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Trends of Tropical Tuna catch in Iran

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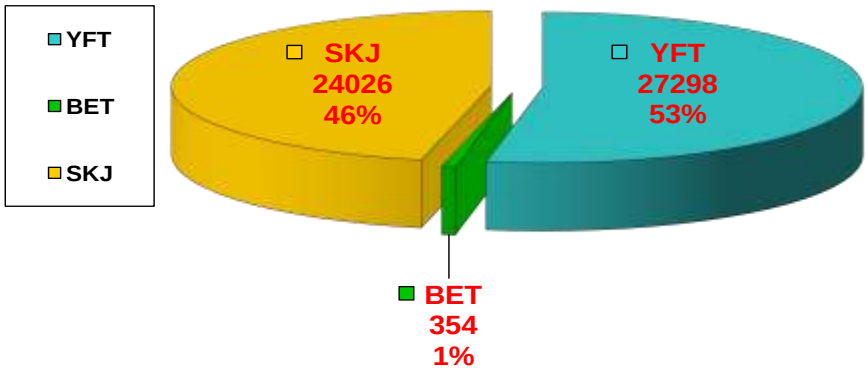
Average catch of tropical tuna in Indian Ocean operated by Iranian fishing fleet during recent 5 years (2008 to 2012) was equivalent to 51,678 tonnes where average 5 years catch for skipjack was 24,026 tonnes, yellowfin tuna: 27,298 tonnes and Bigeye tuna 354 tonnes.

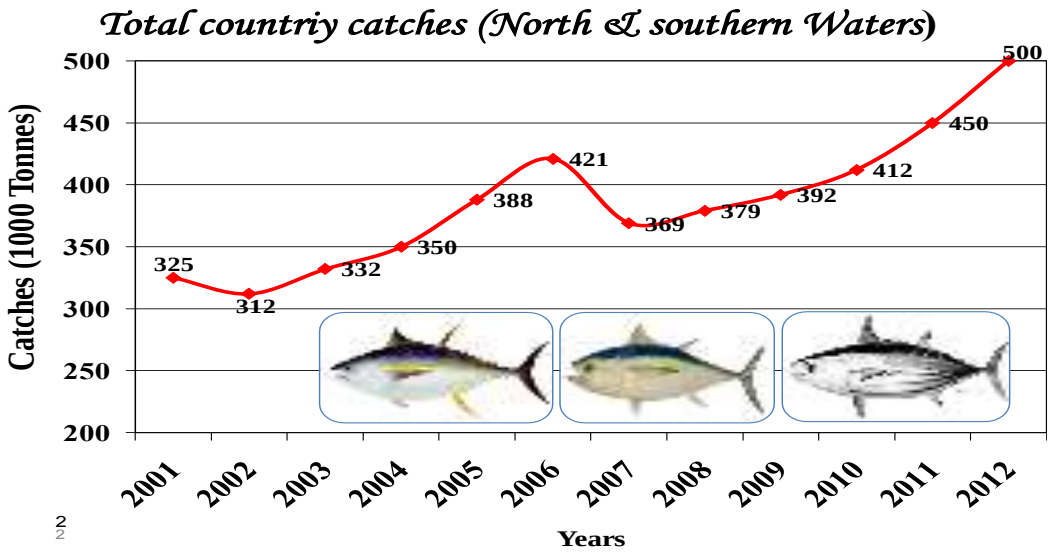
Average catch for tropical tuna during recent 5 years in Indian Ocean by species, operated by Iranian fishing fleet (2008 – 2012)



