REVIEW OF THE STATISTICAL DATA AVAILABLE FOR IOTC BYCATCH SPECIES

Prepared by IOTC Secretariat[1]

Purpose

To provide participants to the 22nd Session of the IOTC Working Party on Ecosystems and Bycatch Data preparatory meeting (WPEB22DP) with a summary of the current information held at the IOTC Secretariat as of April 2026 on silky shark (*Carcharhinus falciformis*), oceanic whitetip shark (*Carcharhinus longimanus*) and scalloped hammerhead shark (*Sphyrna lewini*) in line with the WPEB Programme of work (IOTC, 2025a). The document describes the progress achieved in relation to the collection and verification of data, identifies problem areas and proposes actions that could be undertaken to improve them.

Materials

Several fisheries datasets must be reported to the IOTC Secretariat by the Contracting Parties and Cooperating Non-Contracting Parties (CPCs) as per the IOTC Conservation and Management Measures (CMMs) and following the standards and formats defined in the IOTC Data Reporting Guidelines. The use of the IOTC reporting forms is mandatory since 2024 to facilitate data curation and management.

Retained catch data

The retained catch data correspond to the amount of fish caught and retained (in live weight) per year, Indian Ocean major area, fleet, fishing gear, and species and should be reported through Form 1RC.

Two datasets of retained catches are made available by the Secretariat: (1) the raw estimates which include both the 16 IOTC species (prior to the breakdown of species and gear aggregates) and all other species considered as bycatch and (2) the best scientific estimates only available for the 16 IOTC species (e.g., IOTC 2022).

Changes in the IOTC consolidated datasets of retained catches (i.e., raw and best scientific estimates) may be required as a result of:

i. Updates received by December 30th each year, of the preliminary data for longline fleets submitted by June 30th of the same year;

ii. Revisions of historical data by CPCs following corrections of errors, addition of missing data, changes in data processing, etc.

iii. Changes in the estimation process performed by the Secretariat based on evidence of improved methods and/or assumptions (e.g., selection of proxy fleets, updated morphometric relationships) and upon endorsement by the Scientific Committee.

Geo-referenced catch and effort data

Catch and effort data refer to finer-scale data, usually from logbooks, reported in aggregated format and stratified per year, month, grid, fleet, gear, type of school, and species. The Form 3CE designed for reporting geo-referenced catch and effort data covers to the three IOTC fishery categories: surface, longline, and coastal. In addition, information on the use of drifting floating objects and satellite-tracked buoys in large-scale purse seine fisheries using drifting Fish Aggregating Devices (DFADs) should be collected and reported to the Secretariat through Form 3DA and 3BU.

[1] IOTC-Statistics@fao.org

Geo-referenced catches of sharks and rays are reported in both number of fish and total weight and generally represent only a subset of the nominal catches reported by fleet and gear for each species. Due to the general lack of information on the size composition of the catch, these cannot be converted into a common unit and therefore spatial distribution maps of catches are provided both in numbers and in weight.

Discard data

The IOTC follows the definition of discards adopted by FAO in previous reports (Alverson et al. 1994; Kelleher 2005) which considers all non-retained catch, including individuals released alive or discarded dead. Estimates of total annual discard levels in live weight (or number) by Indian Ocean major area, species and type of fishery must be reported to the Secretariat as per IOTC Resolution 15/02. Form 1DI has been designed for the reporting of discards and the data contained shall be extrapolated at the source to represent the total level of discards for the year, gear, fleet, Indian Ocean major area, and species concerned, including turtles, cetaceans, and seabirds.

Nevertheless, discard data reported to the Secretariat are generally scarce, not raised, and not complying with all IOTC reporting standards. For these reasons, the most accurate information available on discards comes from the IOTC Regional Observer Scheme (Resolution 25/06) that aims to collect detailed information (e.g., exact location in space and time of the sets and interactions, including the fate of observed individuals) on discards of IOTC and bycatch species for industrial fisheries (see below).

Size-frequency data

The size composition of catches may be derived from size-frequency data collected at sea and during the unloading of fishing vessels. IOTC Form 4SF provides all fields requested for a complete reporting of size-frequency data to the stratification by fleet, year, gear, type of school, month, grid, and species. While the great majority of size data reported through IOTC Form 4SF are for retained catches, CPCs can also use the same form to report size data of discarded individuals. Furthermore, additional size data (including those for individuals discarded at sea) may be collected through onboard observer programs and reported to the Secretariat as part of the ROS (see below).

