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National Report of Pakistan: Tuna and Tuna-like Fisheries, Catch Statistics and Data Collection, 2021–2025

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Abstract

Tuna and tuna-like species are an important component of Pakistan's marine fisheries, contributing to fish production, export earnings and the livelihoods of coastal communities. The fishery is carried out mainly by locally built wooden vessels using gillnets, operating from Karachi, Gwadar, Pasni, Ormara and Jiwani. It comprises small-scale neritic tuna operations and a large-scale offshore gillnet fishery; no large-scale tuna longline fishery is currently reported, and no longline fleet has operated since 2009. The reported catch of tunas and allied large pelagic species (tunas and bonitos, billfishes, Spanish mackerel and dolphinfish) rose from 44,776 t in 2021 to 54,765 t in 2025, an increase of 22.3%. The 2025 catch was 6.7% above the 51,311 t reported for 2024. Gillnets took 54,597 t (99.7%) and handline, trolling and coastal longline 168 t. Tunas and bonitos contributed 31,892 t, led by yellowfin tuna (7,852 t), frigate tuna (7,320 t) and longtail tuna (4,248 t); Spanish mackerel (14,488 t) was the largest single non-tuna component. Shark and ray catches totalled 1,020 t. Dolphinfish catches fell by 51% over the period. Approximately 27% of the 2025 tuna catch was reported as "tunas and bonitos nei", which limits species-level analysis. Elevated sea-surface temperatures, jellyfish blooms and monsoon conditions affect effort and catch rates, while incomplete vessel registration and limited catch, effort and size data remain the main constraints. Priorities include strengthened port sampling, observer coverage, vessel registration, VMS implementation and finalisation of the National Plan of Action for Sharks.

Keywords: Pakistan; tuna; gillnet; Arabian Sea; catch statistics; data collection; IOTC; sharks; bycatch

1. Introduction

Pakistan has a coastline of about 1,050 km on the northern Arabian Sea, shared between the provinces of Sindh and Balochistan. Tunas and tuna-like species are caught throughout this area, mainly by gillnet vessels, and form part of the catch of an Indian Ocean Tuna Commission (IOTC) Contracting Party whose fleets fish in both national waters and the high seas of the Indian Ocean. Reliable catch, effort and size statistics from these fisheries are needed for stock assessments by the IOTC Scientific Committee and its working parties.

This report presents Pakistan's reported catches of tunas, billfishes, Spanish mackerel, dolphinfish, sharks and rays for 2021–2025, describes how the data are collected and compiled, and identifies data gaps and actions planned to improve reporting. The 2025 figures are estimates prepared on 15 October 2026 and may be revised when provincial compilations are finalised.

2. Materials and Methods

2.1 Description of the fishery

The tuna fishery operates through locally built wooden vessels using surface drift gillnets. The main fishing bases are Karachi in Sindh and Gwadar, Pasni, Ormara and Jiwani in Balochistan. Two components are recognised: a small-scale neritic tuna fishery operating close to the coast and targeting longtail tuna, kawakawa, frigate tuna, bonitos and Spanish mackerel, and a large-scale offshore gillnet fishery that targets yellowfin tuna and skipjack and also takes billfishes, dolphinfish and sharks. Small

quantities are also taken by handline, trolling and coastal longline. No longline catches were reported for any species group in 2021–2024, and no tuna longline fleet has been operational since 2009. Seasonal rough seas during the southwest monsoon restrict fishing, particularly by smaller vessels.

2.2 Data sources and compilation

Catch data are collected at landing sites by the provincial fisheries departments of Sindh and Balochistan and are compiled and validated by the Marine Fisheries Department, Ministry of Maritime Affairs, Government of Pakistan, which acts as the national data focal point for the IOTC. Catches are reported in metric tonnes by species and gear. Totals for species groups and fisheries were calculated from the species-level data in the national IOTC data sheet, and percentage changes were calculated as (catch in 2025 ÷ catch in 2024 − 1) × 100. Percentage changes are not shown where the 2024 value was zero. Figures for 2025 are provisional estimates.

