

The Status of Tuna Stocks with Special Reference to Tropical Tunas in Pakistan

Abstract

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Tuna and tuna like fishes are one of the components of pelagic resources. In Pakistan, mainly neritic and oceanic species are encountered in the tuna fishery. Tuna fishing fleet comprises of about 709 gillnet boats. The total production of tunas and tuna-like fishes, including Neritic and Oceanic tunas, Billfishes and Seerfishes during the year 2024 was 51, 163 m. tonnes.

Tuna and allied resources called as large pelagic resources. The large pelagic resources contributed 51, 163 ton, accounting for 21% of the marine capture fish production. Major share of the landing was by Tunas (82%) followed by Seerfishes (13.65%),dolphinfish (3.0%) and billfish (2.99%). Among the tunas, yellowfin was dominating with 32%, followed by longtail (23), frigate (21.50%), tuna-nei (10%), kawakawa (8%) and skipjack (4.5%). There were no landings of bullet tuna and striped bonito as well. There is a change in the pattern over the years, the contribution of the neritic tunas were decreased as compared to the past years.

There are no reported instances of sea bird interaction in any of the tuna fishing boat. Sea turtles, Marine mammals and Whale sharks are protected in Pakistan under various national and provincial fisheries and wildlife legislations. Data on tuna production is collected by provincial fisheries departments of maritime provinces of Sindh and Balochistan and compiled by Marine Fisheries Department, Government of Pakistan, Ministry Maritime Affairs.

Significant progress has been made during the years from 2023-2025, for the conservation of bycatch species which include promulgation of fisheries legislations by Federal Government, provinces of Sindh and Balochistan. This legislation prohibited the catching of turtle, cetacean (whales & dolphins), whale shark, silky shark, oceanic whitetip shark, thresher shark, hammerhead sharks, all species of sawfishes of family Pristidae, all species of guitar fishes and wedge fishes of family Rhinidae, Rhinobatidae or Rhynchobatodae. To monitor the activities of local tuna boat, it

is made mandatory to have VMS on all fishing vessel larger than 15 meters (in length overall). The contravention of these regulation is punishable with fine and imprisonment.

Introduction

Gillnetting for tropical tuna is an important fisheries of Pakistan as a major part of the fleet is engaged in this fishing. Gillnets consisting of multifilament are used for catching tropical tunas including yellowfin tuna (*Thunnus abacares*) and skipjack tuna (*Katsuwonus pelamis*). Bigeye tuna (*Thunnus obesus*) is rarely caught by the gillnet fishing vessels in coastal and offshore waters, therefore, it does not contribute to the tuna landings of Pakistan. Information about tropical tuna fisheries of Pakistan is known through the work of Khan (2016), Moazzam (2011, 2012a-b, 2014), Moazzam et al., (2017) and Nawaz and Moazzam (2014).

These studies were based mainly on the fisheries statistical data that was published by Marine Fisheries Department, Government of Pakistan. Some information collected through the Crew-based Observer Programme initiated by WWFPakistan since 2012 is also incorporated in this study. Based on the information generated through this WWF-Pakistan's Crew-based Observer Programme, data of tuna and tuna like species was reconciled with the landings data available with Marine Fisheries Department, Government of Pakistan.

An exercise for reconstruction of landing data for IOTC species since 1987 to 2017 was also carried out. These data sets were provided to IOTC by Marine Fisheries Department, Government of Pakistan whereas a part of it was presented in WPNT07 (Moazzam and Ayub, 2017).

TROPICAL TUNA LANDINGS

Tropical tuna landings during 2024 was observed to be slightly higher than previous year (Table-I). An overall increase of 8.40 % in the landings tropical tuna was observed during 2024 as compared to 2023. Major increase was noticed in case of skipjack tuna where an increase of 10.52 % was noticed during the same period. In case of yellowfin tuna this increase was observed the only 5.44 %.