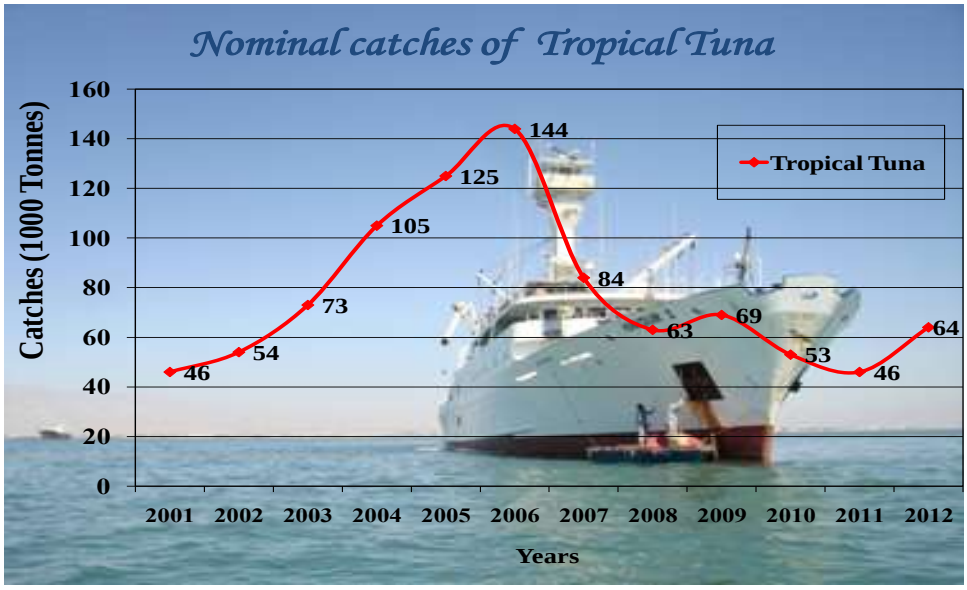
Catch quantity of three tropical species in Iran in 2012 is equivalent to 63,660 Tonnes which shows around 39% growth in compare to last year. But a decline of 55% in compare to 2006.

Country catch in 2012 account for 500,000 tonnes of which 225,000 tonnes belong to tuna and tuna-like species (45% of total country catch) and country catch in 2006 was equivalent to 420,000 tonnes of which 207,000 tonnes was belong to tuna and tuna-like species (49% of total country catch). Tropical tuna catch in 2006 was around 144,000 tonnes (34% country total catch) which declined by 56% in 2012 to 64,000 tonnes. In fact after piracy phenomenon,

tropical tuna catch decreased dramatically specifically for Yellowfin and skipjack tuna.