3. Results

3.1 Total catch

The total reported catch of tunas and allied large pelagic species was 54,765 t in 2025, compared with 51,311 t in 2024 (+6.7%) and 44,776 t in 2021 (+22.3%) (Table 1; Figure 1). After a slight decline in 2022 (−0.7%), the total increased in each of the following three years. Gillnets accounted for 54,597 t (99.7%) of the 2025 total. Handline, trolling and coastal longline contributed 168 t (0.3%), up from 77 t in 2021. Tunas and bonitos made up 58.4% of the gillnet catch in 2025, Spanish mackerel 26.5%, billfishes 8.2% and dolphinfish 6.8%.

Table 1. Reported catch (t) of tunas and allied species by group, Pakistan, 2021–2025. Figures for 2025 are provisional.

Species group	2021	2022	2023	2024	2025	Change 2025/2024 (%)
Tunas and bonitos	22,075	27,287	28,719	29,760	31,892	+7.2
Billfishes	4,025	3,614	4,521	4,438	4,487	+1.1
Spanish mackerel	10,987	8,775	9,651	12,670	14,488	+14.3
Dolphinfish	7,612	4,684	4,678	4,295	3,730	-13.2
Total gillnet	**44,699**	**44,360**	**47,569**	**51,163**	**54,597**	**+6.7**
Handline, trolling and coastal longline	77	116	146	148	168	+13.5
Total reported catch	**44,776**	**44,476**	**47,715**	**51,311**	**54,765**	**+6.7**

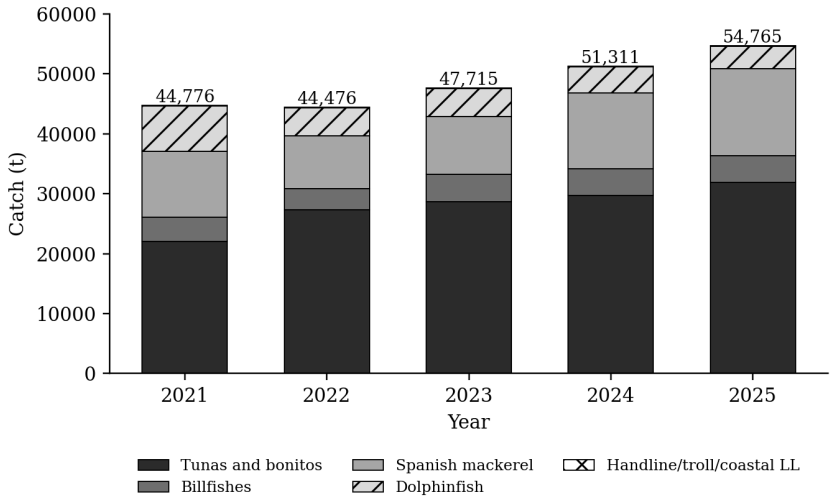

Figure 1. Reported catch by species group, Pakistan, 2021–2025.

3.2 Tunas and bonitos

The catch of tunas and bonitos increased every year, from 22,075 t in 2021 to 31,892 t in 2025 (+44.5%), with a 7.2% increase between 2024 and 2025 (Table 2; Figure 2). Yellowfin tuna rose from 5,598 t to 7,852 t over the period (+40.3%), with a 7.3% increase in 2025. Skipjack showed the largest relative growth, from 810 t to 2,110 t, including a 19.6% increase in 2025. Catches of the neritic species longtail tuna (4,248 t) and frigate tuna (7,320 t) peaked in 2022–2023 and have since declined, by 1.9% and 4.3% respectively between 2024 and 2025. Kawakawa was stable at about 1,700–1,800 t from 2022 onwards. Bullet tuna and striped bonito were reported at constant minimal levels (2 t and 3 t per year), which suggests that these values are not based on current sampling.

Tunas and bonitos not elsewhere included (nei) rose from 4,532 t in 2023 to 8,615 t in 2025 and represented 27.0% of the 2025 tuna catch (23.3% in 2021). This is the largest single tuna category in 2025 and reflects landings that were not identified to species.

Table 2. Reported gillnet catch (t) of tunas and bonitos by species, Pakistan, 2021–2025.