Regional Observer Scheme

Resolution 25/06 on a *Regional Observer Scheme* (ROS) makes provision for the development and implementation of national observer schemes among the IOTC CPCs starting from July 2010 with the overarching objective of collecting *"verified catch data and other scientific data related to the fisheries for tuna and tuna-like species in the IOTC area of competence"*. The ROS aims to cover *"at least 5% of the number of operations/sets for each gear type by the fleet of each CPC while fishing in the IOTC Area of competence of 24 meters overall length and over, and under 24 meters if they fish outside their EEZs shall be covered by this observer scheme"*. Observer data collected as part of the ROS include: (i) fishing activities and vessel positions, (ii) catch estimates with a view to identifying catch composition and monitoring discards, bycatch and size frequency, (iii) gear type, mesh size and attachments employed by the master, and (iv) information to enable the cross-checking of entries made to the logbooks (i.e., species composition and quantities, live and processed weight and location). A technical description of the ROS data requirements is available in the reference file IOTC Regional Observer Scheme (ROS) Data Collection Fields and included in the ROS Form descriptions.

Morphometric data

The current length-length and length-weight IOTC reference relationships for pelagic sharks mostly come from historical data collected in the Atlantic Ocean or Western-Central Pacific Ocean (Skomal and Natanson 2003; Francis and Duffy 2005). However, several morphometric datasets have been collected for sharks through different research and monitoring programs conducted in the Indian Ocean over the last decades, including measurements taken at sea and on land (Garcia-Cortés and Mejuto 2002; Ariz et al. 2007; Romanov and Romanova 2009; Espino et al. 2010; Filmalter et al. 2012). Hence, different statistical relationships have been established for several Indian Ocean pelagic sharks based on data that may cover different size ranges as well as different areas and time periods (**Appendix I**).

Methods

Data available for bycatch species

The data reporting requirements for bycatch species vary according to species categories and fishing gears and changed over time with the adoption of new resolutions. In the case of sharks, last year Resolution 25/08 condenses the reporting requirements, mitigation measures, handling practices or retention bans that were previously set by several other shark-focused Resolutions.

Information available on the estimates of total discards collated through IOTC form 1DI was not used in the present report as the data are currently very limited, often provided using heterogeneous formats (not fully compliant with IOTC standards) which do not include several metadata fields (e.g., reason for discard, fate) as well as the detailed information on sampling coverage and raising procedures adopted (if any).

Data processing

First, standard controls and checks are performed to ensure that the metadata and data submitted to the Secretariat are consistent and include all mandatory fields (e.g., dimensions of the strata, etc.). The controls depend on each dataset and may require the submission of revised data from CPCs if the original ones are found to be incomplete.

Second, when retained catches are not reported by a CPC, catch data from the previous year may be repeated or derived from a range of sources, e.g., the FAO FishStat database. In addition, for some specific fisheries characterized by well-known, outstanding issues in terms of data quality, a process of re-estimation of species and/or gear composition may be performed based on data available from other years or areas, or by using proxy fleets, i.e., fleets occurring in the same strata which are assumed to have a very similar catch composition (Moreno et al. 2012).

Finally, filtering and conversions are applied to the size data reported for the most common shark and ray species in order to harmonize their format and structure, and remove data which are non-compliant with IOTC standards, e.g., provided with size bins exceeding the maximum width considered meaningful for the species (IOTC 2020). All samples collected using types of measurement other than fork length (FL; straight distance from the tip of the upper snout to the fork of the tail) are converted into FL by using the IOTC equations and binned by constant intervals of 5 cm in size. If no IOTC-endorsed equations exist to convert from a given length measurement for a species to the standard fork length (FL) measurement, the original size-frequency data are not disseminated although they are kept within the IOTC databases for future reference.

Results

Overall bycatch levels & trends - Silky shark

Retained catches of silky sharks caught by Indian Ocean fisheries have been recorded since 1985. Until the mid-2000s, the catch was entirely comprised of artisanal fisheries' catches, increasing over time to reach a peak of 25,000 tin 1999. This was followed by a sudden decrease in the mid-2000s. Since then, with the addition of catches reported by industrial fisheries, the average catch has remained at around 2,800 t, with contributions of 70% and 30% from artisanal and industrial fisheries, respectively (**Fig. 1**). The industrial fisheries component is mostly made up of offshore gillnet catches (53%), followed by deep-frozen longline (24%) and fresh longline (7%).

