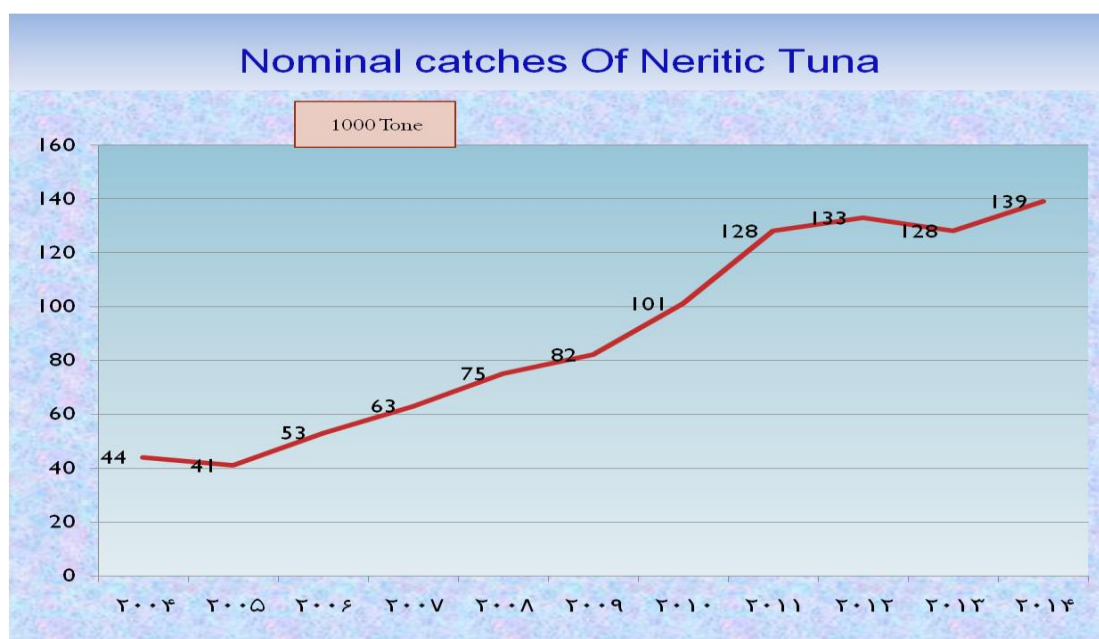


Fig. 12: Trends of neritic tuna catches

The amount of catch for different neritic species of Iran in 2014 is as follows:

The longtail tuna catch is equivalent to 66 thousand tonnes, Narrow-barred Spanish Mackerel: 29 thousand tonnes, Indo-pacific king mackerel: 7 thousand tonnes, Kawakawa: 29 thousand tonnes, and frigate tuna 14 thousand tonnes. (the numbers are rounded off)

Since 2011, the amount of catch for longtail tuna has declined by establishing tactful management on downsizing fishing efforts, so that from 81 thousand tonnes in 2011 decreased to 66 thousand tonnes in 2014.

The central concentration of neritic tuna resources is located in Exclusive Economic Zone (EEZ) of Persian Gulf & Oman Sea. Similar to previous years, in 2014, almost in July and August which is coincide with Monsoon Season the Sea is rough and there are temporal Storms around Oman Sea so, the fishing operation will be ceased because of that issue so we are facing a decline in neritic tuna catch during the mentioned period.

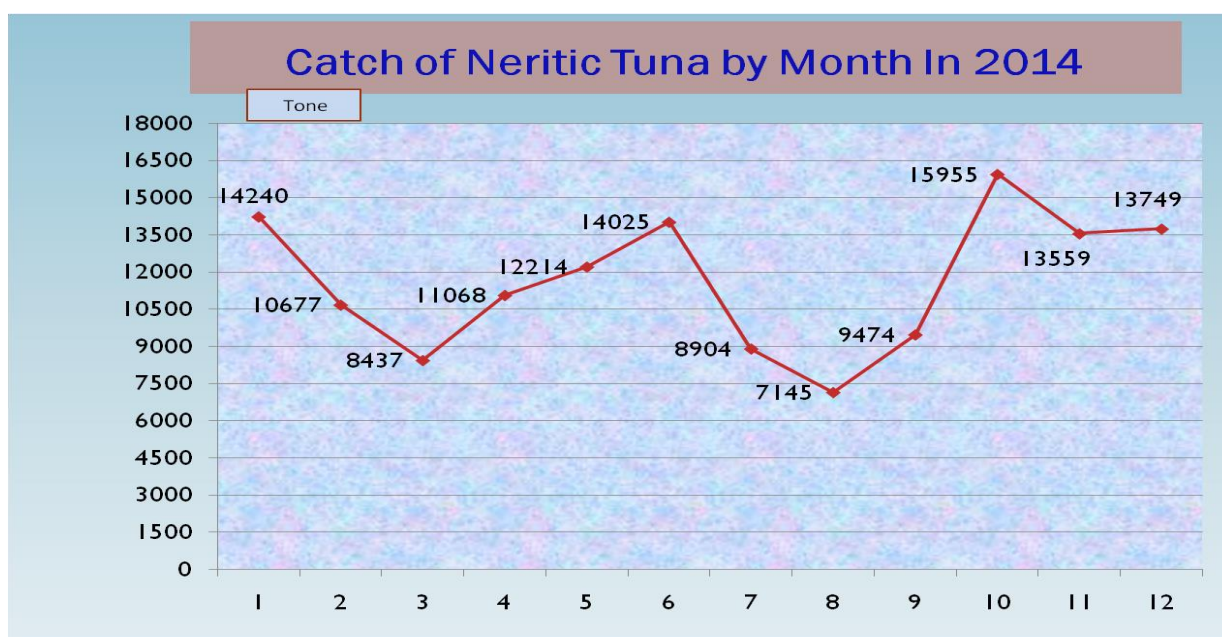


Fig. 14: Trends of neritic tuna catch in the breakdown of month in 2014

One of the management approaches of Iran fisheries organization is always to control and downsizing the fishing efforts of those species which are under fishing pressure and is considered as endangered species. In this way appropriate management measures regarding fishing method has been carried out, in this paper management measures will be discussed further and based on fishery statistics, the registered fishing effort and CPUE for exploiting tuna and tuna-like species will be taken into account.