Species	2021	2022	2023	2024	2025	Change 2025/2024 (%)
Yellowfin tuna	5,598	5,511	6,943	7,321	7,852	+7.3
Skipjack tuna	810	892	1,597	1,765	2,110	+19.5
Longtail tuna	3,120	4,981	4,987	4,328	4,248	-1.8
Kawakawa	1,210	1,807	1,782	1,689	1,742	+3.1
Frigate tuna	6,190	9,108	8,873	7,651	7,320	-4.3
Bullet tuna	2	2	2	2	2	0.0
Striped bonito	3	3	3	3	3	0.0
Tunas and bonitos nei	5,142	4,983	4,532	7,001	8,615	+23.1
Total tunas and bonitos	**22,075**	**27,287**	**28,719**	**29,760**	**31,892**	**+7.2**

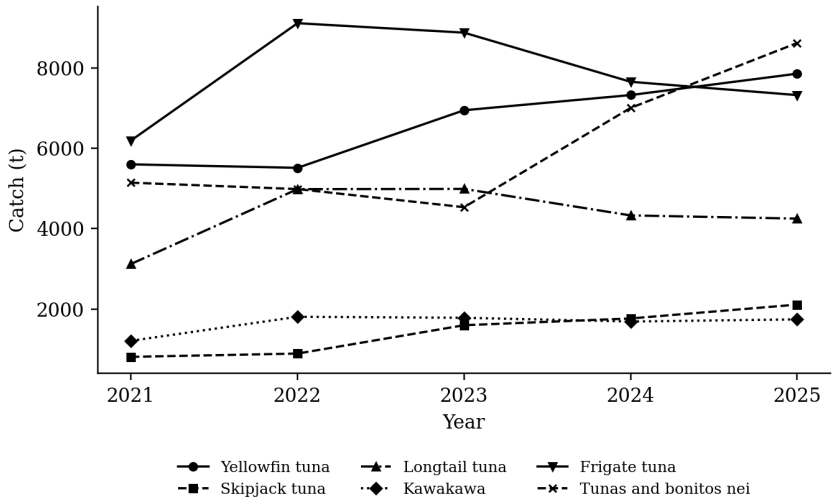

Figure 2. Reported gillnet catch of principal tuna species, Pakistan, 2021–2025.

3.3 Billfishes, Spanish mackerel and dolphinfish

Billfish catches were 4,487 t in 2025 (+1.1% from 2024), dominated by Indo-Pacific sailfish (1,896 t) and black marlin (1,488 t) (Table 3). Black marlin increased by 5.5% in 2025 and has risen from 983 t in 2021, while striped marlin declined to 742 t (−2.4%). Spanish mackerel (Scomberomorus spp.) was the largest non-tuna component, with 14,488 t in 2025 (+14.4%), following a decrease in 2022 and an increase of 31.3% in 2024. Gillnet catches of dolphinfish declined from 7,612 t in 2021 to 3,730 t in 2025 (−51.0%), including a decrease of 13.2% in 2025. Handline, trolling and coastal longline catches of yellowfin tuna, Spanish mackerel and dolphinfish totalled 168 t in 2025 (+13.5%); the increase in yellowfin tuna from this component was 26.8%.

Table 3. Reported catch (t) of billfishes, Spanish mackerel, dolphinfish and handline/trolling/coastal longline catches, Pakistan, 2021–2025. LL = longline.

Species	2021	2022	2023	2024	2025	Change 2025/2024 (%)
Indo-Pacific sailfish	1,892	1,674	1,965	1,916	1,896	-1.0
Black marlin	983	1,009	1,439	1,411	1,488	+5.5
Striped marlin	845	654	769	760	742	-2.4
Blue marlin	305	277	348	351	361	+2.8
Total billfishes	**4,025**	**3,614**	**4,521**	**4,438**	**4,487**	**+1.1**
Spanish mackerel (gillnet)	10,987	8,775	9,651	12,670	14,488	+14.3
Dolphinfish (gillnet)	7,612	4,684	4,678	4,295	3,730	-13.2
Yellowfin tuna (handline)	16	21	35	41	52	+26.8
Spanish mackerel (handline)	19	19	27	29	32	+10.3
Dolphinfish (handline)	42	76	84	78	84	+7.7
Total handline, trolling, coastal LL	**77**	**116**	**146**	**148**	**168**	**+13.5**

3.4 Sharks and rays

The reported gillnet catch of sharks and rays was 1,020 t in 2025, an increase of 7.7% on 2024 and of 30.8% on 2021 (Table 4). Silky shark (336 t) and shortfin mako (310 t) were the main identified species, and both increased in 2025 (+7.7% and +12.7%). Pelagic thresher shark was stable at about 130–150 t. Unidentified sharks (nei) amounted to 222 t, or 21.8% of the shark catch. Mobulid catches fell from 14 t in 2021 to 4 t in 2025. No shark catches by longline were reported.

