

# *Importance of Neritic Tuna catch in I.R.Iran capture fishery*

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## Abstract :

Tuna catch in Iran played an important role during previous years and not only for food security and coastal community's subsistence but also carried out an effective economic role in the country fisheries activity chain. In this way, different species of Neritic Tuna fishes are considered as a group of valuable species in terms of harvesting marine aquatic species.

Total aquatic catch of Iran in 2015 is equivalent to 582 thousand tonnes, of which 550 thousand tonnes attributed to catch in Persian Gulf and Oman Sea. Of 550 thousand tonnes, around 271 thousand tonnes belong to Large Pelagic, of which around 132 thousand tonnes attributed to Neritic tunas including: kawakawa, skipjack tuna, longtail tuna, Frigate tuna, N-Barred Spanish Mackerel, I-Pacific king mackerel Different fishing crafts are engaged in tuna and tuna-like species fishing operation. According to estimation, more than 6000 fishing boats and dhows are engaged in Neritic tuna fishing operation. Generally numerous fishing gears are used by fishermen to catch Neritic Tunas, including: gillnet, purse seine, trolling and, longline fishery. Recently a large number of fishing boats and dhows are encouraged to use various angling methods to catch Tuna fishes and this

method is developing among fishermen. This policy is in conformity with the management approaches to gradually transfer fishing method from gillnetting to other kind of angling. Conservation and Management regulations in Neritic tuna fishery sector is set out and regulated according to the country domestic regulations and IOTC approvals and resolutions. The paper will describes details of the stuff pointed out in the abstract and compare the Neritic Tuna catch statistic status and related indicators.

## Introduction:

According to official statistics of Islamic Republic of Iran in 2015, it can be said that 11369 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 582 thousands 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 2015 is equivalent to 232 thousand tonnes compared to the previous year shown a decrease rate of around 7 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 2015, is equivalent to 582 thousand tonnes, of which around 550 tonnes attributed to Persian Gulf and Oman Sea fishing grounds. The major part of it is related to large pelagic with an equivalent to 232 thousand tonnes which account for about 50% of total catch in Persian Gulf and Oman Sea. Also small pelagic, demersal species,

shrimp and Lanternfish (Lantern fishes) allocate the remaining catch to itself. (See the diagram)

