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Abstract

This document presents summary information about fisheries statistical data in Iran, accordance with IOTC resolutions and recommendations concerning the mandatory minimum data to be submitted to IOTC, as well as basic actions to improve the data collection system, with the approvals and recommendations of the Scientific Committee and WPDCS.

In 2023 the total fish production in Iran was 1,418,215 tonnes, comprising 639,936 tonnes from aquaculture and 778,279 tonnes from catch, this catch included 741,308 tonnes (95%) from southern waters, and 36,971 tonnes (5%) from northern waters. The total catch in southern waters can be distributed as 606,899 tonnes (82%) attributed to Persian Gulf and Oman Sea as coastal fisheries, 134,408 tonnes (18%) from the high seas (outside of Iran's EEZ in western Indian Ocean). More than 14000 artisanal fishing vessels are active. For better collaboration with the IOTC, significant efforts have been made to extract all necessary outputs required to meet the concerned IOTC, resolutions. The development of our data collection system and software is in progress to meet mandatory minimum statistical requirements and report catch and effort data by gear, coastal fishing grounds, and high seas fishery to the IOTC. We have taken various actions to implement the resolutions and recommendations of the Scientific Committee and IOTC.

In compliance with IOTC regulations, we are reducing the fishing pressure on coastal species by substituting a number of gillnetters with logline fishery to meet IOTC mandates. Moreover, data collection for high seas fishery is ongoing, to this end we are collecting and recording the data through logbooks. In addition, the species for which size data is reported include six tuna species: YFT, SKJ, BET, KAW, COM and LOT across 17 landing sites. Size data is collected by type of Fishery, including: gillnet, purse seine and hook or troll fishery. The identification of tuna and tuna-like species has been improved by conducting training courses to differentiate BET from YFT, KAW from Bullet and Frigate tuna, and to identify Billfishes, shark species, and others.

In order to comply with the Commission's regulations, information on two species of sharks, namely mako shark and hammerhead shark, as well as two species of billfish, specifically blue marlin and shortbill-spearfish, has been revised. The catch and length frequency data of these marine species have been completed in 1RC, 3CE and 4SF forms and submitted to the IOTC Secretariat.

Catch & effort data have been reviewed and modified to determine the exact catch of vessels longer than 24 meters. We have undertaken numerous actions to report the by-catch and discard species such as sharks, dolphins, sea turtles, and others in gillnet fishery.

Every year, efforts are made to adapt and implement the recommendations of the Indian Ocean Tuna Commission (IOTC) in Iran, with a focus on finding suitable areas for implementation that involve the cooperation and participation of the fishing community. Strengthening fisheries education and training programs to improve fishing conditions is considered a crucial approach in managing the sustainable exploitation of neritic tuna stocks, as well as catch & effort data collection in the country.

1-Background/General Fishery Information

The fishery for tuna and tuna-like species is a major component of large pelagic fisheries in Iran and is one of the most important activities in the Persian Gulf and Oman Sea. There are four coastal provinces in this area, with approximately 11,000 vessels, including fishing boats, dhows, and other vessels, engaged in both coastal and high-seas fishing. Gillnetting, trolling, coastal artisanal longlining, purse seining, and trolling are the primary fishing methods used by Iranian vessels targeting tuna and tuna-like species in the IOTC area of competence, with some smaller boats using trolling in coastal fisheries. Iran has taken various actions to implement the Scientific Committee's recommendations and IOTC Resolutions.

One of these actions has been national efforts to improve the data collection system for the tuna fishery since 2012. We have modified the logbook template for Iranian industrial purse seiners and artisanal gillnets (which have not yet been utilized) to meet the mandatory minimum statistical requirements, particularly regarding the recording of vessel position in the IOTC area for target species, by-catch (including nine species of sharks and five species of billfish), non-targeted, associated and dependent species, and discards.

In 2023, total fish catch and aquaculture production in Iran amounted to 1,418,215 tonnes, distributed as follows: 52% from the Persian Gulf, Oman Sea, and overseas; 3% from the Caspian Sea; and 45% through aquaculture. The total catch in 2023 was 778,279 tonnes, of which approximately 275,000 tonnes were tuna and tuna-like species. In 2006, the tuna and tuna-like species catch was 207,000 tonnes, with around 50% consisting of skipjack. However, after 2006, due to a tsunami and piracy in the IOTC region, vessels shifted their fishing grounds to coastal areas. This change caused a significant decrease in skipjack catch, from 103,000 tonnes in 2006 to 72,681 tonnes in 2023, while longtail tuna catch increased from 25,000 tonnes in 2006 to 53,214 tonnes in 2023. Fishing effort in coastal areas increased, resulting in a higher longtail tuna catch in 2023 compared to 2006.

As mentioned earlier, tuna and tuna-like species fisheries are among the most important activities in the Persian Gulf and Oman Sea. The 2023 catch included: Yellowfin tuna (37,350 tonnes), skipjack tuna (72,681 tonnes), bigeye tuna (1,376 tonnes), longtail tuna (53,214 tonnes), kawakawa (28,252 tonnes), frigate tuna (11,942 tonnes), billfish (five species; 31,450 tonnes), Indo-Pacific king mackerel (10,066 tonnes), narrow-barred Spanish mackerel (28,427 tonnes), sharks (1,528 tonnes), and other species (11,828 tonnes).

Figure1.1. Annual total production from 2014 to 2023 (metric tonnes)

Area	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Persian Gulf, Oman Sea & Indian Ocean	536	550	601	691	731	720	684	673	718	741
Caspian Sea	40	33	33	34	42	36	31	30	33	37
Aquaculture	372	402	460	477	489	527	553	556	601	640
TOTAL	947	984	1,094	1,202	1,262	1,282	1,269	1,259	1,352	1,418
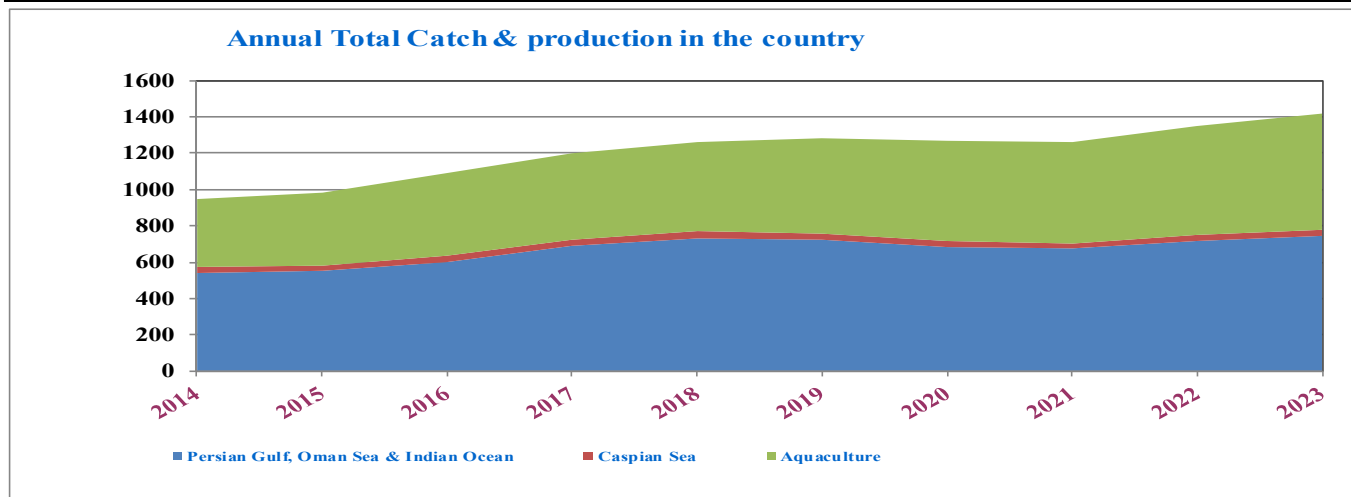
Figure1.2. a Comparison of total production between 2014 and 2023(metric tonnes)