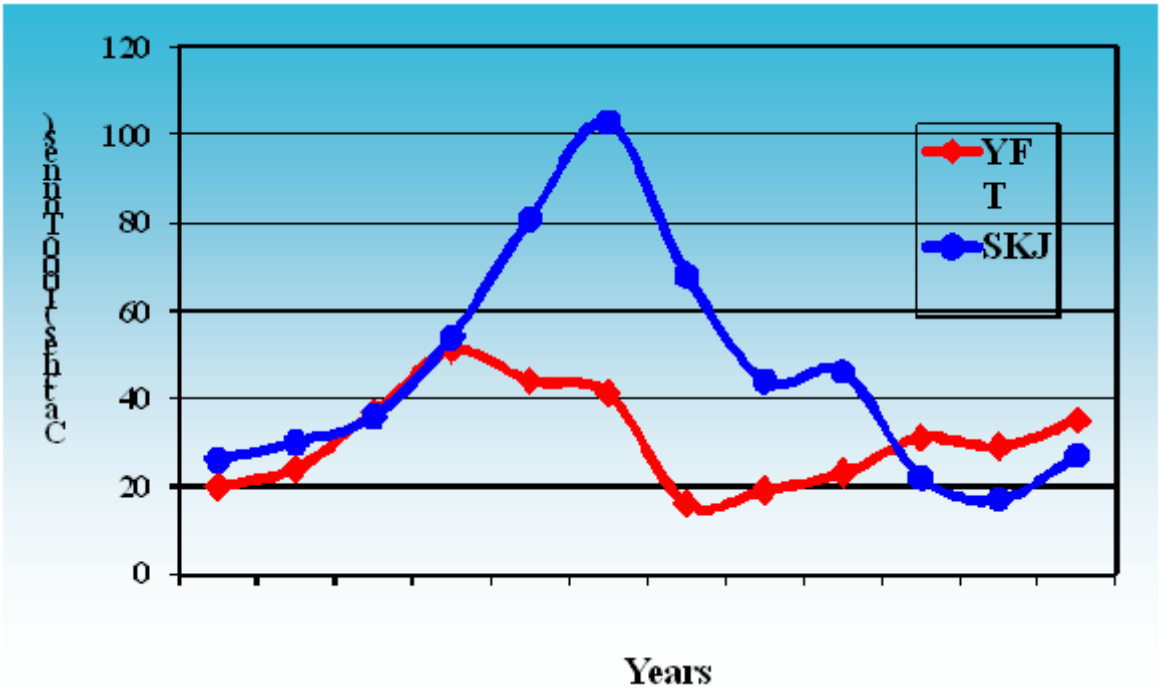


Given that total country catch in 2012 in compare to 2006 increased around 19%, but in contrast, tropical tuna catch in the same period declined by 56%.



This decline was mainly due to piracy phenomenon which lead to dramatically decline of skipjack catch quantity from 103,000 tonnes in 2006 decreased to 27,000 tonnes in 2012 (a decline of 74%) also catch quantity of yellowfin tuna from 41,000 tonnes in 2006 to 35,000 tonnes in 2012 (a decline of 15%).

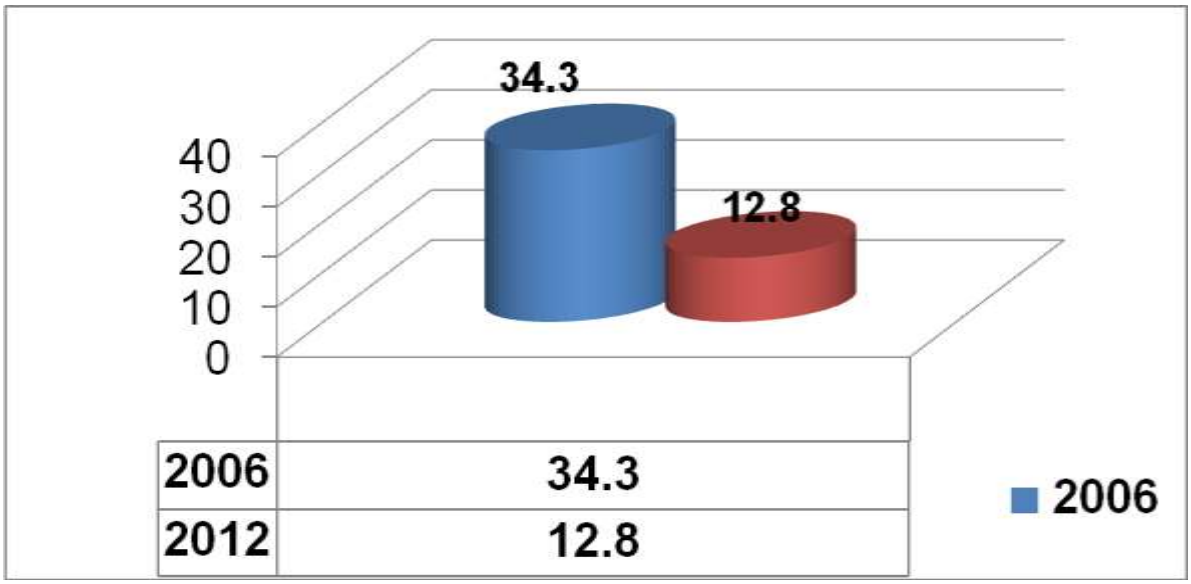
Nominal catches of tropical Tuna by Species