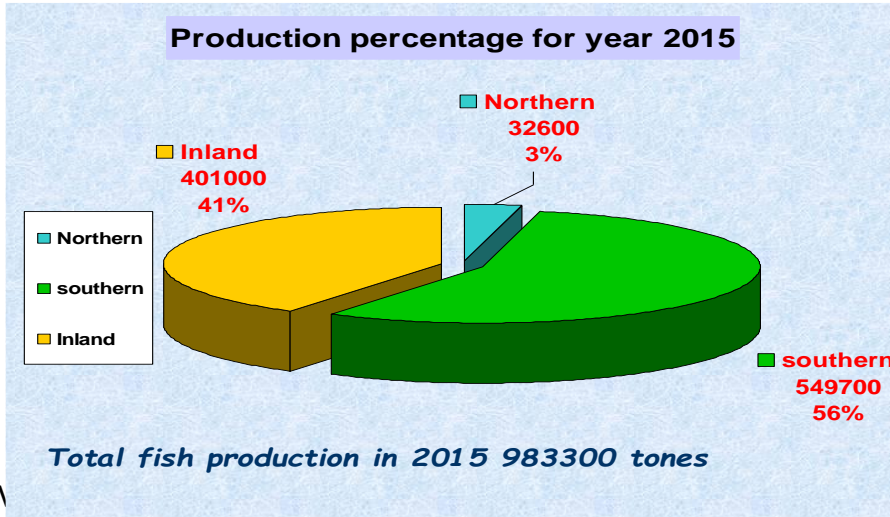
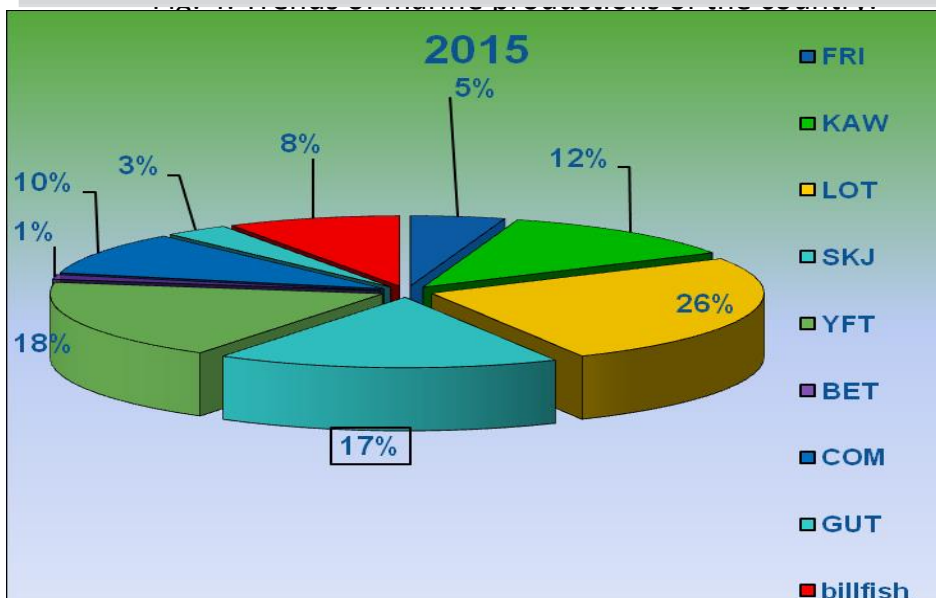
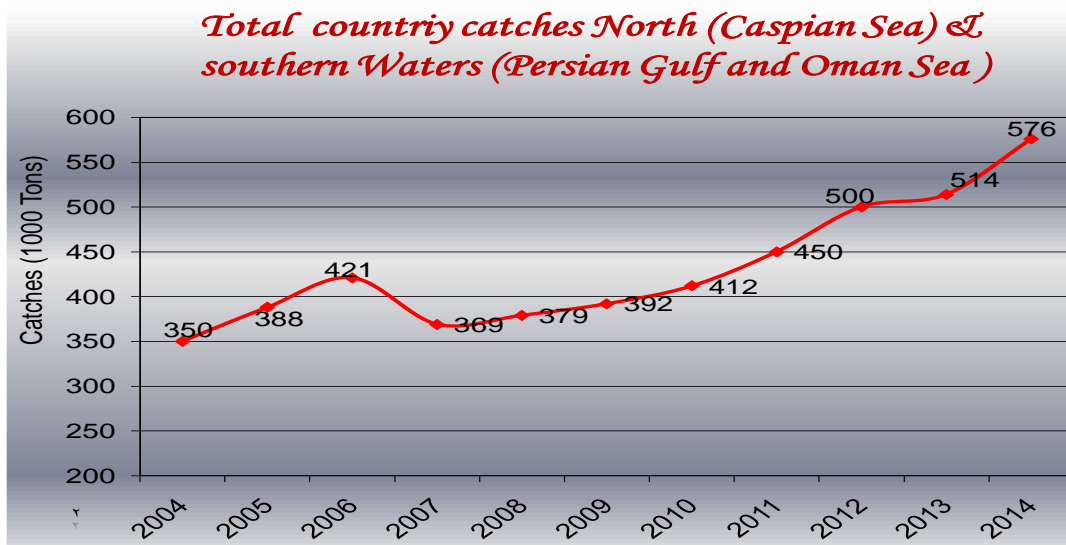


Fig. 3: \



No of total country fishing fleet in 2015 is equivalent to 11369 categorized as fishing boats, Dhows and fishing vessels. There are 8099 fishing boats, 3198 fishing dhows and 72 ships.

Of those fishing crafts a no of 6920 are active in tuna and tuna-like species of which around 5064 are fishing boats, 1848 dhows and 8 ships.

Part of fishing boats it means around 2010 of them using hooking and, tolling method to fish tuna species.