Figure1.3. Annual Catch by 5 species groups from 2013 *to* 2023*(metric tonnes)*

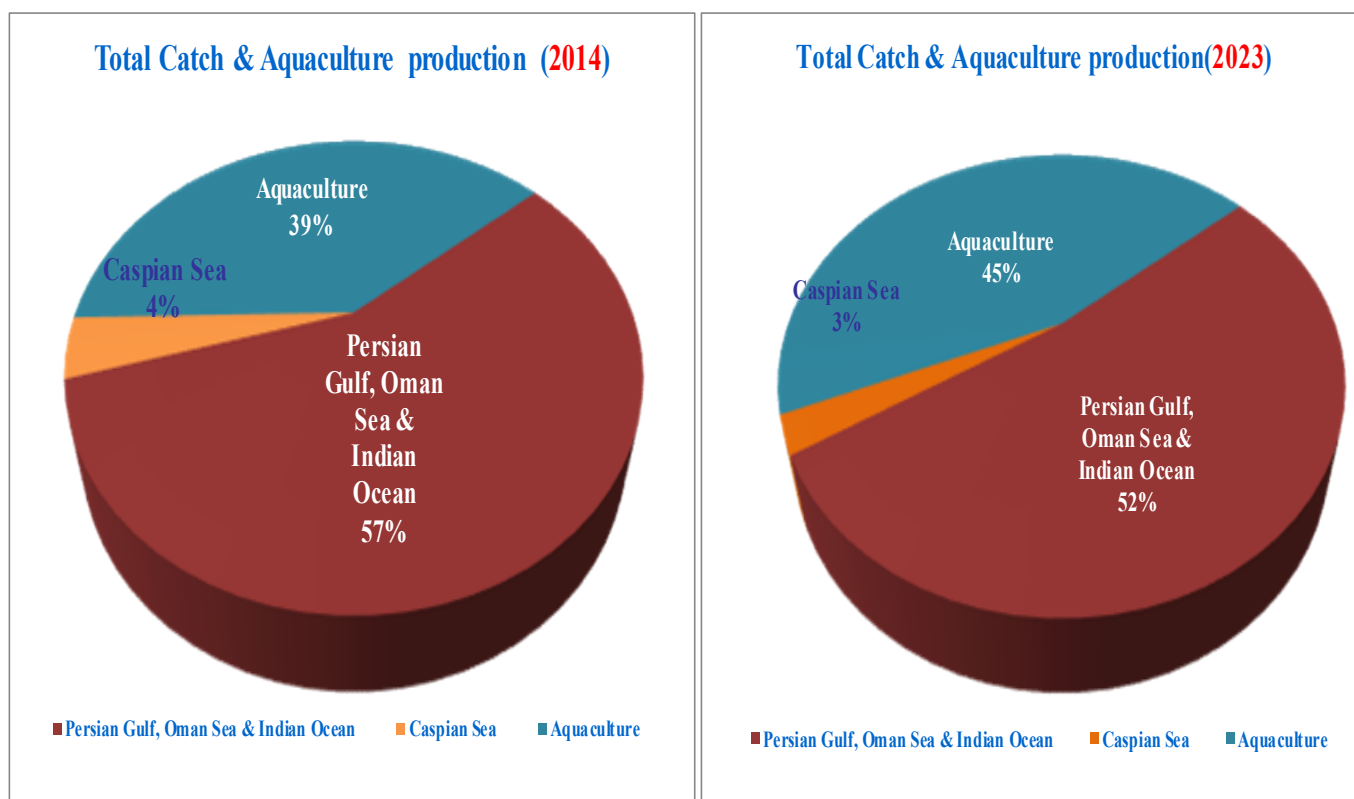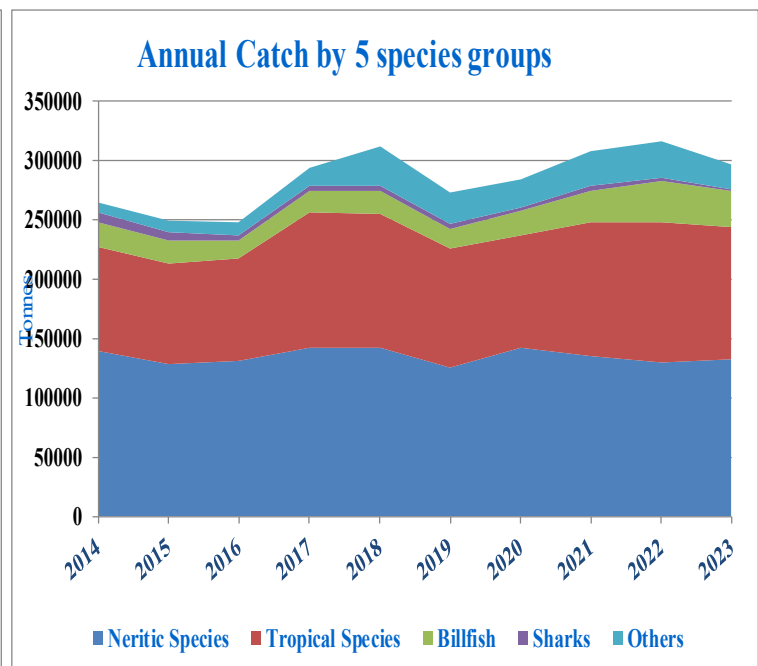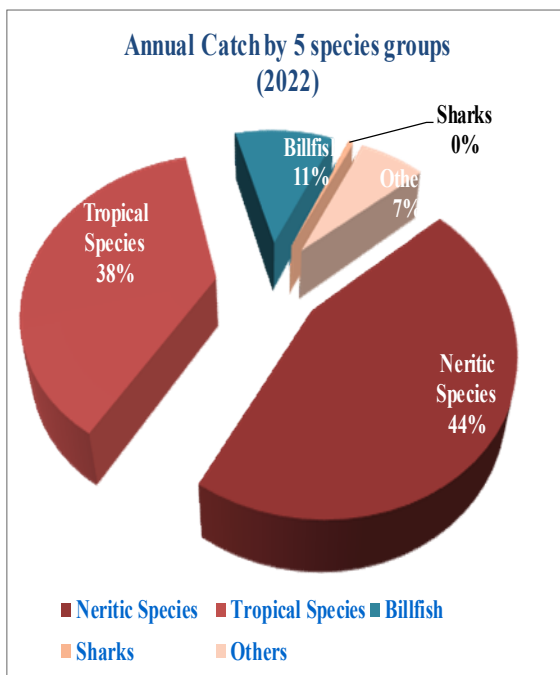| GEAR GROUP	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Neritic Species	138,910	128,661	130,565	142,632	142,160	125,358	142,280	135,230	129,132	131,901
Tropical Species	88,213	83,763	87,337	113,008	112,314	99,968	94,356	113,008	118,435	111,407
Billfish	21,456	19,532	14,585	18,794	20,476	17,679	20,512	26,530	34,809	31,450
Sharks	7,132	7,135	4,797	3,770	2,967	3,432	3,632	4,140	3,031	1,528
Others	8,552	9,840	10,815	15,574	33,323	27,205	22,692	29,323	30,844	20,141
TOTAL	264,264	248,931	248,099	293,778	311,240	273,641	283,472	308,231	316,252	296,427

Annual Catch by 5 species groups

Annual Catch by 5 species groups (2022)

Annual Catch by 5 species groups
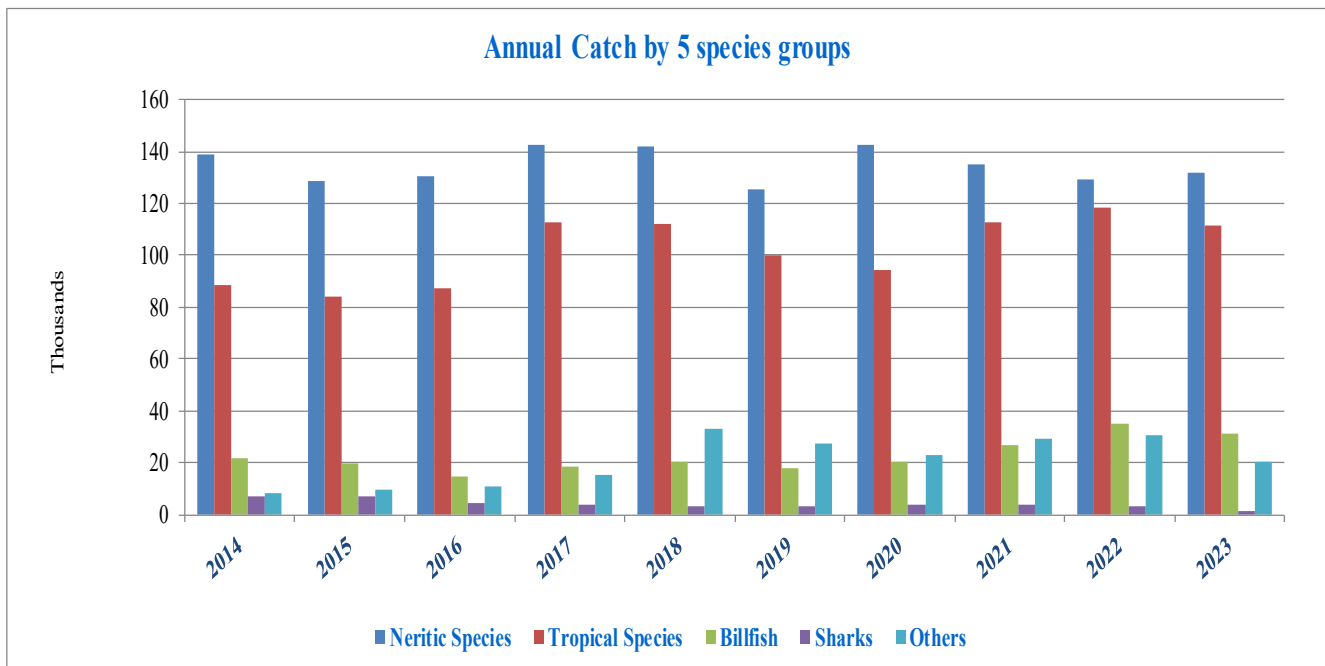
2-Fleet Structure

Fishing activities in the southern waters of Iran are ongoing with a fleet of 14,750 vessels. Of these, approximately 8,317 vessels are engaged in large pelagic species fishing in 2023, with none currently operating as industrial purse seiners. Only one purse seiner vessel (ParsianShila) was active for a few days for research purposes in the Persian Gulf and Oman Sea, hindered by sanctions and related difficulties in accessing satellite-based FADs data; therefore, no FADs were used by fishing vessels. The fleet also includes 3,408 artisanal vessels (dhows) and 11,220 fishing boats.

Around 1,200 vessels are active in tuna and tuna-like fishing in the Oman Sea and high seas. This means approximately 92% of vessels operate in coastal areas, while about 8% of fishing vessels operate in the high seas (outside of Iran's EEZ in the western Indian Ocean). The gross tonnage (GT) of purse seiners is up to 1,000 tonnes, while the GT of gillnetters ranges from less than 3 tonnes to over 100 tonnes. Gillnetting and purse seining are the primary fishing methods for catching tuna and tuna-like species in the IOTC area, with some smaller boats using trolling in coastal fisheries and a few vessels using artisanal longlining to catch yellowfin tuna in the coastal area of the Oman Sea. Table 2.1 shows the fishing fleet, disaggregated by GT categories, from 2014 to 2023.

Table 2.1: Number of vessels operating in the IOTC area of competence, by gear type and size (2014-2023)

GEAR GROUP	Capacity GT	No. Crafts by year									
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Purse seine	500 to 1000 t	2	3	3	2	2	2	2	2	0	0
	>1000 t	2	3	4	5	5	5	5	5	0	0
Total Purse seine fishing Craft		4	6	7	7	7	7	7	7	0	0
Coastal_Artisanal_ Longline	< 3 t	0	0	0	324	324	400	250	280	492	371
	51 to 100 t	0	0	0	165	165	184	70	70	85	59
	100 to 200 t	0	0	0	14	14	20	0	0	0	0
	>1000 t	1	1	1	1	1	1	1	1	1	0
Total Coastal_Artisanal_Longline fishing Craft		1	1	1	504	504	605	321	351	578	430
Gillnet	< 3 t	3,340	3,784	3,741	2,758	3,168	3,097	3,752	2,694	3,416	4,762
	3 to 20 t	586	282	270	239	226	207	230	437	247	301
	21 to 50 t	941	1,021	1,060	318	271	248	216	254	303	345
	51 to 100 t	479	527	534	316	297	249	246	506	477	261
	>100 t	260	329	338	326	377	448	487	246	248	478
Total Gillnet fishing Craft		5,606	5,943	5,943	3,957	4,339	4,248	4,930	4,138	4,691	6,146
Trolling	< 3 t	854	810	805	1,820	1,645	1,748	1,901	1,771	1,808	2,171
Total Trolling fishing Craft		854	810	805	1,820	1,645	1,748	1,901	1,771	1,808	2,171
Total all Gear fishing Craft		6,465	6,760	6,756	5,785	5,992	6,004	6,839	5,917	6,500	8,317

3- Catch and Effort (by Species and Gear)

Table 2.1 and Figures 3.1 to 3.4 show the total annual catch and effort by gear type and species reported for the entire fleet. The catch quantity of tuna and tuna-like species in 2023 was 275,000 tonnes, with 115,095 tonnes coming from coastal waters and the remaining 159,663 tonnes from high-seas fisheries. In 2005 and 2006, the high-seas catch exceeded the coastal waters catch. However, after these years, due to piracy and the associated insecurity, this trend reversed. Since 2007, the catch of tropical tuna has declined, while neritic tuna catch has increased. This decline in tropical tuna catch, caused by piracy, has led fishermen to relocate their fishing grounds from the high seas to the coastal areas in the Persian Gulf and Oman Sea, focusing on traditional coastal fishing grounds. This shift in fishing grounds increased fishing effort in coastal areas, resulting in a 107% increase in longtail tuna catch from 25,000 tonnes in 2006 to 53,214 tonnes in 2023.

Figure 3.1 shows the catch amounts for different fishing methods: purse seine, coastal artisanal longline, gillnet, and trolling, with estimated catches of 0 tonnes, 8,701 tonnes, 274,095 tonnes, and 13,632 tonnes, respectively. The total catch recorded by the purse seine fleet in 2023 was estimated at 0 tonnes, with the catch of purse seiners showing a declining trend from 2019 to 2023 compared to the previous decade. Only one purse seiner vessel (ParsianShila) was active for a few days for research purposes; therefore, no catch and effort data were collected for the purse seine fishery in the past two years.