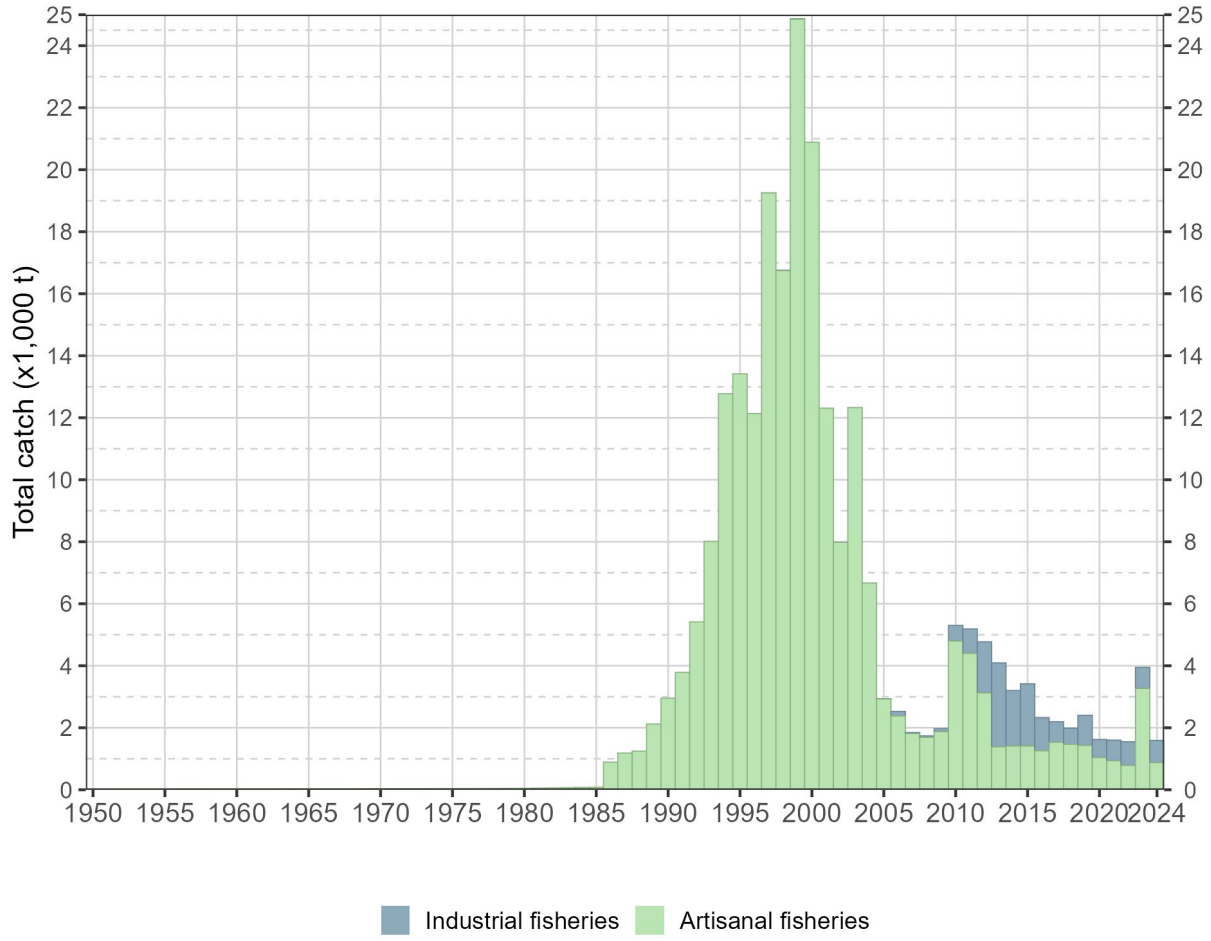

Figure 1: Annual cumulative time series of retained catches (metric tonnes; t) of silky shark by fishery type for the period 1950-2024