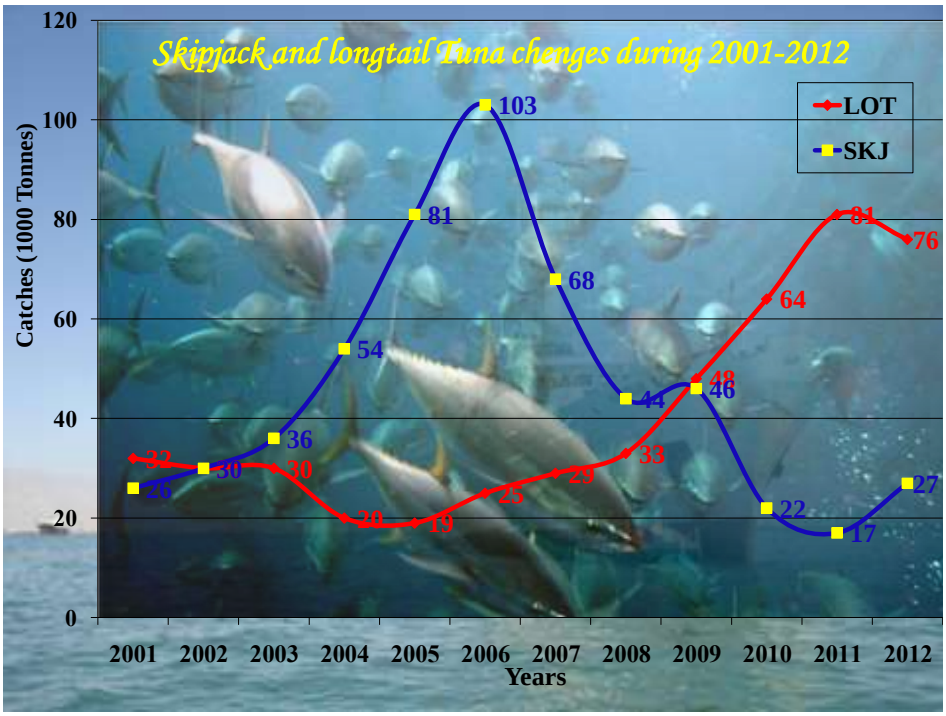
In 2012 around 1644 tonnes of Bigeye Tuna was caught, of which 161 tonnes by purse seine and 1483 tonnes by Gillnet was reported.

The proportion of tropical tuna catch with total country catch in 2006 was around 34.3% which dramatically declined with 12.8% in 2012.

The proportion of Tropical Tuna catch to country Total catch



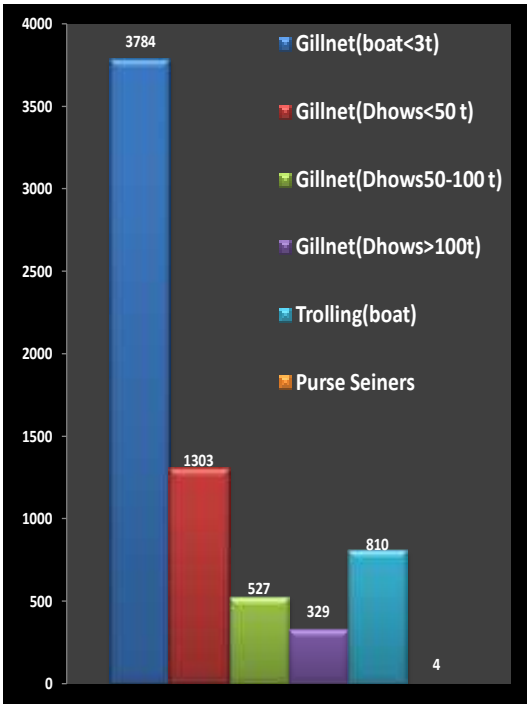
After piracy phenomenon which led to sharp decline of tropical tuna, fishermen transferred their fishing grounds from offshore to coastal fishing areas and operate there so fishing efforts in those areas of southern provinces increased and lead to a rise of 204% for longtail tuna from 25,000 tonnes in 2006 to 76,000 tonnes in 2012.

