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A Review of fishing tuna by purse seiner in Iran

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In this article is mentioned to the overall fishing and caught, in Iran and then tuna catching by purse seine vessels will be discussed. As you know, fishing vessels of Iran are active in three of the regions:

- 1- In Caspian Sea in the northern Iran to catch sturgeon, kilka, and fish bone.
- 2- The Persian Gulf and Oman sea to catch kinds of fish
- 3- India ocean and outside the EEZ (I said overseas) to catch tuna fish

÷ catching of kind of fish in Iran is done in the following way:

- 1- Gillnet: Gillnet is kind of fishing methods for Tuna and large pelagic fish that can be done by boats and dhows.
- 2- Trawl & Mid-water trawl: A method of fishing to catch species Demersal and Lantern fish and usually can be done by dhows and ship.
- 3- Trap: One way to catch cattle fish and crab rap is done by boats and dhows.
- 4- Trolling: A method of tuna fishing is trolling that done by boat in Iran.
- 5- Purse seine: A method of tuna fishing is done by ship as large vessels

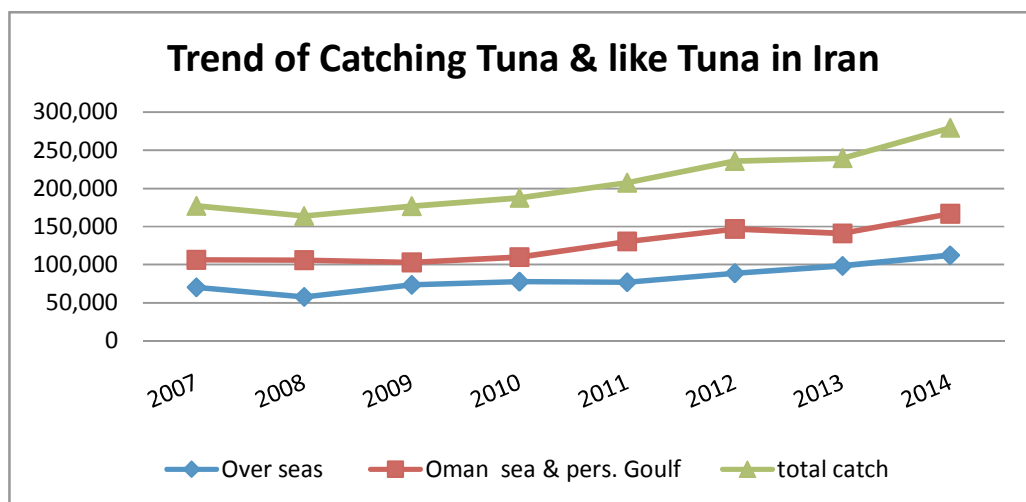
6- Beach – seine: The method for catching sardines in southern Iran and bony fishes in northern Iran, which is done by boat and dhows.

7- Light conical- ship-net: This is a fishing method that can be done with dhows , in the Caspian Sea

Around 8300 boat, 50 ships and 3200 dhows were fishing activities in 2014 in Iran that totally catching a bout 540 thousand tones. Also among these vessels about3,600 boats, 3,100 dhows and 5 purse seiner was activity for catching about 279 thousand tons of Tuna and like Tuna fish . The .table of bellow shows Trend of Catching Tuna & like tuna in Iran.

Trend of Catching Tuna & like tuna in Iran

year	2007	2008	2009	2010	2011	2012	2013	2014
Over seas	70,507	57,820	73,592	77,823	76,985	88,856	98,441	112,415
Oman sea & pers. Gulf	106,419	105,970	102,949	109,787	130,453	146,974	141,152	166,887
total catch	176,926	163,790	176,541	187,610	207,438	235,830	239,593	279,302



Also the 10-year average of recent catches (2013-2014) shows that more than 96% of tuna catch by Gillnet and 3% by purse seine and 1% by trolling method.

There for can be concluded that, while a bout 0.08 percent of all vessels are purse seiner but fishing tuna make up more than 30 times that of other fishing vessels .table of bellow shows this issue. There fore I will be discussed about catch of purse seiners of Iran

Ratio of catch purse seiner to others vessels

years	2007	2008	2009	2010	2011	2012	2013	2014
% Catch of purse seiner to total catch	2.9	3.0	2.2	1.8	2.2	2.2	2.7	2.1
% purse seiner to total Tuna Catching Vessels	0.12	0.11	0.08	0.08	0.06	0.06	0.06	0.07
Ratio of catch purse seiner to others vessels	24.04	27.75	27.89	23.38	37.31	36.21	44.62	27.79