Although catches in the early period are based almost exclusively on data from the Sri Lankan longline-gillnet fishery, the gillnet fishery was the dominant source of silky shark catches in the Indian Ocean throughout the entire time series, accounting for the largest proportion of reported catches during the historical peak in the late 1990s. At its maximum, it contributed approximately 14,000 t, and it remains the primary component in the most recent years of the series (**Fig. 2**). Collectively, the longline fisheries represent the second most important source of catches. The 'Longline | Other' subcategory makes a substantial contribution during the 1995–2001 peak period (Sri Lankan longline-gillnet fisheries), adding up to 10,000 t above the gillnet baseline in some years. The 'Longline | Fresh' and 'Longline | Deep-freezing' subcategories provide smaller, yet consistent, contributions and have become relatively more visible since 2010 as overall catch levels have declined (**Fig. 2**). Catches from the "Purse Seine | Other" subcategory are exclusively from Indonesia's small purse fishery, representing a marginal contribution of around 1,000 t over the entire time series, but accounting for 50% of the total reported catches in 2023 (**Fig. 2**).

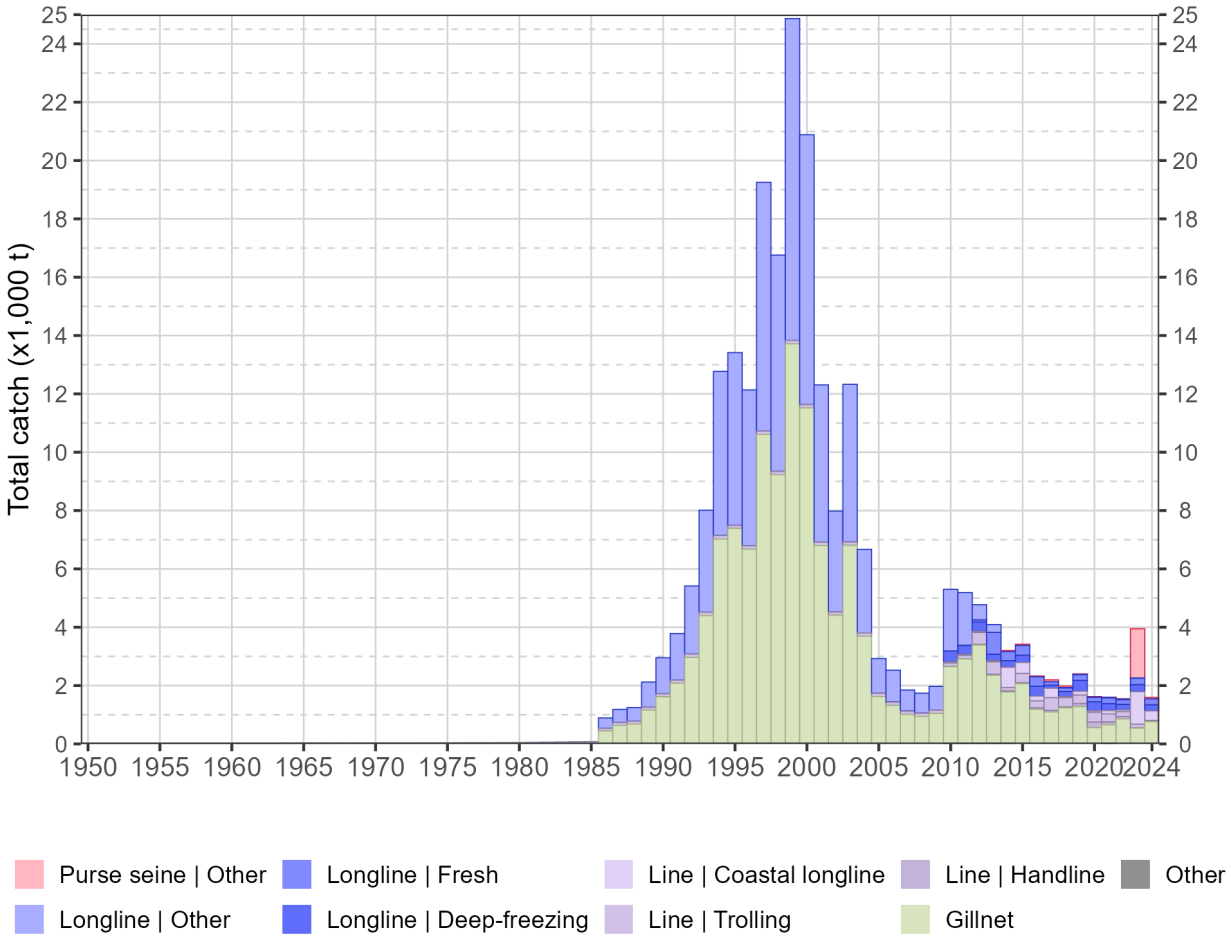

Figure 2: Annual cumulative absolute time series of retained catches (metric tonnes; t) of silky shark by fishery for the period 1986-2024