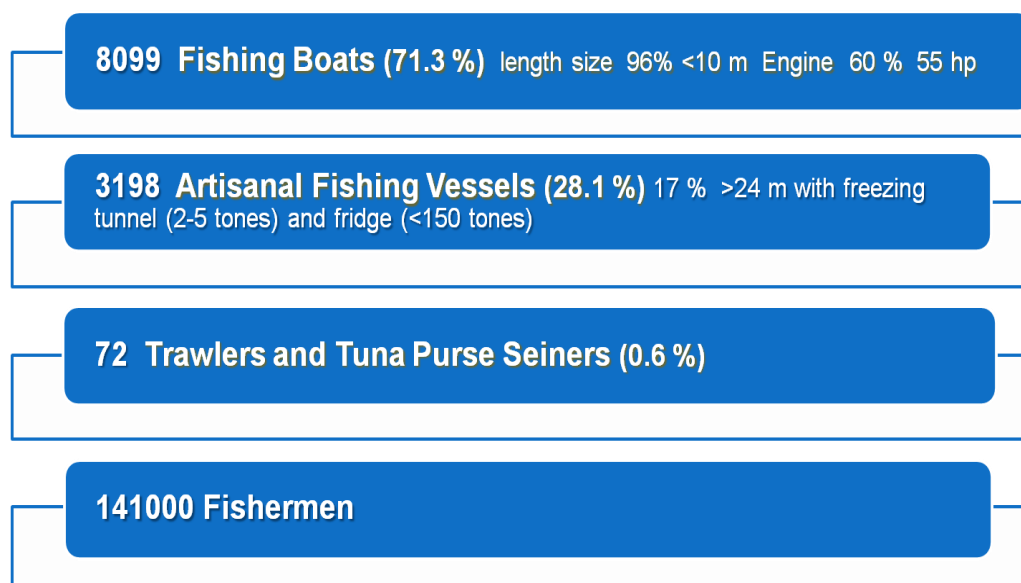


Fig. 6: No of fishing fleet.



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 fishing landing centre to compile and register catch statistics in questionnaire and also several fish species are measured.





Fig. 10: Picture of fishing landing centre.

## Neritic tuna fishes:

Neritic tuna fishes in Iranian southern coastal waters have suitable species diversity and comprised of:  
 These species have attach-importance in fishing crafts catch composition. The size of neritic tuna catch in 2015 is equivalent to 129 thousand tonnes which share 55% of total volume of tuna and tuna-like catch quantity.

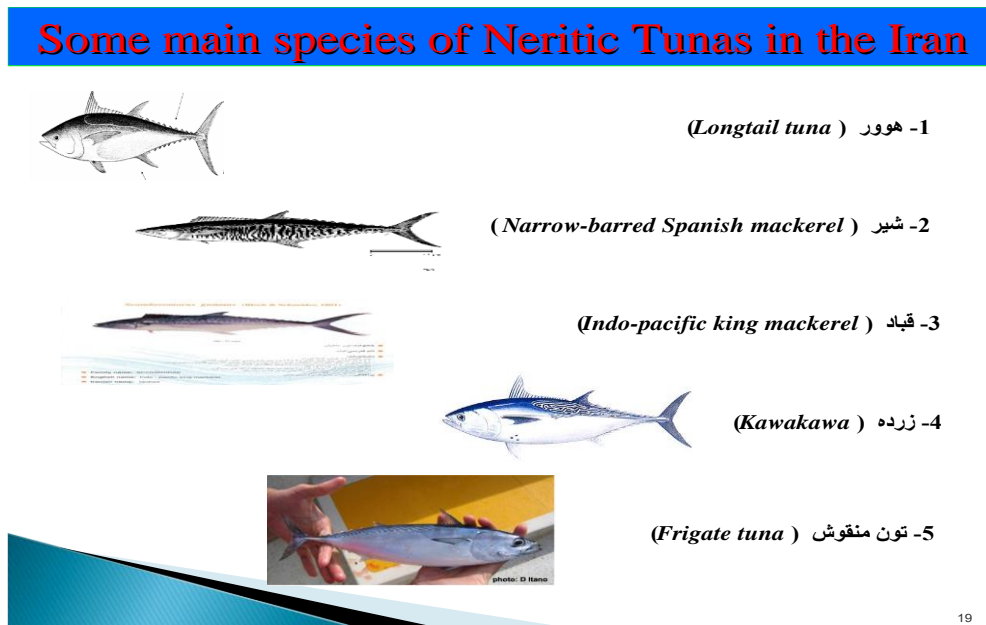


Fig. 11: Neritic tuna species.