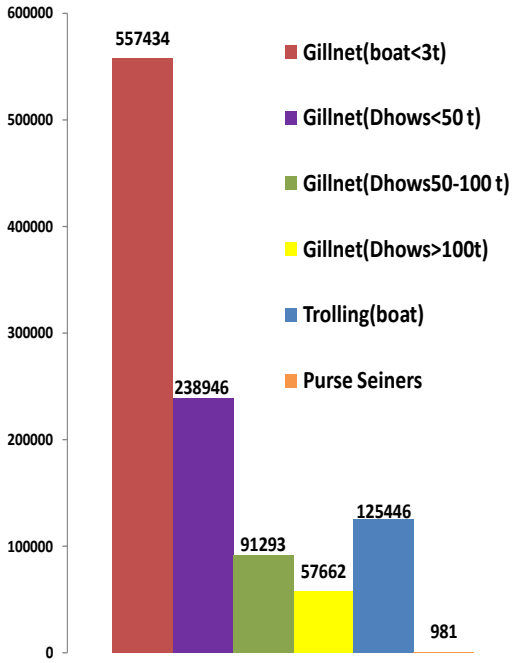


Of 226,000 tonnes of tuna and tuna-like catches, 5,154 tonnes caught by 4 Active purse seiners, 215,000 tonnes by 5,943 gillnetters (Dhows plus boats) and 5,169 tonnes by 810 trolling boats. As you see, main fishing method in the country is Gillnet.

In 2012, for tuna and tuna-like catches around 1,071,000 days fishing efforts was Carried out, of which 945,000 days was operated by Gillnet, 981 days by purse seine and 125,000 days done by Trolling fisheries.

Iranian fishing active vessels & fishing efforts in Southern waters by gear type and size in 2012 for *Tuna &Tunalike Species*





Comparing the catch of 10 country which are the main exploiter of Tropical Tuna in Indian Ocean

Of total Indian Ocean catch, around 50 to 55 % attributed to Tropical tuna which comprised of: skipjack (48%), Yellow fin (41%) and Big eye tuna (11%) in 2011.

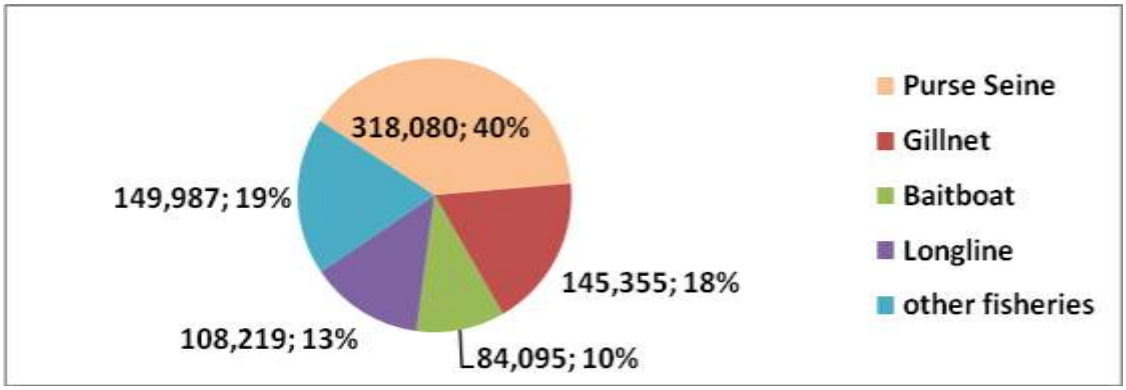
10 countries in Indian Ocean with more than 89% are the main exploiter of these species. Among them Indonesia, Spain, Seri Lanka, Maldives & Seychelles have the major exploitation respectively (67%).

Tropical Tuna catches in IOTC area in 2011

	country	YFT(t)	BET(t)	SKJ(t)	TOTAL
1	**Indonesia**	31,969	30,861	85,076	147,905
2	**Spain**	52,350	10,898	67,247	130,495
3	**Sri Lanka**	30,215	2,446	67,059	99,720
4	**Maldives**	34,941	634	57,672	93,247
5	**Seychelles**	26,494	9,417	32,990	68,902
6	**Iran**	28,380	525	17,473	46,378
7	**France**	21,201	3,594	17,862	42,656
8	**India**	22,343	3,207	16,698	42,248
9	**Taiwan**	12,782	20,249	34	33,065
10	**Pakistan**	7,350		5,350	12,700
	10 countries	**268,025**	**81,831**	**367,461**	**717,317**
	TOTAL	**327,490**	**93,709**	**384,537**	**805,736**

The share for different fishing methods is noticeable. Around 40% of Tropical tuna catch belong to purse seine, 18% Gillnet, 13% Long line, 10% Pole-&-line and the rest of the catch with other methods.