Figure3.1. Annual Catch by Gear Type (2014-2023)

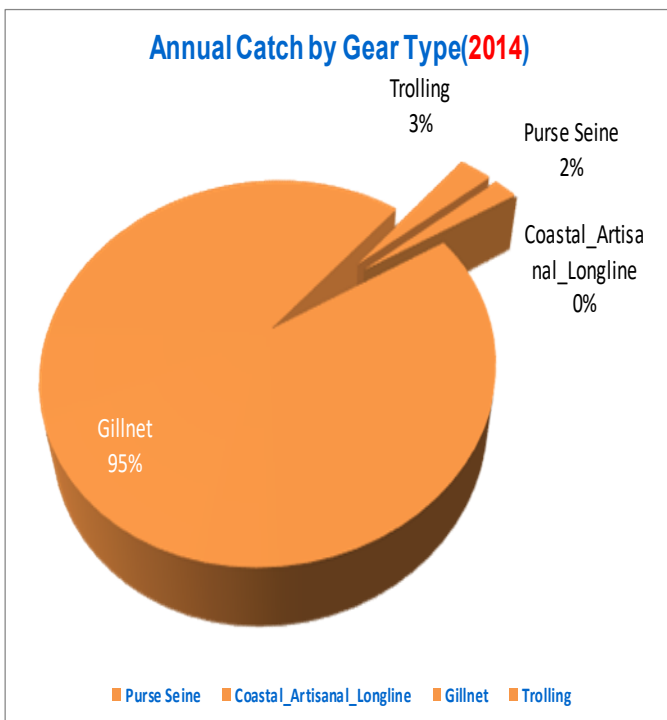| GEAR GROUP	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Purse Seine	5,794	5,308	4,879	6,206	5,292	4,046	1,026	531	0	0
Coastal_Artisanal_Longline	0	0	5,760	8,574	11,975	8,441	8,839	5,660	9,434	8,701
Gillnet	250,470	238,500	232,809	274,567	289,283	248,472	253,675	293,053	287,564	274,095
Trolling	8,000	5,123	4,651	4,432	4,690	12,681	19,932	8,987	19,254	13,632
TOTAL	264,264	248,931	248,099	293,778	311,240	273,641	283,472	308,231	316,252	296,427
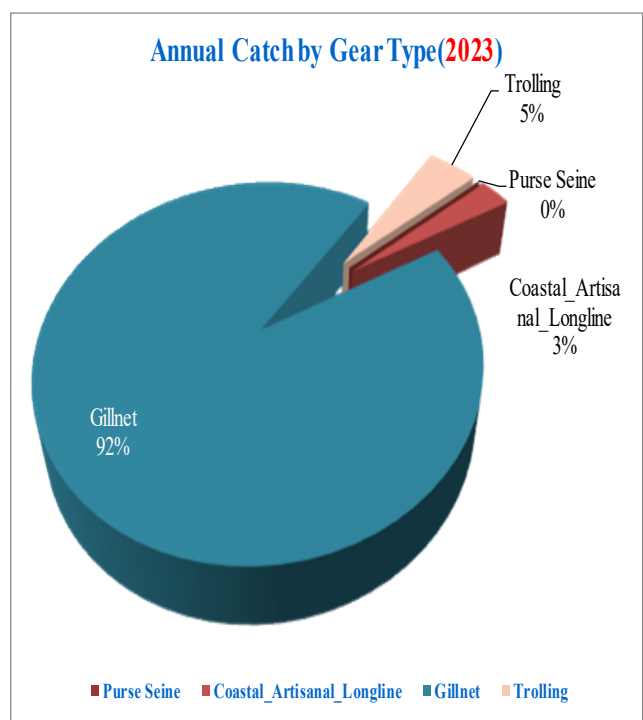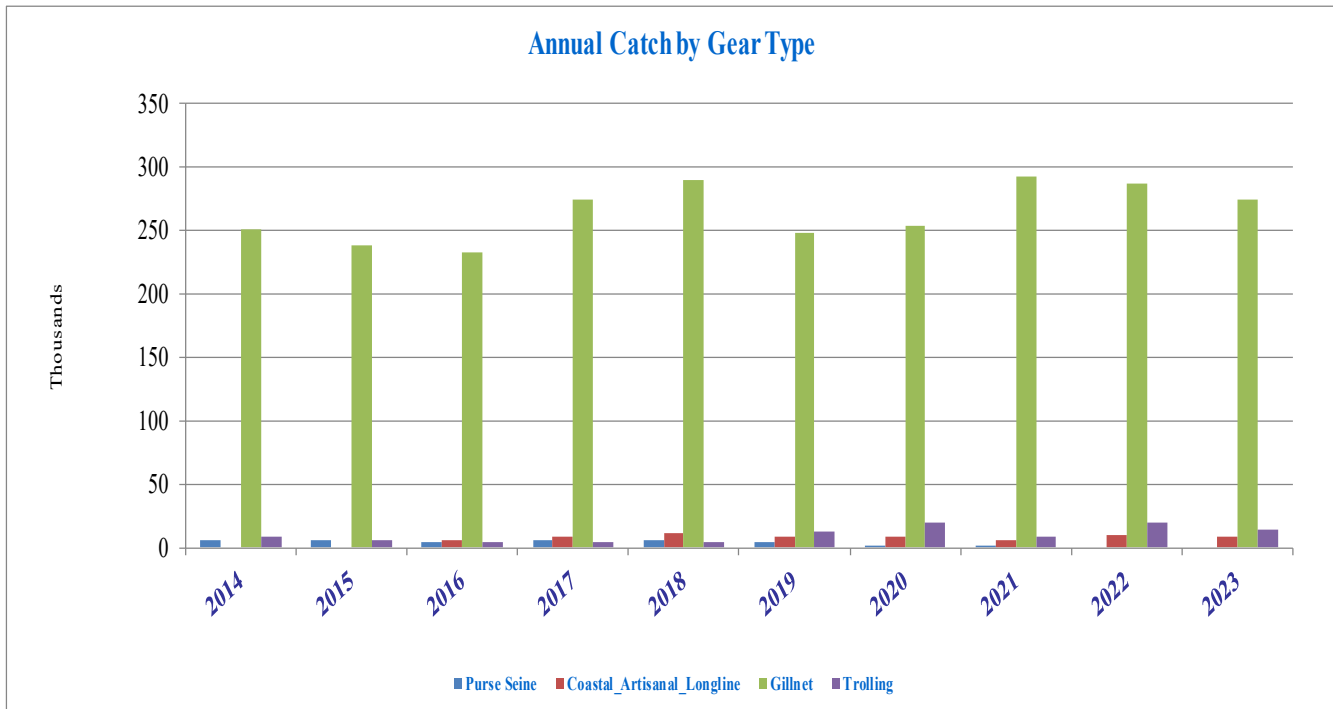
Figure3.2. Annual Catch of Purse Seiners by Species (2014-2023)

SPECIES	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
KAW	11	0	0	5	0	0	0	0	0	0
LOT	140	814	50	1,891	998	467	416	220	0	0
SKJ	798	489	1,202	2,477	356	190	0	59	0	0
YFT	4,832	3,842	3,465	1,764	3,898	3,361	610	247	0	0
BET	10	135	138	29	0	0	0	0	0	0
Others	3	29	24	39	40	28	0	6	0	0
TOTAL	5,794	5,308	4,879	6,206	5,292	4,046	1,026	531	0	0
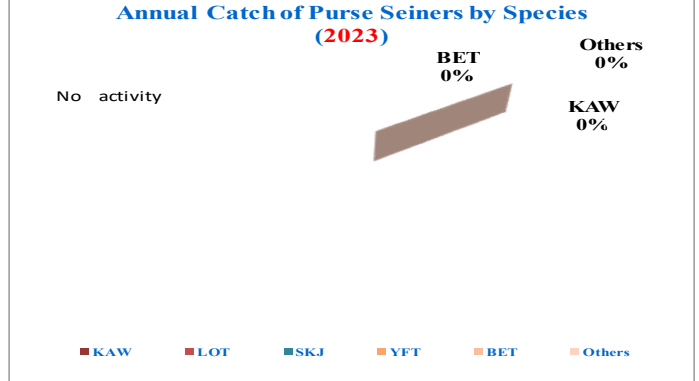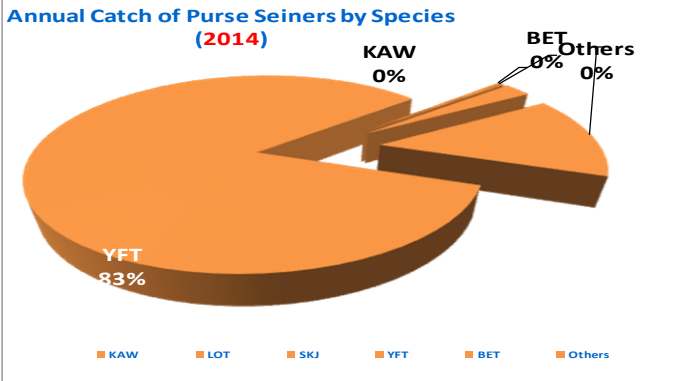
Annual Catch of Purse Seiners by Species (2014)

Annual Catch of Purse Seiners by Species (2023)

Note: *Only one purse seiner vessel (ParsianShila) was active for a few days for research work in the Persian Gulf and Oman Sea, due to sanctions and related difficulties in accessing satellite-based FADs data. Therefore, no catch and effort have been recorded for this fishing method in the past two years.*

Figure3.3. Annual Catch of Gillnet by Species (2014-2023)

SPECIES	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
FRI	13,263	10,422	10,238	10,251	9,135	8,860	12,218	6,902	8,971	11,822
KAW	28,885	27,805	33,640	38,253	35,551	32,706	34,341	39,109	34,930	27,463
LOT	60,754	57,555	54,560	56,654	59,436	46,435	51,482	49,527	44,353	50,623
SKJ	38,931	38,232	37,956	50,822	49,608	39,782	44,516	68,049	78,598	72,681
YFT	41,326	38,412	35,110	45,551	42,071	40,459	33,757	35,235	26,492	27,448
BET	2,259	2,309	2,931	3,577	3,700	1,949	1,526	620	1,016	1,376
COM	21,218	20,617	20,759	22,529	23,675	20,949	21,210	24,508	20,827	24,802
GUT	6,705	6,997	7,501	9,326	9,581	10,035	10,237	9,871	8,785	8,232
BillFish	21,455	19,479	14,585	18,747	20,473	17,179	18,370	26,077	31,470	28,948
Sharks	7,132	6,930	4,737	3,443	2,772	3,281	3,442	4,085	2,779	1,163
Others	6,708	6,567	6,852	7,674	23,492	18,047	14,175	19,833	18,308	11,225
TOTAL	250,470	238,500	232,809	274,567	289,283	248,472	253,675	293,053	287,564	274,095

Annual Catch of Gillnets by Species

Annual Catch of Gillnets by Species (2014)