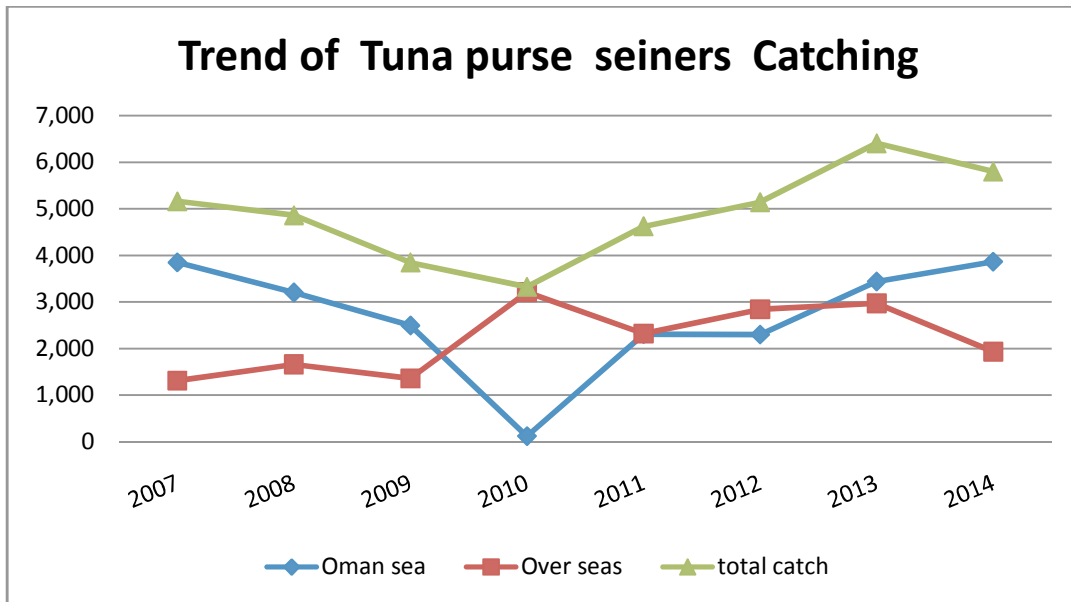
In past years, each of these vessels has fished annually between 1000 and 2000. Several factors in the reduction of fishing vessels can be name

- Failure to take advantage of new technology and satellites to detect the accumulation of tuna.
- The lack of interest and Experience in the Crowe
- Old fleet and need long-term to repairs.
- Long-term sleep vessels in ports and evacuation centers.

In any case, the fishing vessels purse seiner recent years has been between 4000 and 6000 tons. (See table below)

Trend of Catching Tuna & like tuna by purse seiners in Iran (tones)

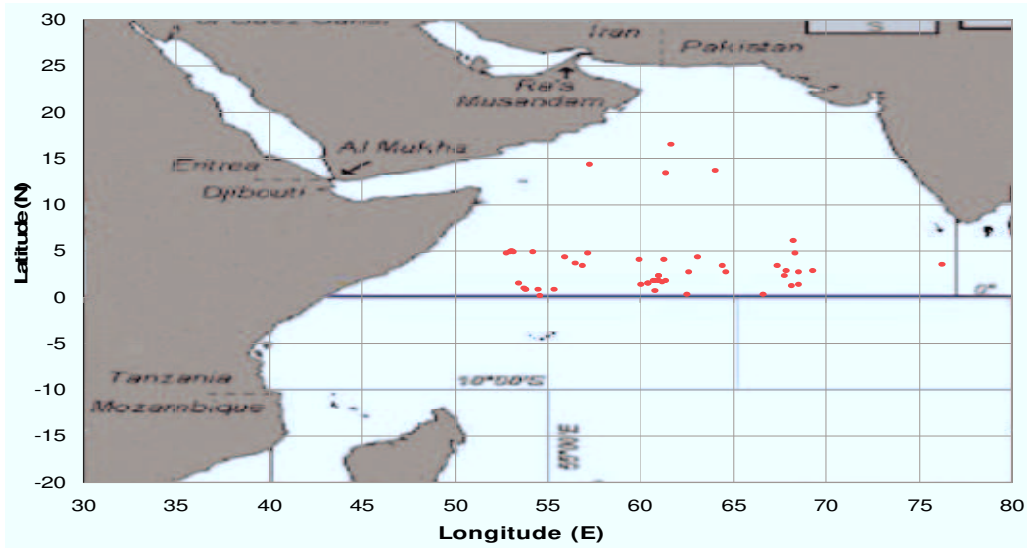
سال	2007	2008	2009	2010	2011	2012	2013	2014
No of purse seiner	8	7	5	5	4	4	4	5
Oman sea	3,845	3,198	2,491	117	2,304	2,296	3,435	3,861
Over seas	1,311	1,660	1,355	3,206	2,317	2,840	2,966	1,932
total catch	5,156	4,858	3,846	3,323	4,621	5,136	6,401	5,793
Ratio of Over seas to total catch (%)	25	34	35	96	50	55	46	33