Table 4. Reported gillnet catch (t) of sharks and rays by species, Pakistan, 2021–2025.

Species	2021	2022	2023	2024	2025	Change 2025/2024 (%)
Shortfin mako	198	209	238	275	310	+12.7
Pelagic thresher shark	156	132	136	145	148	+2.1
Silky shark	243	278	290	312	336	+7.7
Sharks nei	169	211	206	211	222	+5.2
Spinetail mobula	9	3	2	2	2	0.0
Mobula nei	5	2	2	2	2	0.0
Total sharks and rays	**780**	**835**	**874**	**947**	**1,020**	**+7.7**

4. Discussion

4.1 Trends in catch

Reported catches have increased steadily since 2022, mainly through higher landings of tunas and bonitos and Spanish mackerel. Since the fishery relies almost entirely on gillnets and effort data are limited, the increase cannot be interpreted as a change in stock abundance. Differences between species suggest changes in target species and fishing areas: yellowfin tuna and skipjack, which are caught mainly offshore, have increased, whereas the neritic species longtail tuna and frigate tuna have declined from their 2022–2023 levels. The decline in dolphinfish by half since 2021 is the largest change among reported species and should be examined with catch and effort data.

Environmental conditions affect the fishery. Elevated sea-surface temperatures in the Arabian Sea and jellyfish blooms have been reported to reduce effort and catch rates, and the southwest monsoon limits fishing for several months each year. The fishing pattern of the coastal tuna fleet has also changed, but no quantitative information is yet available to separate these effects from changes in abundance or reporting.

4.2 Data quality

Four issues affect the quality of the data submitted. First, 27% of the tuna catch in 2025 was reported as “tunas and bonitos nei”, and this proportion has risen since 2023. Second, the constant values reported for bullet tuna and striped bonito in all years indicate that these entries are placeholders rather than measured catches. Third, effort is not reported in a standardised form such as fishing days or net length, and size data are not available for the main species, so catch-per-unit-effort series and length-based assessments cannot be produced. Fourth, vessel registration records are incomplete, which makes it difficult to relate catches to fleet size, vessel characteristics and areas fished. In addition, 21.8% of the shark catch is reported as “sharks nei” and mobulids are not separated by species in most years.

4.3 Conservation and monitoring measures

The Federal and Provincial Governments have introduced measures for the conservation of sharks, rays, marine turtles, cetaceans and other ecologically important species through fisheries and wildlife legislation and regulatory notifications. Catching and trade restrictions apply to several protected species. A Vessel Monitoring System (VMS) requirement has been introduced for motorized fishing vessels to improve monitoring of fishing activity. No seabird interactions have been reported in the tuna fishery, which is consistent with the absence of longline fishing since 2009. The National Plan of Action for Sharks is under stakeholder consultation. Information on interactions with marine turtles and cetaceans in the gillnet fishery is limited and should be collected through observer or port-based programmes in line with IOTC Resolutions on these species.

5. Actions Planned and Recommendations

To address the gaps identified above, Pakistan plans, subject to resources and capacity-building support, to:

(1) strengthen landing-site sampling and enumerator training in Sindh and Balochistan to reduce the share of catch reported as "nei" and to separate shark and ray species;

(2) complete and update the national vessel registry and align it with the IOTC Record of Authorised Vessels;

(3) extend VMS coverage and use VMS data to support estimation of fishing effort;

(4) establish length-frequency sampling for the main tuna and tuna-like species and an observer programme covering bycatch;

(5) review the species allocation of the 2021–2025 catch series, including bullet tuna and striped bonito, and submit revised data if required;

(6) finalise the National Plan of Action for Sharks; and

(7) continue cooperation with the IOTC Secretariat and regional partners for technical assistance and capacity building.

The WPDCS is invited to note the catch data presented in this report and the data gaps identified, and to consider supporting capacity-building activities on species-specific data collection, size sampling and observer coverage in Pakistan.

6. Conclusion

Pakistan's reported catch of tunas and allied large pelagic species reached 54,765 t in 2025, the highest level in the 2021–2025 series. Continued improvement of species-specific statistics, effort and size data, vessel registration and monitoring is necessary to support sound scientific assessment and compliance with IOTC obligations.

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