Annual Catch of Gillnets by Species (2023)
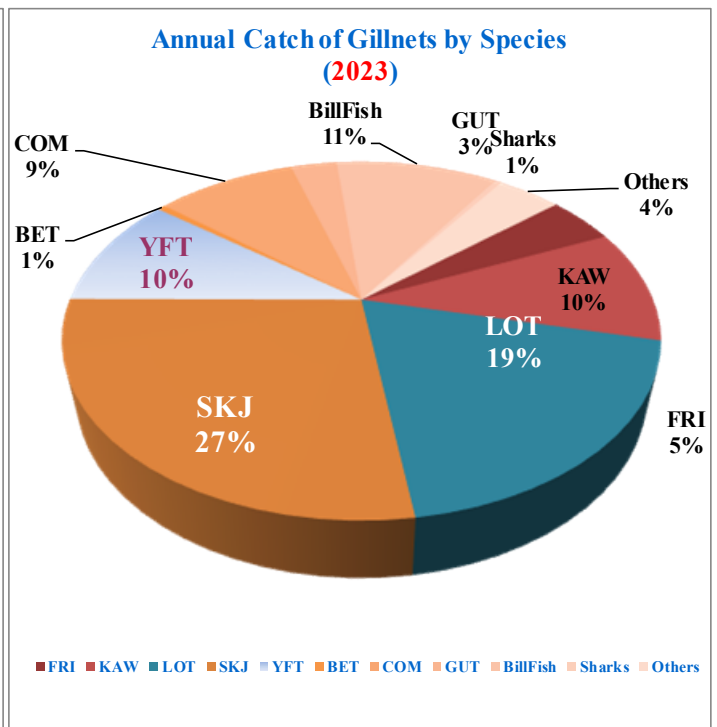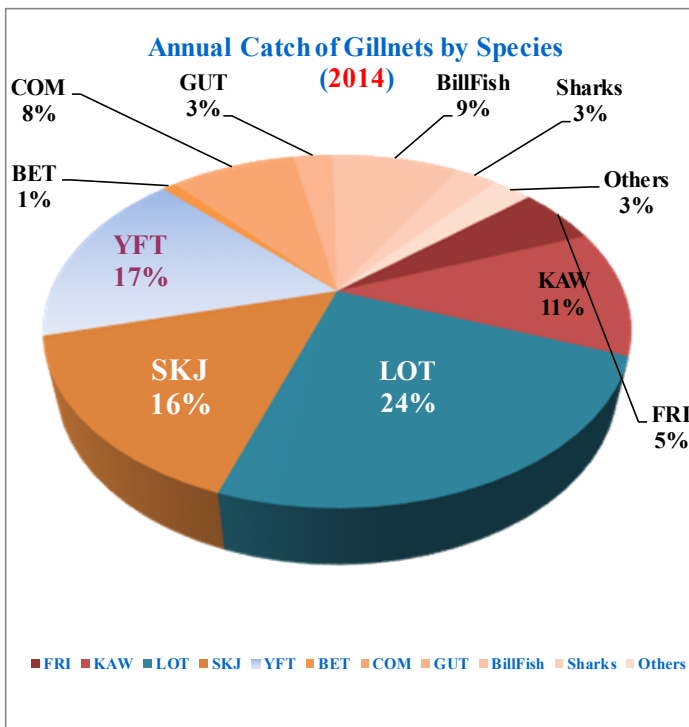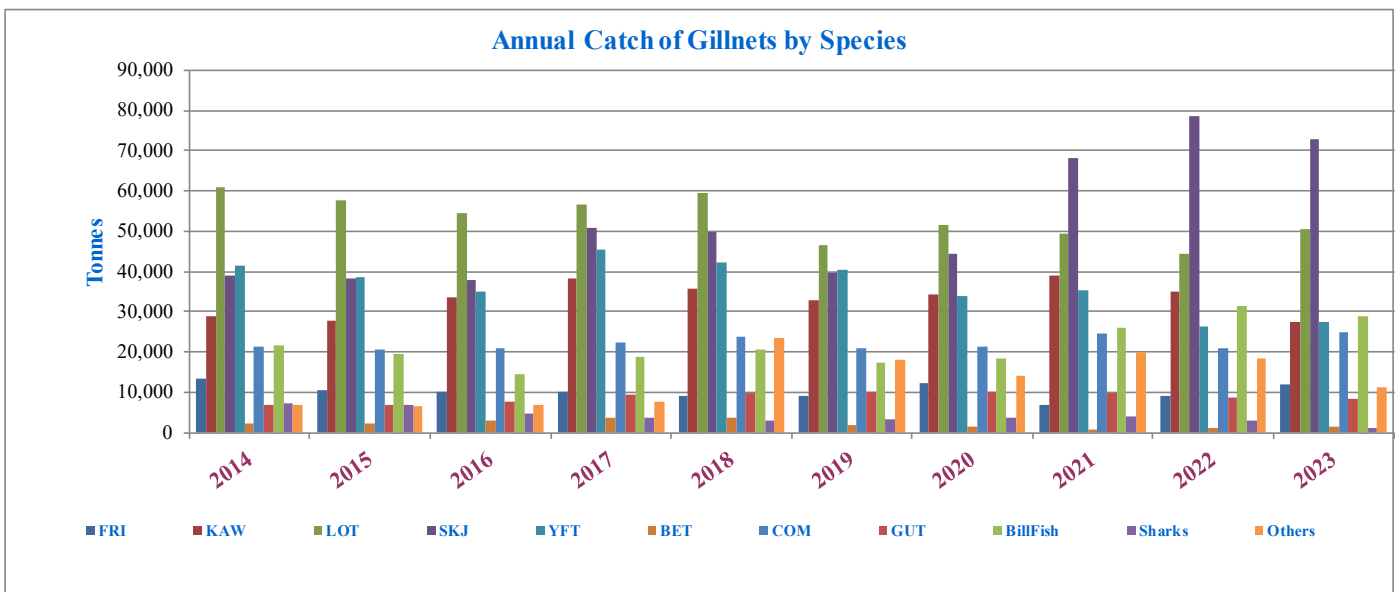
Figure3.4. Annual Catch of Trolling Method by Species (2014-2023)

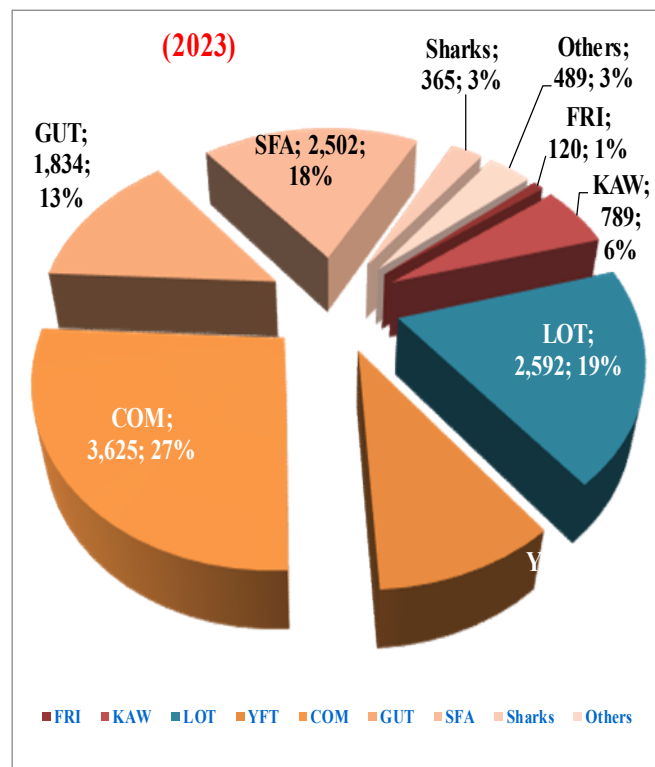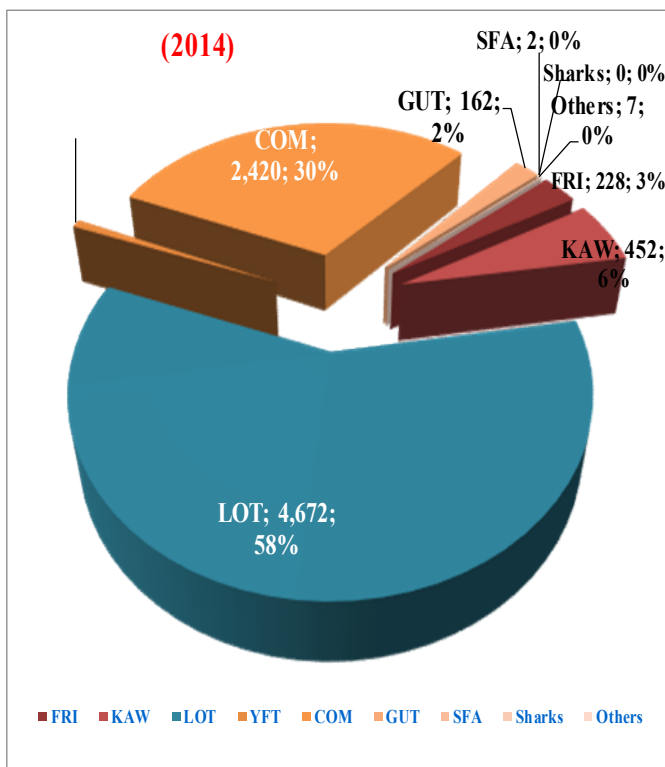| SPECIES	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
FRI	228	233	6	14	45	98	8	125	608	120
KAW	452	516	231	457	1,105	554	2,215	457	1,055	789
LOT	4,672	1,278	501	1,605	667	2,119	4,655	1,921	4,035	2,592
YFT	57	345	775	335	707	5,787	5,109	3,198	3,025	1,316
COM	2,420	2,181	2,922	1,532	1,519	2,822	5,078	2,305	4,457	3,625
GUT	162	245	158	116	448	312	419	285	1,111	1,834
SFA	2	53	0	47	3	499	2,142	453	3,339	2,502
Sharks	0	205	59	327	195	151	190	55	252	365
Others	7	68	0	0	0	340	115	188	1,371	489
TOTAL	8,000	5,123	4,651	4,432	4,690	12,681	19,932	8,987	19,254	13,632
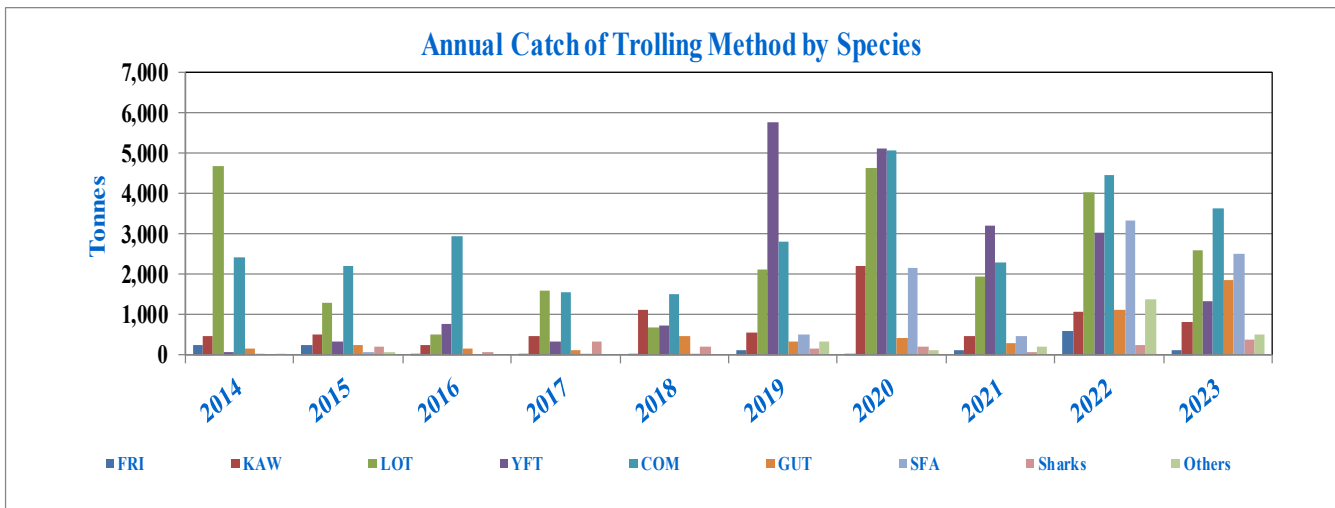
Figure3.5. Annual Catch of Coastal_Artisanal_Longline Method by Species (2014-2023)