Also code of conduct for neritic tuna exploitation management include related rules and regulations as a guideline for fish exploiters has been prepared and communicated among coastal fishery authorities and fishing cooperatives so fishermen are obliged to respect the regulation.

Social consideration of neritic tuna:

Coastal communities' livelihood in Iran is highly reliant on Sea and fishing activities and the role of fishing activities on people's subsistence is vital. Without taking account of the Social Considerations, management of fish stocks will not lead to good results.

Neritic tuna catch in Iran has a high percentage in the total catch and there is a lot of active fishing vessels engaged in tuna fishing operation. Total number of fishing crafts engaged in tuna fishing activities are around 6120 (boats: 5069 & dhows: 1051). They catch tunas with different fisheries or gear types.

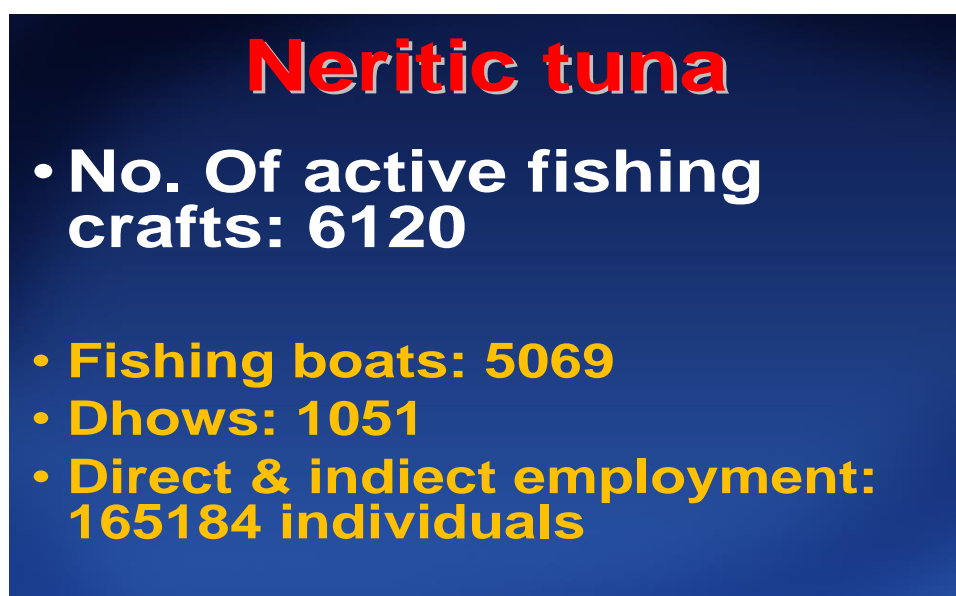


Fig. 15: Active fishing crafts engaged in neritic tuna fishing operation

There are two types of employment in neritic tuna activities, the first one is direct employment which encompasses all activities in the process of fishing operation and the second one is indirect employment which is related to post harvest activities and activities related to fishery industries. Part of the activities

include: fishing net & tackle industries, fishing crafts. Ice making & cold storage facilities, processing & packaging industries & marketing.

According to the estimates, neritic tuna fishery provided work for 41296 people directly and total employment in this sector account for 165184 individuals. (Fig. 16)

In line with the proper training courses and updating fishermen's working skills and information, required planning for holding training courses with various subject carried out annually. Inter alia: in 2013 around 30 thousand individuals training classes per day were held for active fishermen in Persian Gulf and Oman Sea fishing grounds. These courses include various subjects such as: training course for *Fishing Vessels Captains* and Co-Captains, crew members (professional and novice fishermen), Marine Diesel *Engine courses*, fishing rules and regulations, fishing cooperatives cooperation, seeking fishing grounds and strategic conduction of fishing crafts, principles and duties of fishing cooperatives, *maritime security and sovereign rights*. Specifically 700 individual per day was trained mainly on IOTC rules and regulations and planning has been carried out for making the fishermen more familiar with related regulations.

The most important management measures and approaches in Iran:

During recent years Iran fisheries organization extremely attempted to provide grounds for better management of IOTC neritic tuna rules and regulations and, of course technical advice and expertise from relevant IOTC experts has been used and related training courses both for briefing fishermen and fishing cooperatives has been carried out.

One of the main approaches to fishery management is to improve the data collection system according to demanded format. In this way the fishery statistic Software has been upgraded. Also a large number of logbooks has been designed and disseminated among a large number of fishing crafts, also guidelines for identification of Bigeye, yellowfin tuna, kawakawa, frigate tuna and bullet tuna (Persian version) for fishermen and field samplers for correct identification of different neritic tuna species has been provided.

Meanwhile, action is taken to collect fishing effort and CPUE based on geographical position and this issue is under consideration.

The other appropriate management measures taken regarding neritic tuna include: control and downsizing fishing effort for a number of tuna species and taking care of fishing tackles specifications, technical consideration for fishing crafts, panning and programming for control and surveillance of active fishing crafts, and also complying with the IOTC rules and regulations with enforcement condition of the country has been carried out.

The end