

The role and importance of Neritic tuna catches in I.R. Iran fishing activities

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Abstract

In Islamic republic of Iran about 6,500 out of 12,000 fishing craft are engaged in tuna fishing activities. The catch quantity of tuna and tuna-like fishes in 2012 is equal to 206 Thousand tonnes of which 144 thousand tunnes attributed to neritic tuna fishes.

Neritic tuna fishes have attach importance in the livelihood of coastal communities and is considered as one of the valuable Opportunities for developing employment and income and long-term and sustainable exploitation of those marine resource in line with responsible fishery were always pursued by country fisheries management.

An analysis of tuna catch trend since 2005 shows that the catch of this group of species during recent years facing gradual and relative increase.

According to characteristics and importance of tuna catches, there have been formulated and enforced suitable managerial and operational program for improving related activities in the country inter alia: coordinating to input catch statistics and biometric data of species and upgrade fishery data collection software, designing specific logbooks, train the On-board Observers , crew of fishing crafts, providing guidelines for identification of Bigeye and yellowfin tuna, analysing catch composition and status of tuna bycatch and discards, complying IOTC resolutions and announcement with enforcement condition of the country including providing the code of conduct for neritic tuna catch fishing management and so on.

Introduction

Without doubt the neritic catch has an important role in livelihood and social welfare of coastal communities and has significant effect on employment, livelihood and economical aspects of people.

Tuna species in different fishing grounds of Iran (Islamic Republic of) has a variety and dominant species comprised of: longtail tuna, Narrow-barred Spanish Mackerel, Kawakawa, frigate tuna, indo-pacific king mackerel. Part of these species utilized in fish cannery plants and the rest consumed as food by people.

Main fishing grounds of neritic tuna and the position of their stocks exploitation in Iran mainly in coastal areas of Persian Gulf and Oman Sea are located between longitude 48 degree 30 minutes to 61 degree 25 minutes east. Total catch production in the mentioned fishing grounds is equal to 442 Thousand tones which include: large pelagic, small pelagic, demersal, shrimp and lanternfishes. Major catch is allocated to large pelagic with 232 Thousand tones (52.4 % of total catch) in Persian Gulf & Oman Sea.

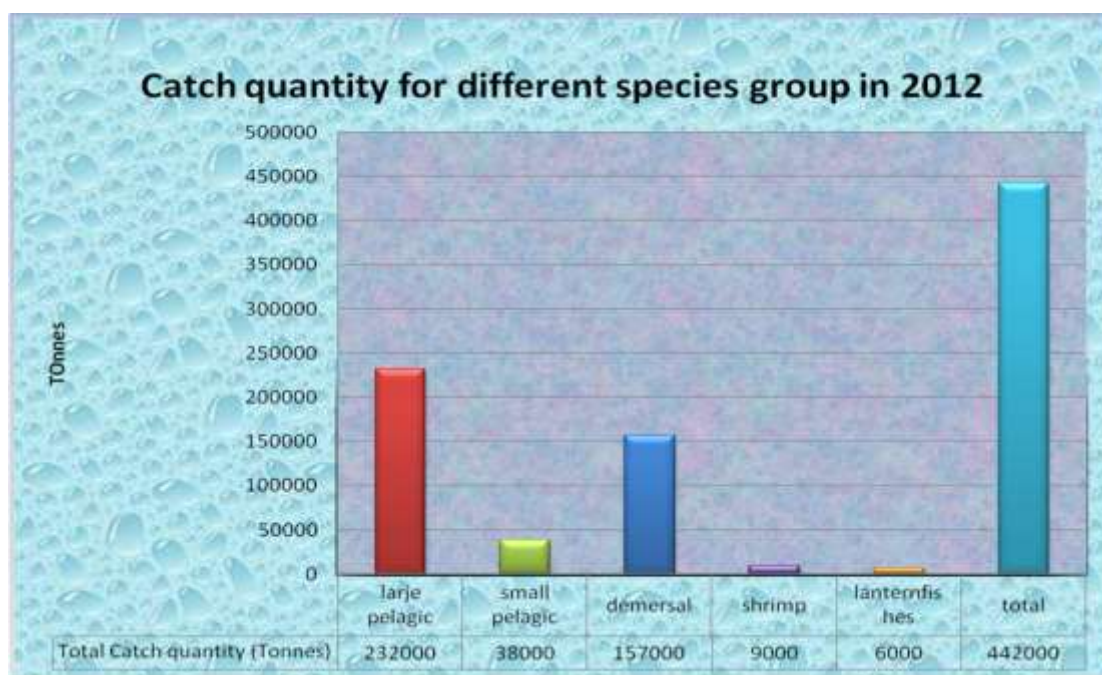


Fig1. Different species Groups in 2012

Fishermen and fishing arrangements

Fishing activities in the country are organized in fishing arrangements and fishing cooperatives as managed as a non-governmental entity arose from a fishing community. These fishing arrangements serving as a backup party to provide fuel transferring, providing fishing tackles and trip supply and even selling fishers catch production. Of course fishery governmental system will control and monitor the function of these fishery arrangements. At present there are 390 fishing cooperatives in the country.