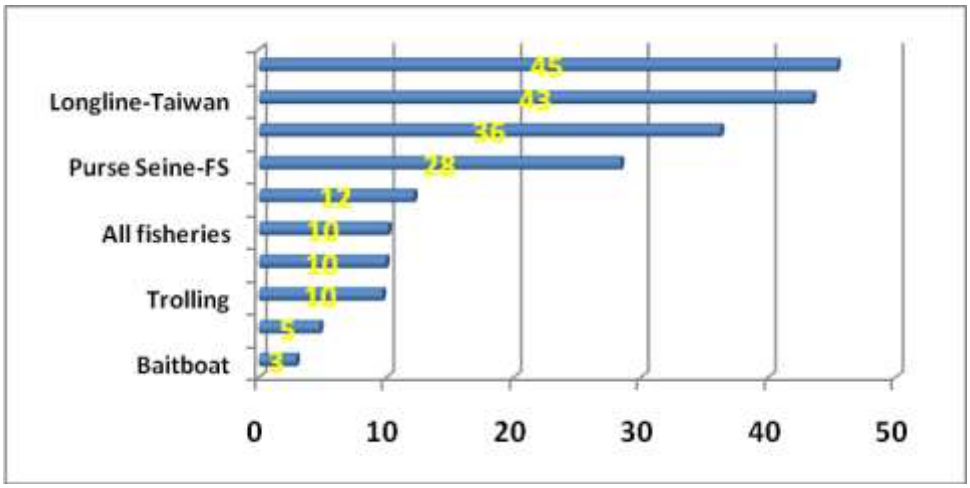
Catch quantity of tropical tuna by fishing method in Indian Ocean (2011)



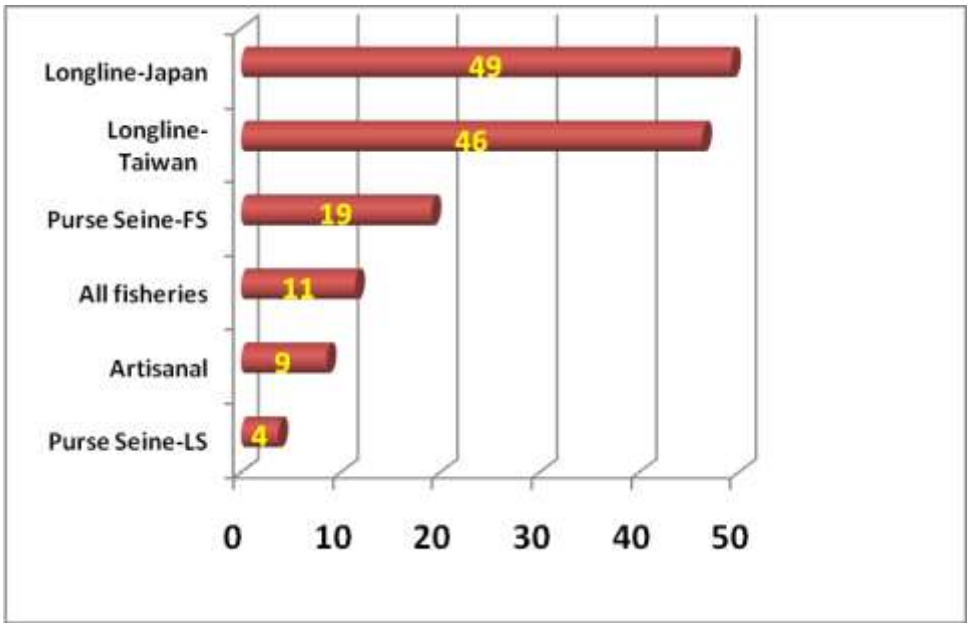
Average weight for 3 tropical tuna in Indian Ocean by species in 2011 is as per the following diagrams.