SPECIES	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
YFT			5,760	8,452	11,974	8,441	8,839	5,600	9,304	8,586
BET			0	0	0	0	0	0	0	0
SFA			0	0	0	0	0	0	0	0
BLM			0	0	0	0	0	0	0	0
SWO			0	0	0	0	0	0	0	0
DOL			0	122	0	0	0	60	130	114
TOTAL	0	0	5,760	8,574	11,975	8,441	8,839	5,660	9,434	8,701
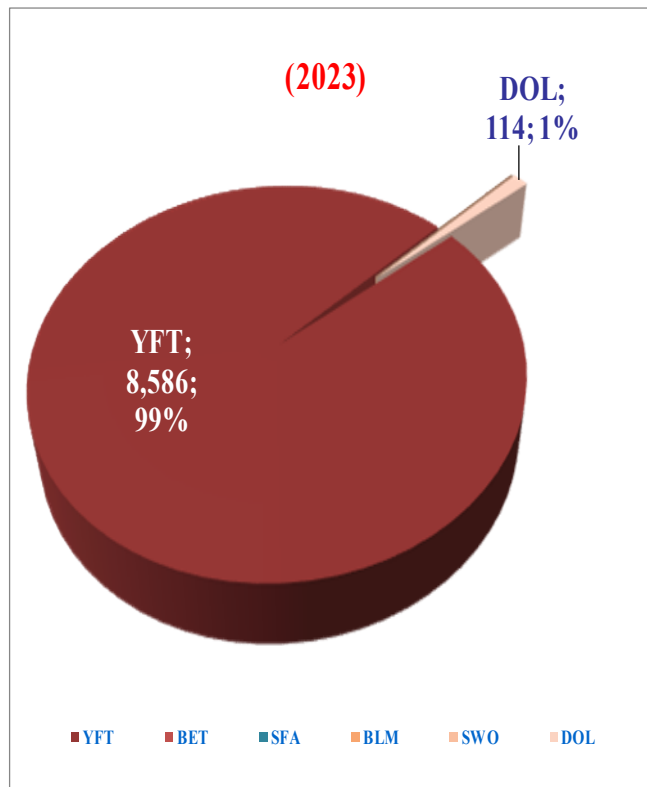
Table.3.6.Annual fishing effort by different vessel categories per days (2014-2023)

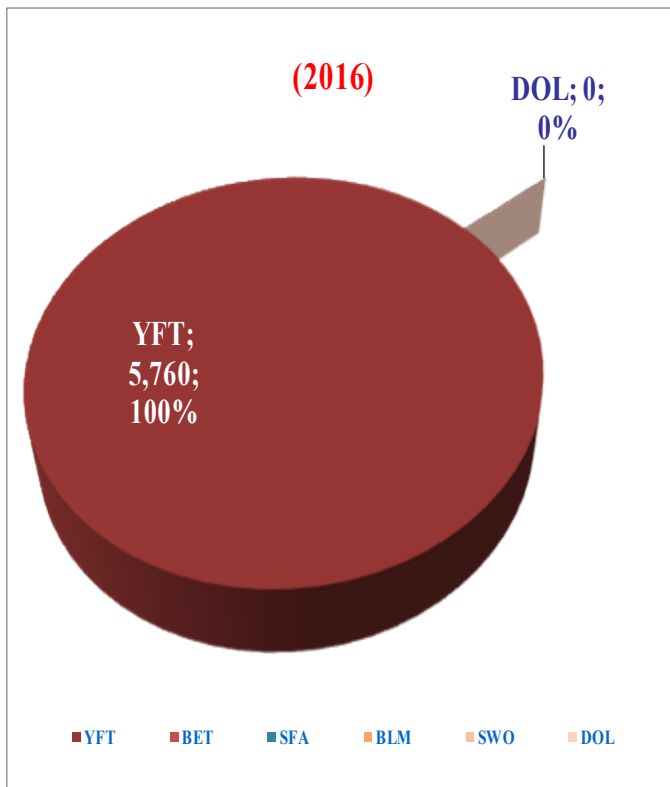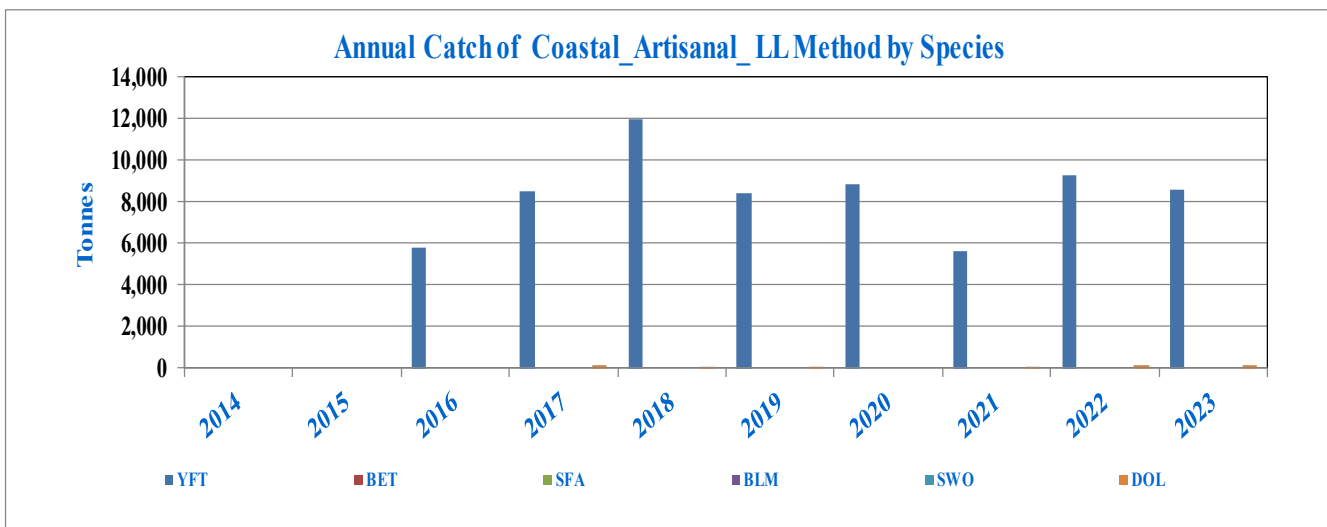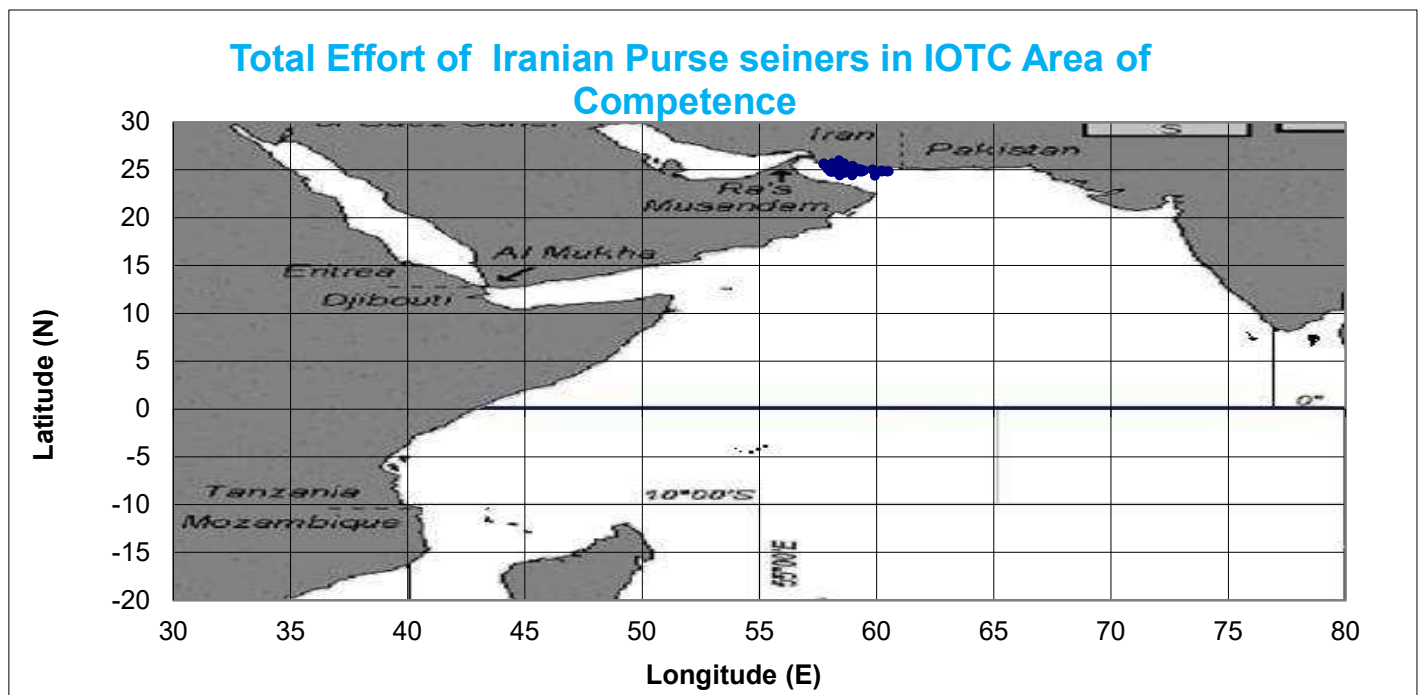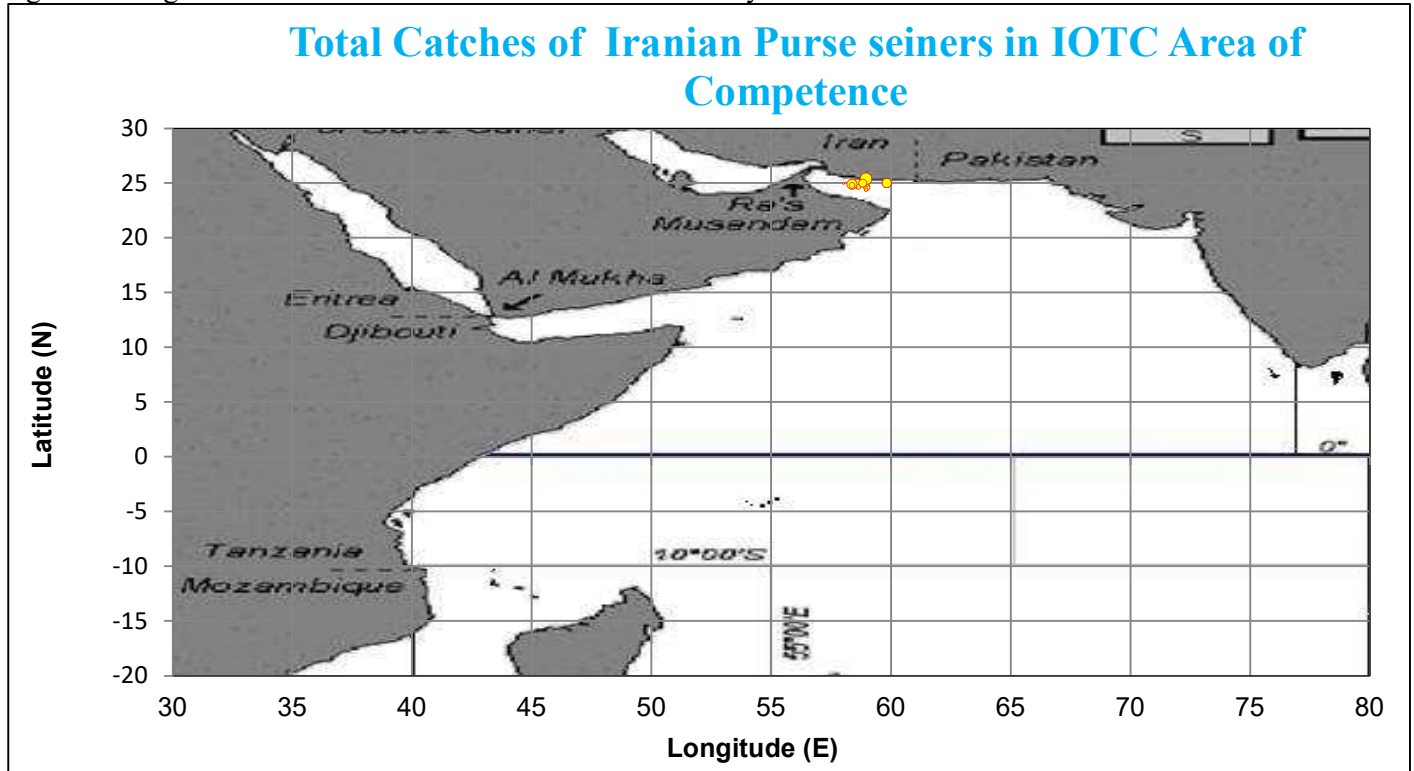| GEAR GROUP	Capacity GT	Fishing effort by gear(days)									
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Purse seine	500 to 1000 t	0	0	0	0	0	0	0	0	0	0
	>1000 t	450	981	727	1,085	715	811	401	376	0	0
Total Purse seine fishing effort		**450**	**981**	**727**	**1,085**	**715**	**811**	**401**	**376**	**0**	**0**
Coastal_Artisan al_Longline	< 3	0	0	0	19,440	24,300	20,000	34,000	45,000	49,200	49,920
	51 to 100	0	0	0	6,600	14,025	11,040	9,520	16,800	29,520	6,490
	100 to 200	0	0	0	560	1,190	1,200	0	0	0	0
	>1000	0	0	0	0	0	0	0	0	0	0
Coastal_Artisanal_Longline fishing ef		**0**	**0**	**0**	**26,600**	**39,515**	**32,240**	**43,520**	**61,800**	**78,720**	**56,410**
Gillnet	< 3 t	515,372	557,434	538,550	438,046	516,149	496,736	764,432	541,066	568,892	600,452
	3 to 20 t	100,809	43,303	40,985	43,035	44,779	37,392	43,369	77,334	46,606	57,645
	21 to 50 t	176,132	195,643	184,070	58,114	51,045	47,178	44,594	60,629	63,268	71,066
	51 to 100 t	82,637	91,293	91,790	54,873	52,410	40,029	36,904	93,199	100,245	55,436
	>100 t	45,020	57,662	60,400	59,746	69,535	75,343	72,941	46,197	52,129	101,037
Total Gillnet fishing effort		**919,970**	**945,335**	**915,795**	**653,815**	**733,918**	**696,677**	**962,241**	**818,425**	**831,140**	**885,635**
Trolling	< 3 t	139,161	125,446	123,450	196,440	224,708	258,713	133,500	127,260	135,740	183,070
Total Trolling fishing effort		**139,161**	**125,446**	**123,450**	**196,440**	**224,708**	**258,713**	**133,500**	**127,260**	**135,740**	**183,070**
Total all Gear fishing effort		**1,059,581**	**1,071,762**	**1,039,972**	**877,940**	**998,856**	**988,441**	**1,139,662**	**1,007,861**	**1,045,600**	**1,125,115**