One of the tools that are used purse seine vessels to catching Tuna is FADs. Purse seiner of Iran use FADs in the over seas. Information related to the use of is FADs in used purse seiners of Iran in 2014 are as follows:

- Total No. of FAD sets: 75
- Total PS over seas catch in 2014 : 1933 tones
- Estimated catch associated to FADs : 1100 tones (57%)
- Catch associated to free school : 833 tones (43%) .
- FADs type : Artificial + Natural
- Dimension: average (3*3 eters)

Where Iranian vessels as part of their catch to the FADs doing in the map below. As can be seen near the north of the equator has the highest density of FADs Rate.



We extract information of FADs and other statistics on fishing operations of the vessels from the log books. (Bellow form)

Form of log books

جدول گزارش روزانه عملیات صید کشتی های پرساینر (Purse Seiner vessels logbook)																											
Sheet No / شماره صفحه	Master / کاپیتان	Name&No Vessel / نام و شماره ثبت شناور	ورود به / بندر / Port / لوگرگاه/ Loch		خروج از / بندر / Departure From / بندر/ Loch																						
			Name Port / نام بندر	Date / تاریخ	Name Port / نام بندر	Date / تاریخ	تجهیزات		Current																		
Date / تاریخ	Position 1-موقعیت تور ریوی (طول و عرض جغرافیایی)	Set / تور ریوی		Estimated catch / صید تخمینی										Association / ارتباط	log	supply vessel / کشتی پشتیبان	beacan / بویه	shark wale / نهنگ کوسه/whale	5- جهت / direction	speed / سرعت (نوک)							
		Successful / موفق	Null / ناموفق	Well / شماره مگرن ماهی	yellowfin / کپور	sk / هورر مسقطی	bigeye / چشم درشت	longtail / هورر دم دراز	kawkaw / زرده	Other Species / سایر گونه ها (غالب)	Discards / گونه های غلبه در صید تور ریوی	Free school / گله آزاد	log								supply vessel / کشتی پشتیبان	beacan / بویه	shark wale / نهنگ کوسه/whale	5- جهت / direction	speed / سرعت (نوک)		
					average catch size kg	catch rate kg	average catch size kg	catch rate kg	average catch size kg	catch rate kg	average catch size kg	catch rate kg	average catch size kg	catch rate kg	name of species	average catch size kg	catch rate kg	name of species	average catch size kg	catch rate kg	Free school / گله آزاد	log	supply vessel / کشتی پشتیبان	beacan / بویه	shark wale / نهنگ کوسه/whale	5- جهت / direction	speed / سرعت (نوک)
تاریخ استقرار:موقعیت جغرافیایی طول:عرض:شماره سریال رادیو بویه:گیرنده ماهواره ای:ایزار ها: طبیعی: مصنوعی: سایز: 2°3'3"± مواد بازر و قه:نوع بازید: استقرار: کنترل: بهداشت: تعمیر:																											
توضیحات:																											

Also Iran purse seiner tuna vessels characteristics are as follows

row	IOTC Record Number	Vessel name	Gear used (code)	Vessel LOA (m)	Vessel tonnage (GT)	Active/ not active
1	IOTC000030	HAVOOR 1	PS	69	1,146.00	Active
2	IOTC000031	HAVOOR 2	PS	69	1,146.00	Active
3	IOTC000142	HAVOOR 3	PS	75.5	2,098.00	Active
4	IOTC000362	BALUCH	PS	70.5	1,145.00	Active
5	IOTC008793	PARSIAN SHILA	PS	95.7	2,312.00	Active
6	IOTC000033	AZADEGAN 1	PS	55.17	935.00	no active
7	IOTC000034	AZADEGAN 2	PS	55.17	935.00	no active
8	IOTC000032	AZADEGAN 3	PS	76	1,853.00	no active

- Conclusion:

- Purse seiner catching tuna more than 30 times of other fishing vessels and 75% vessel owned by a company, however:
- Purse seiners of Iran Fish caught very less.(Compared with other countries)
- The percentage of the catch in over seas to the Oman Sea is very low.
- Number of FADs that used by Purse seiners is too low (each one a bout 20 No.)
So the current limit for the use of the FADs should not be applied to these vessels.