As it shows, average weight for yellowfin tuna by Japanese and Taiwanese long line fisheries are 45 and 43 kilograms respectively and for Purse Seine-FS 28 Kilograms, for Gillnet 12 kilograms and for Purse Seine-LS 5 kilograms also for Baitboat 3 kilograms. This reflects the effect of fishing method on weight and size of the species and specifies that, which fishing method has more negative impact on fish stocks. This issue is almost the same for skipjack and Bigeye tuna, for example for Bigeye, the average weight of each fish by Japanese and Taiwanese long line was 49 and 46 kilograms respectively and in contrast for Purse Seine-LS just 4 kilograms. Also for skipjack average weight for purse seine was 2.4 kilogram and for Handline and gillnet 4.1 and 3.8 kilogram respectively.

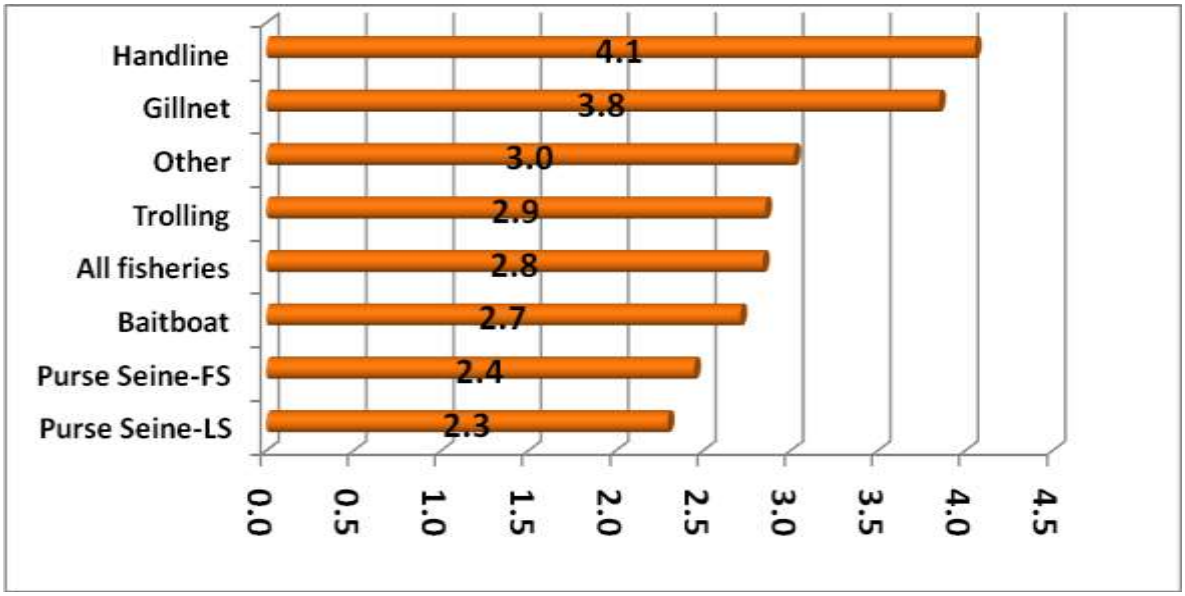
Average weight for yellowfin tuna by fishing method in Indian Ocean (2011)-Kg



Average weight for Bigeye tuna by fishing method in Indian Ocean (2011)-Kg



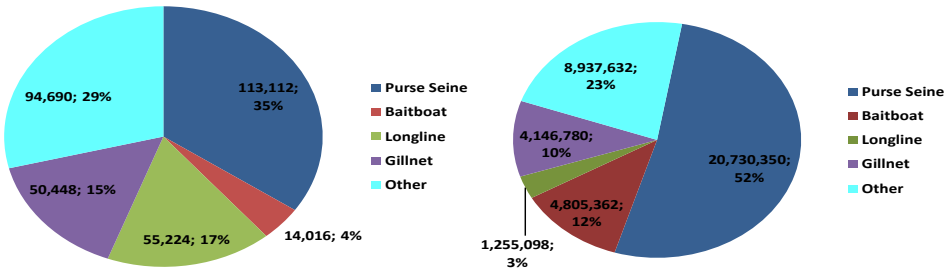
Average weight for skipjack tuna by fishing method in Indian Ocean (2011)-Kg