Figure3.7. 1° grid area for Purse Seiners Catch-and-Effort data year 2021

Total Catches of Iranian Purse seiners in IOTC Area of Competence

Total Effort of Iranian Purse seiners in IOTC Area of Competence

Note: Only one purse seiner vessel (ParsianShila) was active for a few days for research work in the Persian Gulf and Oman Sea, due to sanctions and related difficulties in accessing satellite-based FADs data. Therefore, no catch and effort have been recorded for this fishing method in the past two years.

4. National Data Collection and Processing System

Iran's fisheries activities consist of two distinct parts, each with different fishing methods and geographical features:

1. Northern coastal provinces (Caspian Sea)
2. Southern coastal provinces (Persian Gulf, Oman Sea, and Overseas)

4.1. Caspian Sea

4.1. Caspian Sea

There are three coastal provinces in the northern waters, which fish within their territorial waters, totaling around 36,971 tonnes with 738 vessels and employing three different fishing methods (Figures 4.1.1 and 4.1.2):

4.1.1. Sturgeon Fishing

Around 428 fishermen with 138 fishing boats in 33 fishing grounds use the gillnet method to catch sturgeon (five major species).

Note: Iran has voluntarily banned commercial sturgeon fishing since March 2012.

4.1.2. Kilka (Anchovy) Fishing

Around 523 fishermen with 73 fishing vessels in four fishing grounds use light-conical nets (funnel-shaped nets) to catch anchovy (three major species).

4.1.3. Bony Fish Fishing

Around 8,487 fishermen within 105 fishing cooperatives at 105 sites use the beach seine method to catch 15 bony fish species.

The statistical method used in the Caspian Sea for all three aquatic groups involves a total enumeration approach. Port samplers at fishing ports collect data on the unloaded catch of kilka (anchovy) from fishing vessels and gather information on the catch and size of bony fish and sturgeon. These data are collected through designated fishing stations for each aquatic group and recorded in fishing statistics questionnaires.

Figure 4.1.1. Caspian Sea Catch by Categories (2023)

Caspian Sea Catch for year 2023(Mt)
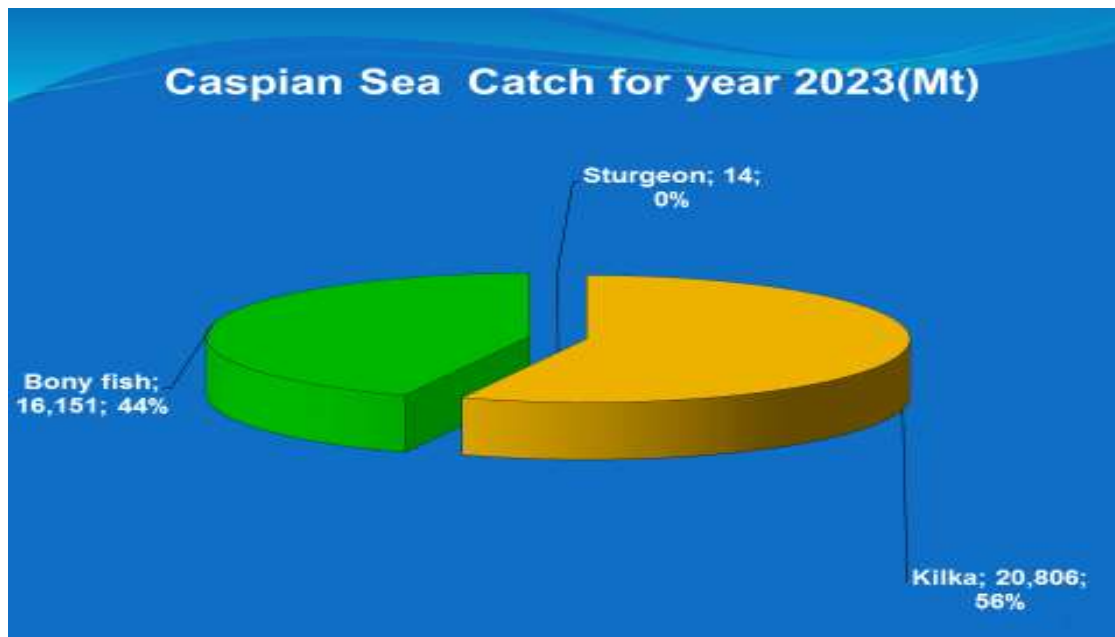
4.2. Persian Gulf & Oman Sea & High Seas

There are four coastal provinces in the southern waters, where fishing takes place within territorial waters using approximately 14,750 vessels.

- **Gillnet fishing** is used by fishing boats and dhows for large pelagic species.

- **Mid-water trawl fishing** is employed by ships for cuttlefish, lantern fish (myctophids), and hairtail (ribbonfish) during time-area closures.

- **Shrimp trawl fishing** is used by artisanal boats, dhows, and industrial vessels for shrimp, also during time-area closures.

- **Trap (Gargoor) fishing** is used by boats and dhows for grouper, cuttlefish, and other demersal species.

- **Trolling and pole & line fishing** are used by boats for tuna species, mackerel, longtail tuna, yellowfin tuna, and some demersal species.

- **Coastal artisanal longline fishing** is used by boats and dhows primarily for tuna species, especially yellowfin tuna.

- **Purse-seine (pair-boat) fishing** is used by boats for sardine and by industrial vessels for tuna.

All fishing operations require a fishing license (permit) when going out to sea. There are 67 basic landing centers in the southern coastal waters, each issuing fishing permits for vessels. The fishing permit forms are also used at all landing sites for total enumeration to gather statistics on the total effort of the active fleet.

Additional fishing methods and total enumeration are conducted by fishermen's cooperatives as follows:

- **Beach-seine fishing** is used by fishermen in a limited area of Hormozgan province for sardine.

- **Set-net fishing** is used in the tidal regions of Hormozgan province for shrimp, crab, and other species.

4.3. Logbook program for artisanal gillnets and industrial purse seiners

In 2011, a logbook program was implemented for Iranian artisanal gillnets and industrial purse seiners, and a new logbook template was designed according to IOTC Resolutions. Four Iranian purse seiners were active in 2023, and their fishing operations were reported in logbook format.

In compliance with IOTC regulations, we are reducing fishing pressure on coastal species by substituting some gillnetters with longline fisheries to meet IOTC mandates. Significant efforts have been made to complete the logbook data, but there are still some weak points in the recorded data. Unfortunately, despite follow-up actions and training courses held for fishermen, we have not yet succeeded in fully implementing the logbook program for gillnet fisheries.