Table:1 Tropical Tuna Landings in Pakistan

English name	Scientific name	Gear	2023	2024	%age
Yellowfin tuna	<i>Thunnus albacares</i>	Gill	6943	7321	5.44
Skipjack	<i>Katsuwonus pelamis</i>	Gill	1597	1765	10.52
Total			8,540	9,086	8.40

It is observed that the reduction in the catches are evident from 2017 to date. The highest catches were found in the 2017. The increase in the landings of tropical tuna during 2017 may be attributed mainly to the operation of large tuna gillnetters in comparatively offshore waters as compared to previous years. Unprecedented increase of the prices of yellowfin and skipjack in the tuna market of Pakistan during 2017 was noticed. The average prices of these two species were about US\$ 1.95-1.85/kg during 2017 as compared to 2016 when prices were US\$ 1.25-1.35/kg. It is worth mentioning that longtail, yellowfin and skipjack tunas are traded with neighbouring country whereas kawakawa and frigate tuna are mainly exported to Sri Lanka in salted-dried form whereas small quantities of these species are locally consumed Fig .

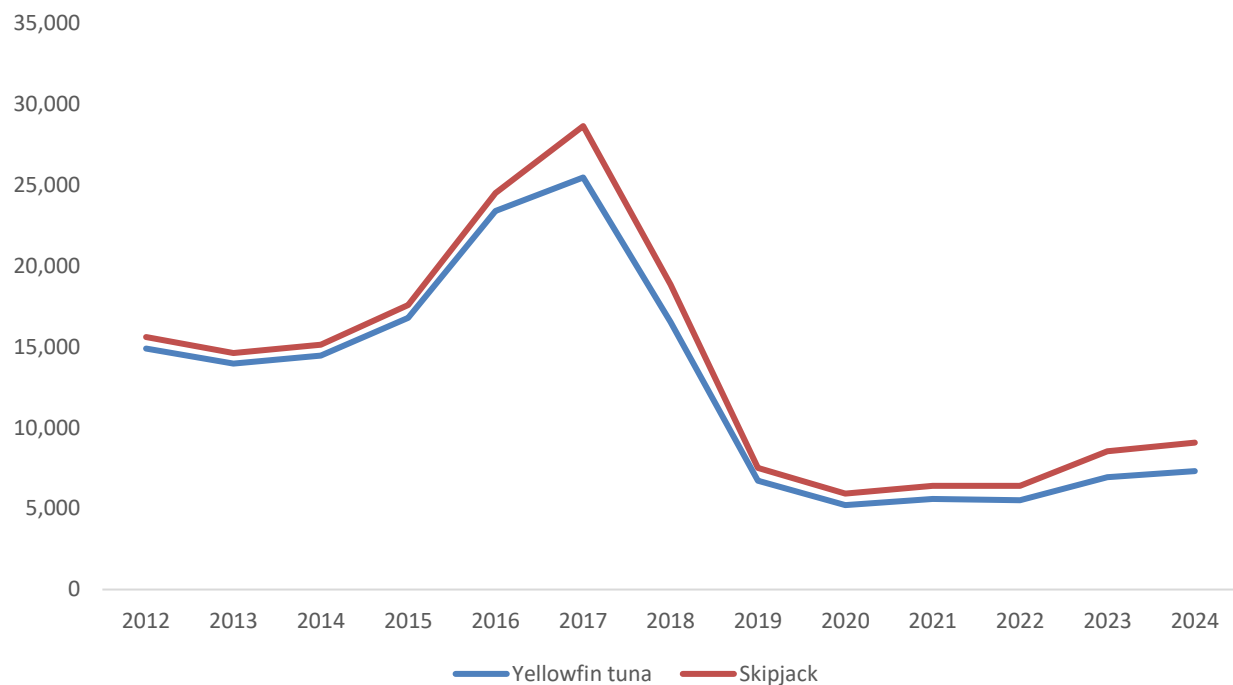


Fig: 1 Total landings of yellow fish and skipjack from 2012 to 2024

Tropical tuna has always been very important component of large pelagic fisheries in Pakistan. Landings data reconstructed by Marine Fisheries Department, Government of Pakistan and WWF-Pakistan (Moazzam et al., 2017) indicates that annual landings of tropical tuna ranged between 6,000 m. tons during 1987 and about 29,000 in 2017 (Fig.1). Unprecedented increase in the annual landings of tropical tuna was noticed in 2017.