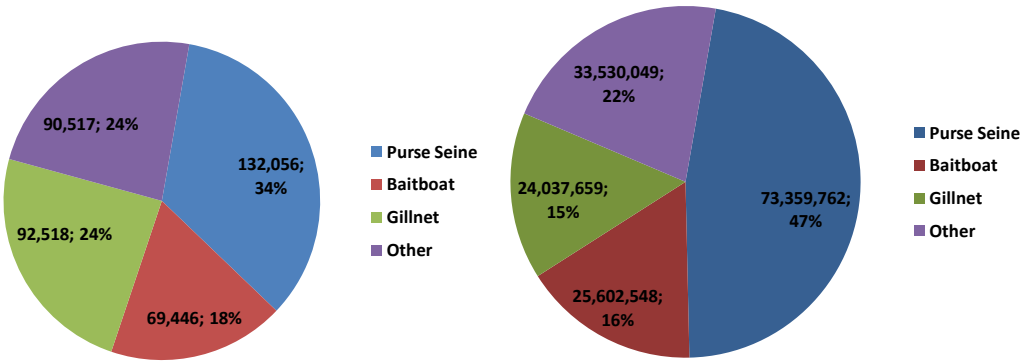
Now if catch quantity of each fishing method be divided on average weight of each species, number of species caught per each

fishing methods can be obtained. The diagram on the left side shows the amount of yellowfin tuna catch and the proportion of its catch to different fishing method which indicate that 35% of yellowfin catch carried out by Purse Seine fisheries, 17% longline, 15% gillnet and 4% by Baitboat. The diagram on the right side shows that 52% of yellowfin catch done by Purse Seine fisheries (of about 21 million pieces), whereas in terms of weight only 35% of yellowfin tuna done by Purse Seine fisheries. So this comparison further reveals the intensity of fishing methods on fish stocks. In contrast, we observe that long line method for exploiting yellowfin tuna in terms of weight have a share of 17%, but in terms of number, the share is 3 percent. This comparison for other fishing methods and skipjack is also reflected in the following diagram.

The catches and number of yellowfin Tuna by fishing method in Indian Ocean - 2011



The catches and number of skipjacks by fishing method in Indian Ocean - 2011



To sum up, the above mentioned information indicates that Purse Seine-LS which allocated around 80% of Purse Seine catch to itself has more negative impact on fish stocks than other fishing methods and catch small size tropical tuna species and need special attention and drastic action by IOTC Secretariat and WPTT to reduce the pressure on fish stocks of those species. Although some approvals (resolutions) of Scientific Committee and Commission meetings addressed the issue but more attention, monitoring and surveillances is necessary to achieve the goals.

Actions carried out concerning improvements of 14th working party approvals for tropical tuna in Iran:

- In 2012, some training courses convened for field samplers (enumerators). For the first time, Bigeye tunas were identified and their catch statistics by gillnet fishries were recorded and reported to the IOTC Secretariat.
- After two years of pilot implementation of logbook plan for gill-netters, a number of 140 logbooks were designed and distributed among the fishermen in 2013 and relevant trainings were carried out on how to fill out the forms.
- Four Iranian purse seiners were active in 2012 and their fishing operations reported in logbook format.
- In 2012 by-catch composition for gillnet fisheries were studied and some species of sharks and Billfishes were identified, recorded and reported to the IOTC Secretariat.
- Length measurement carried out for a number of 1079 Bigeye tuna in 2012, of which a number of 655 species have been fulfilled by gillnet fisheries and it was the first time that's happed.
- In 2012 a total of 10,319 pieces of tropical tuna fish species were measured in Iran which in compare to recent years shows a

significant growth. Moreover, around 70,000 pieces of neritic tuna and tuna-like fishes measured and was reported to IOTC Secretariat by month, fishing method and province.

- Gillnets longer than *2.5 kilometers* was *banned* by Iran Fisheries Organization (IFO) and was communicated to all relevant coastal provinces, fishing ports, fishermen, fishing Cooperatives, and other relevant enforcement agencies.