Figure4.1. Logbook template for Gillnet vessels (active in Highseas for tuna and tuna-like species)

Indian Ocean Tuna Commission
Commission des Thons de l'Océan Indien

LOGBOOK TEMPLATE FOR GILLNET VESSELS	لاگ بوک شناورهای گوشگیر

شماره سفر No.trip	بندر ورود (Port Arrival)	بندر خروج (Port Departure)	۱۲۹۹۵	شماره سریال (Serial No):
نام و نام خانوادگی ناخدا Capt. Name		تاریخ ورود (Date Arrival)	تاریخ خروج (Date Deprture)	شماره ثبت (Reg No):
نام و امضای تکمیل کننده فرم Name&Sign		طول تور به آب انداخته شده - متر(Length net set):		کد IOTC (IOTC No):

A wide data table with the following column groups:

- **Date** (تاریخ)
- **Start set** (شروع تورریزی): Lat, Long, Time
- **End set** (خاتمه تورکشی): Lat, Long, Time
- **Weight&quantity** (وزن و تعداد): No. (تعداد), kg (وزن)
- **Tuna & Tuna Like fishes** (تون و شبه تون ماهیان): Bigeye tuna, Yellowfin tuna, Skipjack tuna, Longtail tuna, Kawakawa, Frigate tuna, commerson Scomberomorous
- **Billfishes** (منقار/ نیزه ماهیان): Sword fish, marlin, Sailfish
- **Sharks** (کوسه ماهیان): Blue shark, Mako shark, Porbeagle Shark, Thresher Shark, Hammerhead shark
- **Other Species** (سایر گونه ها)
- **Discards** (صید دورریز از قبیل لاک پشت ، دلفین و....)

Date	Lat	Long	Time	Lat	Long	Time	Weight&quantity	Bigeye tuna	Yellowfin tuna	Skipjack tuna	Longtail tuna	Kawakawa	Frigate tuna	commerson Scomberomorous	Sword fish	marlin	Sailfish	Blue shark	Mako shark	Porbeagle Shark	Thresher Shark	Hammerhead shark	Other Species			Discards		
							No.																					
							kg																					
							No.																					
							kg																					
							No.																					
							kg																					
							No.																					
							kg																					

5- Size Data

There are 12 important commercial species in Iranian southern waters, which their size frequency data compiled. The species comprised of:

1. Tigertooth croaker (*Otolithes ruber*),
2. Silver pomfret (*Pampus argenteus*),
3. Black pomfret (*Parastromateus niger*),
4. Javelin grunter (*Pomadasys kaakan*),
5. Fourfinger threadfin (*Eleutheronema tetradactylum*),
6. Grouper(serranidae)
7. Longtail tuna (*Thunnus tonggol*),
8. Narrow-barred Spanish mackerel (*Scomberomorus Commerson*),
9. Kawakawa (*Euthynnus affinis*),
10. Yellowfin tuna (*Thunnus albacores*),
11. Skipjack tuna (*Katsuwonus pelamis*),
12. Bigeye tuna (*Thunnus obesus*

One of the major national actions taken to improve the data collection system is the collection of *length-frequency data* for tuna fisheries. Length-frequency data for each tuna species has been provided for all available gear types and for all major tropical tuna species, following the established guidelines. Sampling has been conducted through a random sampling procedure by field samplers at designated landing centers.

Size data for tuna species have been compiled since 2001. Sampling in southern waters is carried out in 17 landing centers: Choebdeh and Hendijan in Khuzestan Province; Daylam, Dayer, Jofreh, and Bandargah in Bushehr Province; Bandar Abbas, Jask, Javad'el'aemeh, Salakh, Bostaneh, Kong, and Gogsar in Hormozgan Province; and Ramin, Pozm, Beris, and Pasabandar in Sistan and Baluchestan Province.

At each landing center, there is a fish measuring board and precise balance scales. Several biometric equipment items have been provided by the IOTC-OFCF project and distributed among the designated landing centers, and size data compilation is in progress.

Port samplers have received necessary training in fish identification and in measuring length and weight; these training courses will be updated annually based on time and area. Fishing vessel catches were irregular across species, but fish measurements were carried out onboard periodically to obtain precise data. In 2023, around 173,077 tuna fish were measured. Fork length frequencies for seven economically important tuna species were recorded. These species include Longtail tuna (Thunnus tonggol) (LOT), which dominated other tuna species with 49,210 (28.4%), followed by Kawakawa (Euthynnus affinis) (KAW) at 26,807 (15.5%), Narrow-barred Spanish mackerel (Scomberomorus commerson) (COM) at 40,902 (23.6%), Yellowfin tuna (Thunnus albacares) (YFT) at 37,569 (21.7%), Skipjack tuna (Katsuwonus pelamis) (SKJ) at 16,839 (9.7%), Bigeye tuna (Thunnus obesus) (BET) at 1,750 (1.0%), and Frigate tuna (Auxis thazard) (FRI) at 0 (0.0%).

The majority of size data was collected from gillnet catches (97.0%), with other fishing gear types, including longlines and purse seines, contributing 0.05% and 2.95%, respectively. Neritic tunas (coastal species) are abundant and commonly found in the waters throughout the Persian Gulf and Oman Sea, while tropical tunas (oceanic species) are found mainly in the Oman Sea and Indian Ocean. Neritic tunas contributed 68% of the total tuna fish measured, while tropical tunas contributed 32% of the total size data compiled in 2021.

Figures 5.1 to 5.3 show the total annual size data by gear type and species reported for the entire fleet, including length frequencies and means for tuna and tuna-like species from 2014 to 2023. These figures indicate an increase in the number of fish measured during 2015–2019; however, fluctuations occurred in the last two years due to the COVID-19 pandemic.

Figure5.1. Length Frequency of Tuna species by Gillnet fishery (2014-2023)

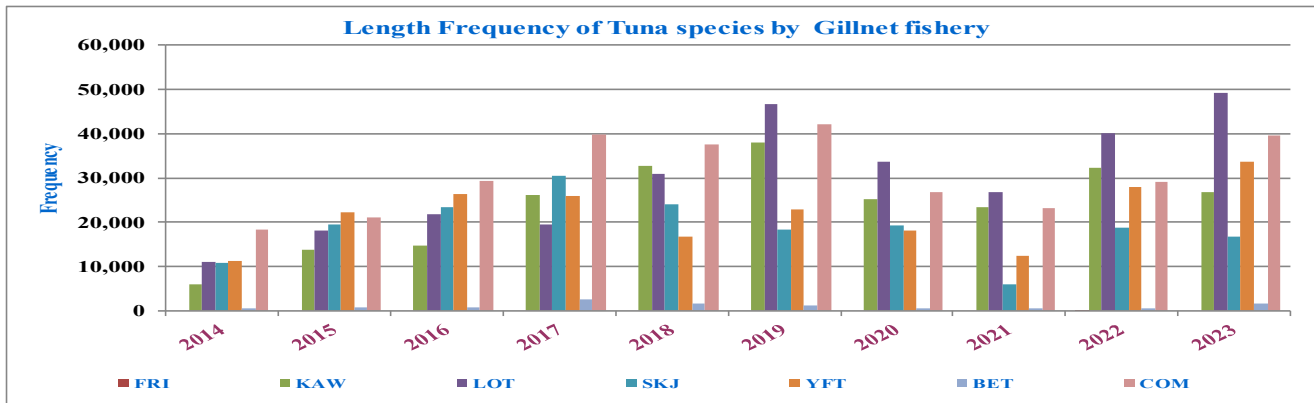| SPECIES	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
FRI	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	172	0
KAW	6,036	13,765	14,678	26,088	32,721	37,985	25,230	23,448	32,295	26,807
LOT	11,174	18,116	21,889	19,449	30,985	46,811	33,735	26,839	40,008	49,210
SKJ	10,857	19,574	23,410	30,577	24,177	18,474	19,398	5,959	18,809	16,839
YFT	11,261	22,161	26,287	25,885	16,684	22,970	18,063	12,470	27,994	33,761
BET	630	724	888	2,639	1,782	1,256	502	465	615	1,750
COM	18,283	21,087	29,315	39,753	37,591	42,115	26,946	23,254	29,068	39,597
TOTAL	58,241	95,427	116,467	144,391	143,940	169,611	123,874	92,435	148,961	167,964

Figure5.2. Length Frequency of Tuna species by Purse seine fishery (2014-2023)

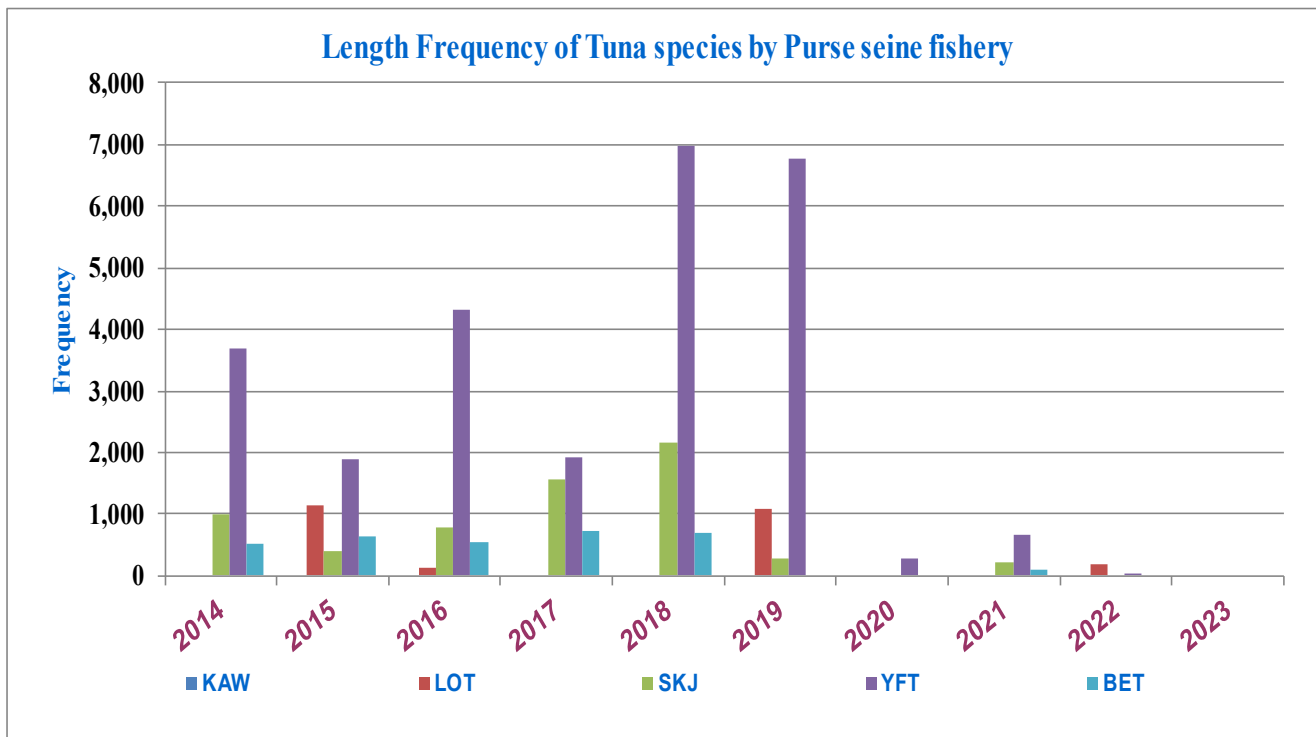| SPECIES	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
KAW	0	0	0	0	0	0	0	0	0	0
LOT	0	1,158	125	0	0	1,097	0	0	189	0
SKJ	1,010	416	797	1,576	2,152	278	0	224	0	0
YFT	3,682	1,892	4,333	1,923	6,995	6,786	285	659	45	0
BET	523	629	560	716	708	0	0	103	0	0
TOTAL	5,215	4,095	5,815	4,215	9,855	8,161	285	986	234	0