It may be noted that there is a major decrease in the landings of tuna and tuna like species in the gillnet fisheries of Pakistan. As compared to 2017 the landings of these species have decreased by a factor of 31.53 % in 2019. The landings of tuna and tuna like species was 71,569 m.tons during 2017 which has dropped to a level of 29,320 m. tons in 2024. Tropical tuna species forms the important part of the tuna fisheries in Pakistan as these species contribute about 23 % of the total tuna landings (Fig 2). Yellowfin Tuna contributed 81% of total tropical tuna landings as compared to SkipJack Tuna i.e. 19% (Fig 2)

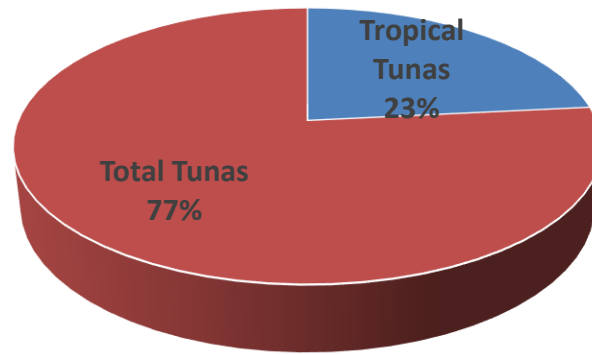


Fig 2: Percentage contribution of tropical tuna landings in total tuna landings of Pakistan

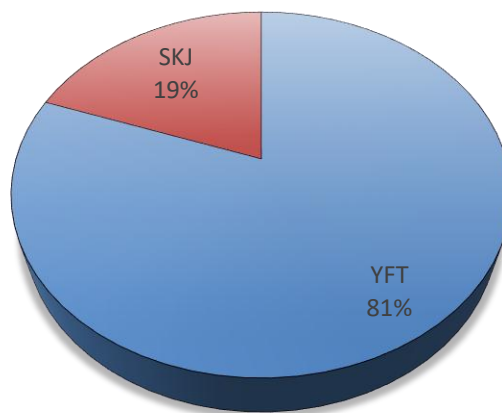


Fig 3: Percentage contribution of Yellow fish and Skipjack tuna in total tropical tuna landings

CONCLUSION

Tropical tuna species forms the important part of the tuna fisheries in Pakistan as these species contribute about 23 % of the total tuna landings. Yellowfin tuna is the most dominating tuna species observed since 1987 which is followed by longtail tuna (*Thunnus tonggol*). A marked seasonality in the tropical tuna landings was noticed with a peak in March and April. There is a

voluntary two month close season observed during June and July by the tuna gillnets fishermen mainly because of extremely rough weather and intensive wave action due to summer monsoon. During 2024, tropical tuna landings was observed to be about 8.4 % higher than 2023 which is mainly due to operation of large gillnet vessels in comparatively offshore waters for targeting skipjack and yellowfin tuna.

Marketing forces, therefore, control area of operation of tuna vessels in Pakistan which is reflected in change in species composition.

Bigeye tuna (*Thunnus obesus*) is seldom caught by Pakistani gillnet vessels. This may be because of geographical distribution of bigeye tuna in Indian Ocean. According to Lee et al. (2005) bigeye tuna mainly distributed in tropical waters of Indian Ocean between 10°N and 15°S which is an area seldom fished by Pakistani gillnetters. Mohri et al., (1991) observed that low catches in the north high latitude region of the Arabian Sea.

Pakistan is taking the step to ensure the compliance to the obligations of IOTC regarding the the tropical tunas. Pakistan has reduced the catches significantly keeping the level of YFT catches in the allocated catch limits under the resolution 21/01. Pakistan has started the project in which the transformation of gillnetters into longliners will be takes place. Pakistan has started to collect the log book data as per IOTC standards from this year.

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