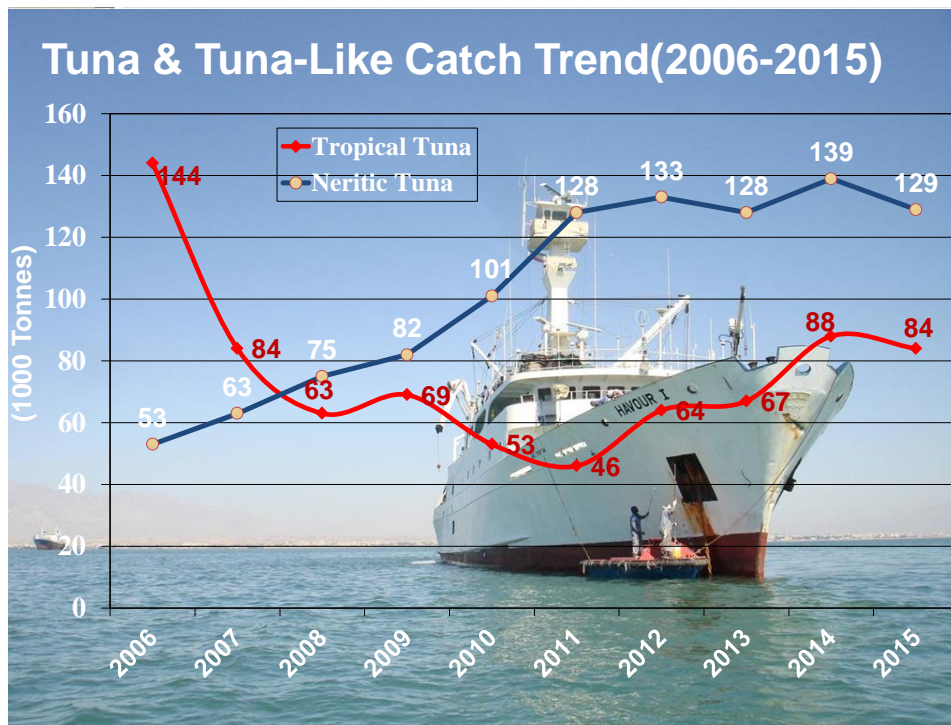


Fig. 12: Trends of neritic tuna and Tropical Tuna catches

## The amount of catch for different neritic species of Iran in 2015 is as follows:

The amount of longtail tuna catch is equivalent to 60 thousand tonnes, Narrow-barred Spanish Mackerel: 22 thousand tonnes, indo-pacific king mackerel: 7 thousand tonnes, Kawakawa: 28 thousand tonnes, and frigate tuna 11 thousand tonnes. (the numbers are rounded off)

Also the catch amount for longtail tuna since 2011 has declined by establishing tactful management on downsizing fishing efforts, so that from 81 thousand tonnes in 2011 decreased to 60 thousand tonnes in 2015.

The central concentration of neritic tuna resources located in Exclusive Economic Zone (EEZ) of Persian Gulf & Oman Sea. Similar to previous years, in 2015, almost in July and August which is coincide with Monsoon Season the Sea is rough and there are temporal Storms in 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.

One of the management approaches of Iran fisheries organization is always monitoring and downsizing the fishing efforts of those species which are under fishing pressure and are treated 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 take into account.

Also code of conduct for neritic tuna exploitation management include related rules and regulations for exploiters has been prepared and communicated and 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 are a lot of active fishing vessels engaged in tuna sector. 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. 13: 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 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)

## 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 designing and disseminating on board a large

number of fishing crafts, providing 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. 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 the IOTC rules and regulations with enforcement condition of the country.

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