Total no of fishing fleet in the country is nearly about 12000 of which about 6500 fishing vessels are engaged in tuna fishing activities. Of all fishing crafts 8500 are fishing boats, 3163 are fishing dhows and 40 are fishing vessels. Numbers of fishermen are 142000 individuals which are directly engaged in fishing activities.



Fig 2. Fishing fleet

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Catch quantity

Catch quantity in 2012 relatively increased in compare to last year. Catch quantity in the breakdown of species groups are: large pelagic: 232 thousand tones, Demersals: 157 Thousand tones, small pelagic: 38 Thousand tones, Shrimp: 9 Thousand tones and Lanternfishes: 6 Thousand tones. The catch trend from 2000 is shown on the following Diagrams.

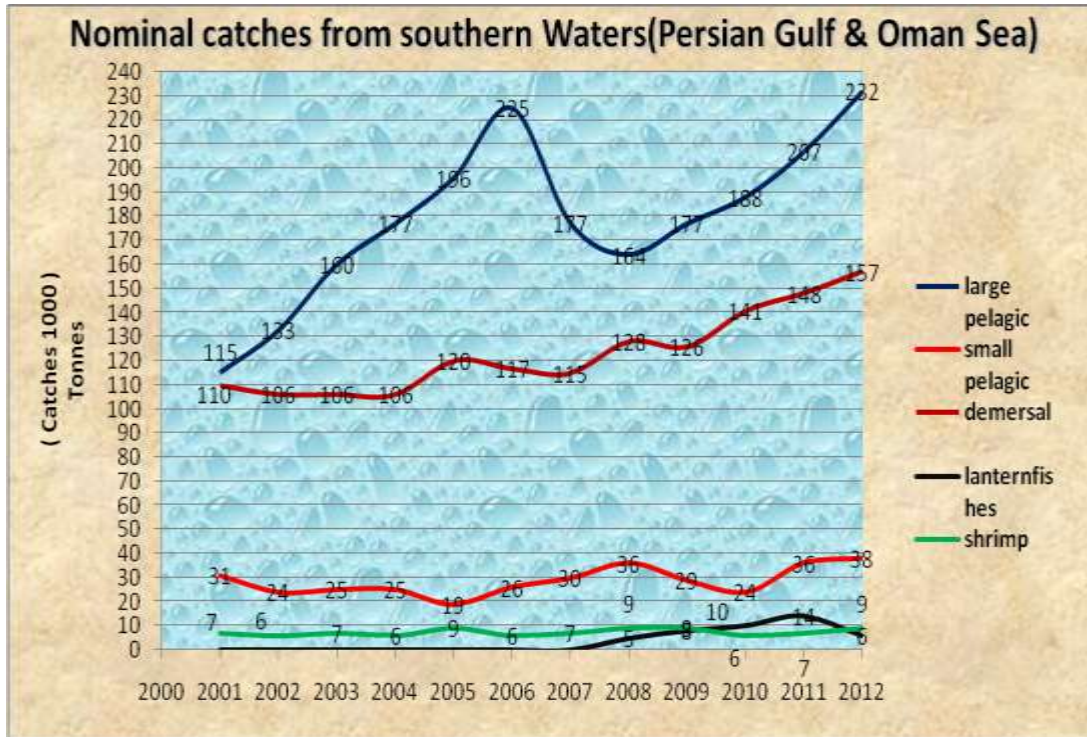


Fig 3. Catch trend by species

Catch quantity for tuna and tuna-like fishes in 2012 are equal to 206 thousand tones of which 144 thousand tones is attributed to coastal waters and 62 thousand tones to offshore waters. During 2005 and 2006 catch quantity for tuna and tuna-like fishes were in its maximum value in compare to previous years i.e. from 2000 onwards but during recent years the volume of catch quantity for tuna and tuna-like species has increased in the coastal area fishing grounds which resulted from lesser presence and lesser activities of fishing fleet in offshore waters and the reason for that is insecurity and emerges of piracy phenomenon in Indian ocean.