Figure5.3. Length Frequency of Tuna species by Trolling & LL fishery (2014-2023)

SPECIES	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
COM	2,808	4,416	2,511	980	335	2,059	2,428	0	840	1,305
LOT	1,289	0	0	0	0	0	0	0	0	0
YFT(by Coastal_LL_Method)	0	0	0	18,457	9,813	7,371	7,712	2,084	5,503	3,808
YFT(by Hook & Line_Method)	0	0	0	2,485	3,371	0	0	0	1,685	0
TOTAL	4,097	4,416	2,511	21,922	13,519	9,430	10,140	2,084	8,028	5,113
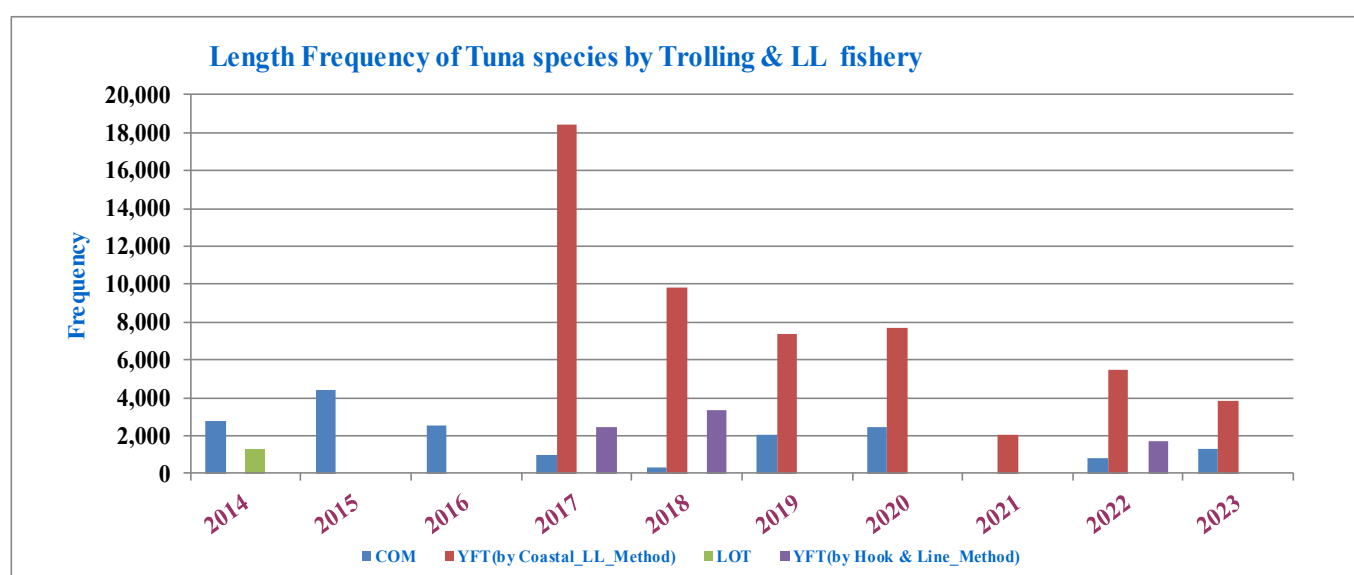
6. Fishing Dhows Catch Composition

We have collected fishery data since 2012 for a sample of fishing dhows at selected fishing ports, using total enumeration to determine the catch composition for tuna and tuna-like species and to identify by-catch species. Through this process, we were able to identify bigeye tuna within the yellowfin catch composition. While the identification of small bigeye tunas (BET) under 50 cm was challenging, we were able to enumerate the number of bigeye tuna (BET) in the overall catch. Additionally, we differentiated between various species of sharks and billfishes in the total catch.

The identified species are as follows:

- **Billfish species**: Swordfish (SWO), Black Marlin (BLM), Indo-Pacific Sailfish (SFA), Striped Marlin (MLS), Shortbill Spearfish.
- **Main shark species**: Silky Shark (FAL), Mako Sharks, Oceanic Whitetip Shark (OCS), Hammerhead Sharks.

Discard information was collected through self-declaration by interviewing the captains of fishing vessels.

- **Discard species**: Manta Ray, Stingray, Dolphins, Sea Turtle (released to sea, some alive and some deceased).

This pilot plan will be continued in the future to improve and enhance data collection at the port through field sampling.

7. to Promote Coastal Tuna Longline Fishing

Iran is the largest fishery producer in the region, with over 3,100 km of coastline. Sistan and Baluchestan, due to its wide range of water resources, has two fisheries departments: one in the north and one in the south of the province. The Sistan and Baluchestan Fisheries Department (Inland Waters), based in Zabul in the northern part of the province, is responsible for controlling and protecting domestic water resources. The Sistan and Baluchestan Fisheries Department located in Chabahar Port, in the south of the province, operates in the Oman Sea and the Indian Ocean.

There are 11 active fishing ports in the province, including Tis, Konarak, Pozm, Tang, Zarabad (Galak), Chabahar, Ramin, Bris, Pasabandar, and Govatr. In addition, six industrial districts and over 100 fishery production and processing units are operational in Sistan and Baluchestan.

Sistan and Baluchestan is a prominent fishing area, accounting for 40% of the country's southern catch and 38% of the total national catch, making it rank second in the Indian Ocean after Indonesia and first in the western Indian Ocean. The province supplies over 60% of the country's tuna and tuna-like catch (2022).

In recent years, Chabahar has ranked lowest in terms of the human development index compared to other provinces in Iran. It faces high unemployment, lack of investment and economic opportunities, scattered population centers, and a shortage of skilled workforce and infrastructure. To address these challenges, the United Nations Industrial Development Organization (UNIDO) and Japan have collaborated to develop the fishery value chain in Chabahar, Iran's only port on the Indian Ocean coast.

In line with predetermined objectives, this collaboration aims to leverage the experience of well-regarded countries in hook fishing. With the endorsement of the UNIDO offices in Vienna and Iran, a plan for promoting the sustainable development of the yellowfin tuna value chain in Chabahar, ratified in 2017, has received special attention. Since the project's inception, various programs have been executed with Japan's assistance to enable resource-conserving and optimized fishing through the longline method, enhancing the quality and value of sushi and sashimi.

As part of the agreed plans, we have acquired a permit to import a Japanese longliner ship to achieve these objectives. Additionally, in the near future, it is anticipated that a vessel with a combined Japanese and Iranian crew may be introduced. The ultimate goal of the Iranian Fisheries Organization is to leverage this partnership as a catalyst to expedite the transition from gillnet fishing to longline fishing through the collaborative efforts of UNIDO and Japan.

8. Implementation of IOTC Recommendation & Resolution Relevant to Data Collection System

1. Submission of historical catch and effort data by fishing ground, gear, vessel, and species for each trip, based on all questionnaires and license permits issued since 2007.

2. The catch and length frequency data of these marine species have been completed in 1RC, 3CE, and 4SF forms and submitted to the IOTC Secretariat.

3. In compliance with the Commission's regulations, information on two shark species, namely the mako shark and hammerhead shark, as well as two billfish species, specifically blue marlin and shortbill spearfish, has been revised.

4. Plans to reduce fishing pressure on coastal species by transitioning some gillnet fisheries to longline fisheries will continue in the coming years to meet IOTC mandates.

5. Various actions have been taken to report by-catch and discards in gillnet fisheries, such as sharks, cetaceans, and sea turtles. Additionally, we have indicated in the fishing licenses for tuna vessels the requirement to release sharks after accidental by-catch.

6. A data collection system, including species identification for Bigeye tuna (BET), Wahoo tuna (WAH), sharks, and billfish, has been implemented.

7. Training courses for port samplers have been conducted. Identification cards for billfish, sharks, Bigeye tuna (BET), and Wahoo tuna (WAH) have been translated into Persian and distributed among port samplers and fishermen to aid in species identification. Recently, Bullet tuna and Frigate tuna have been identified by some fishermen operating in Iranian waters of the Oman Sea. We are currently developing our field samplers' capacity to identify these species and record their size data.
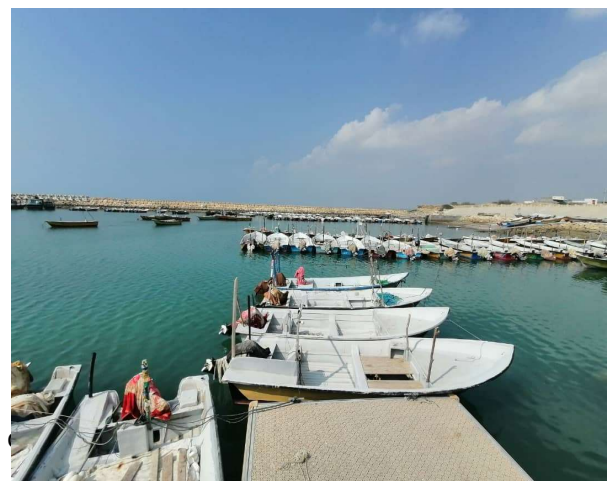
9. Actions related to SDG 14.4.1 indicator to protect marine resources

1. Control the level of fishing efforts and prevent an increase in fishing activity in the Persian Gulf and Oman Sea.
2. Prohibit the periodic catch of certain species (for specific fishing methods and commercial species such as silver pomfret, *Otolithes ruber* (tigertooth croaker), shrimp, Spanish mackerel, etc.) to protect aquatic resources.
3. Implement a plan for all fishing vessels to cease fishing activities for two weeks before the shrimp season.
4. Establish artificial habitats to protect aquatic resources (20 sites completed and 3 sites in progress).
5. Conserve mangrove forests and natural aquatic habitats.
6. Take action to shift from gillnet fishing to longline and selective fishing methods to reduce by-catch and discards, and encourage fishermen in this direction.
7. Ban trawling by industrial fishing vessels in the Persian Gulf and Oman Sea, in effect for the past two years.
8. Reduce fishing activity around coral islands, such as Kish Island.
9. Conduct training and promotional courses for fishermen on the release of endangered and protected species, such as sea turtles, cetaceans, and whale sharks.
10. Prohibit fishing with barrier nets during the spawning season of aquatic stocks to protect endangered aquatic resources, with a 45-day ban each year (April and May).

10. Main Issues

1. Small scale fisheries
2. Multi-species fisheries in the region
3. IUU fishing activities
4. Species identification for some oceanic species
5. Lack of implementation of a fishing logbook template and VMS for gillnet fishery, as well as on-board observers for both gillnet and purse seine fishing methods.

10. Suggestions

1. Coordinating measures for the exchange of necessary technical and expert consultation among member countries through the IOTC Secretariat.

2. Organizing workshops and training courses on tuna and tuna-like species for member countries, targeting observers and field samplers, focusing on data collection and statistics in line with relevant IOTC resolutions and recommendations.

3. Conducting research projects and studies related to the status of marine fish stocks, as well as the conservation and management of tuna fisheries in member coastal countries.