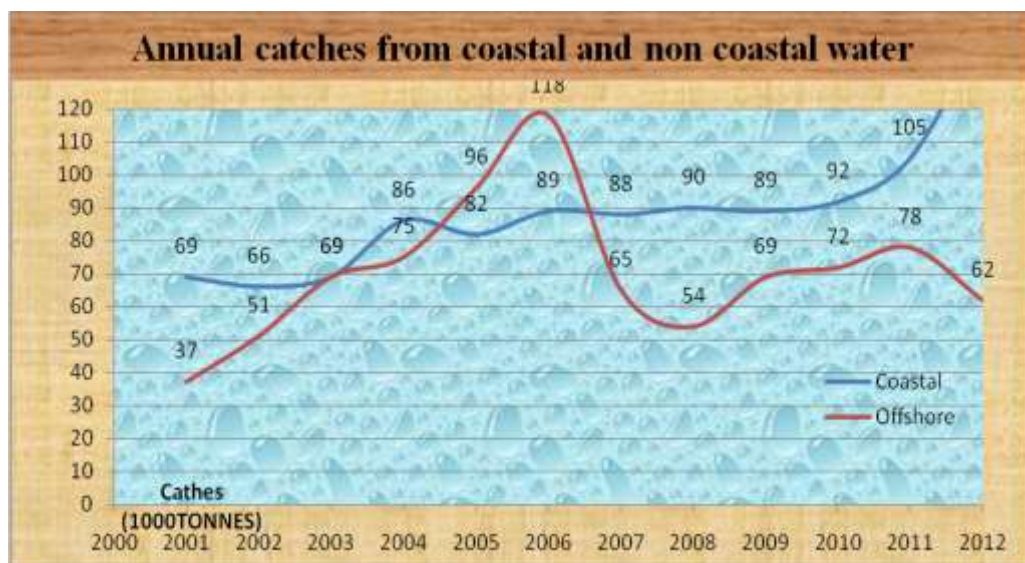


Fig 4. Annual catches from coastal and non-coastal water

Catch quantity of different species of neritic tuna in Iranian sovereignty waters are collected individually. These species include: longtail tuna, yellowfin tuna, skipjack tuna, kawakawa, bigeye tuna, narrow-barred Spanish mackerel, indo-pacific king mackerel. The catch trend from 2001 onwards can be analyzed for fishing efforts and CPUE which could give a broad picture of species stocks.

Capture data collection approach carried out by sampling 10 % of fishing vessels randomly and on the basis of total fishing efforts these data will then be raised. Sampling carried out randomly for picking out 10 % of fishing vessels from different landing centers.

Neritic tuna catches

As noted before, neritic tuna fishing play an important role in terms of socio-economic aspect in the livelihood of coastal communities. Neritic tuna fishes in Iranian waters comprised of: longtail tuna, yellowfin tuna, skipjack tuna, kawakawa, bigeye tuna, narrow-barred Spanish mackerel, indo-pacific king mackerel.

Neritic tuna catches in 2012 is equivalent to 144 thousand tons. Over the last few years we are facing an increase in tuna fishing catches, So that the amount of 50 thousand tons in 2005 increased to nearly 144 thousand tons in 2012, and shows 288% increase.

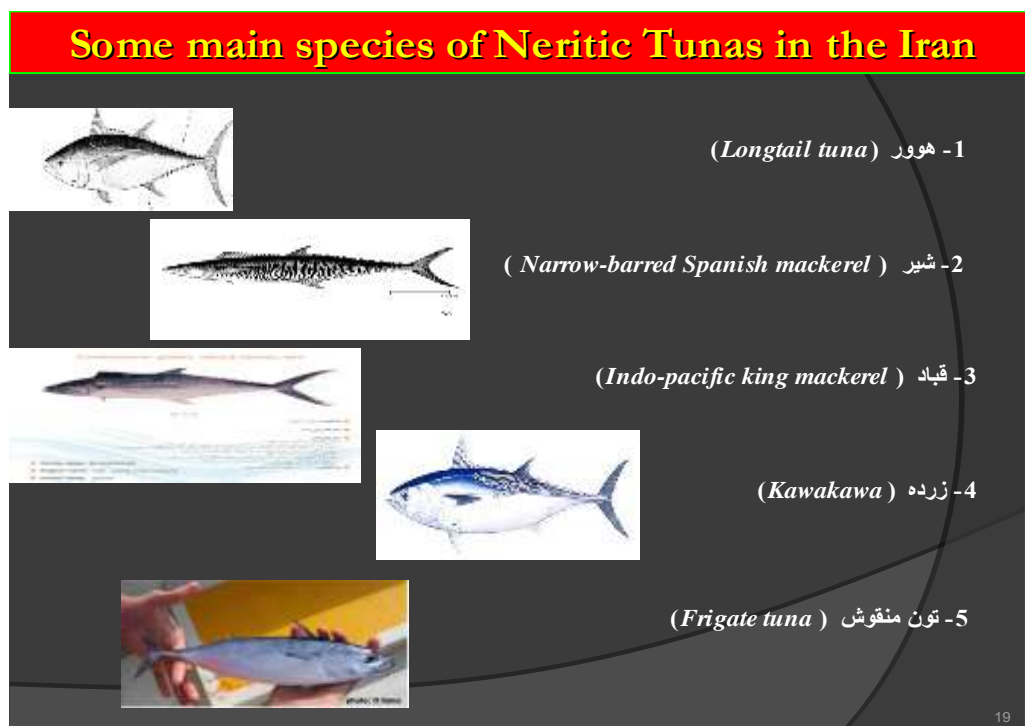


Fig5. Main species of Neritic Tunas in the Iran

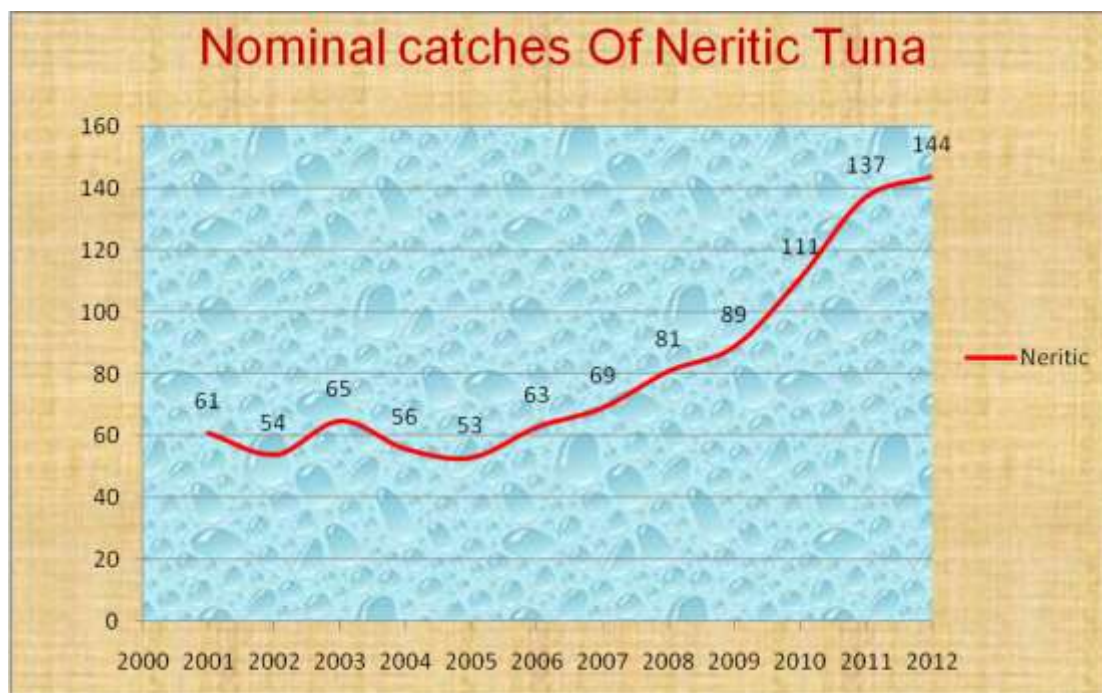


Fig 6. Nominal catches of Neritic Tuna

Also in June and July which is coincidence with monsoon season in Oman Sea, a huge No. of fishing vessels are alongside and consequently neritic tuna catch will decrease during this period.

Fishing efforts for tuna and tuna-like species and for different vessel categories are registered for gillnet trolling and purse seine fishery, and CPUE calculated by collected fishery data.

Biometric data for some neritic tunas like: Narrow-barred Spanish mackerel and longtail tuna have been collected. Average fork length for narrow-barred Spanish mackerel in 2011 for gillnet fishery is 82.6 cm, whereas Length maturity (LM50) of this species is 85 cm. also average fork length for longtail tuna for gillnet fishery during recent years is always less than LM 50 of this species which is 73 cm.

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 accordance with the IOTC and FAO parameters.

Also specific logbook for tuna fishes has been designed and disseminated among 400 fishing craft and training courses for captain and crew members convened on how to fill out logbook. However for establishing more accuracy to compile and complete the data collection, some observers picked out through each fishing craft and they received specialized training.

One of the problems for species identification is relevant to yellowfin tuna and bigeye tuna because they are very similar to each other. So to solve this problem a practical guideline designed in Persian and disseminated among field samplers.

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

And the pilot and a random selection of mixed hunted and captured in multi-species fishing vessel during discharge and used as a complementary controlling process besides other evaluations on catch statistics.

Also comply with the relevant resolutions and notification of IOTC secretariat with the country's executive and administrative regulations including prepare and communicate code of conduct for neritic tuna is one of the approaches which will be followed in Iran.

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.

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