In recent years (2020–2024), the contribution of the catches has remained stable for the longline fisheries, with some variability in the gillnet fisheries. There was a marked peak in the line and purse seine fisheries in 2023 (**Fig. 3**). On average, catches are dominated by the coastal longline and purse seine fisheries of Indonesia, followed by the coastal fisheries of Sri Lanka and the industrial fresh and deep-freezing longline fisheries of Taiwan, province of China (**Fig. 4**).

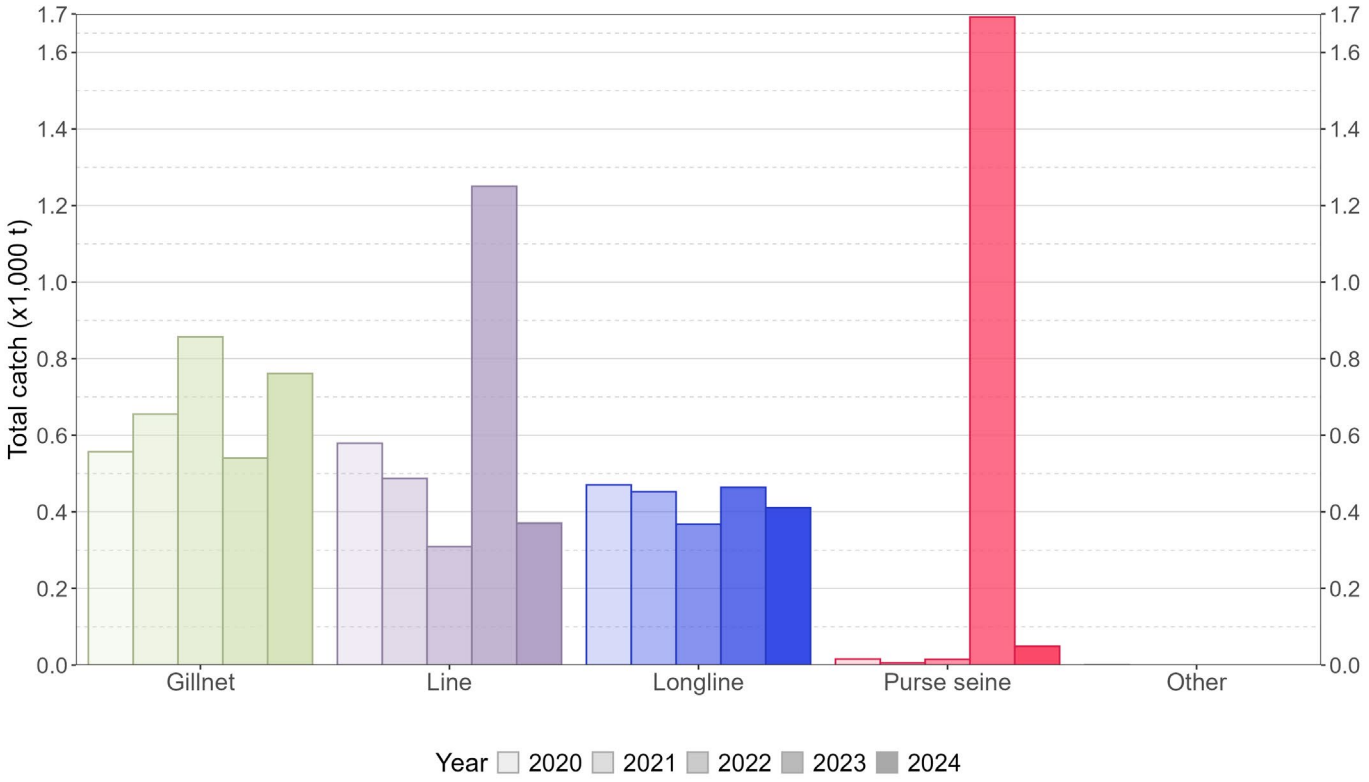

Figure 3: Annual catch trends (metric tonnes; t) of silky shark by fishery group for the period 2020-2024

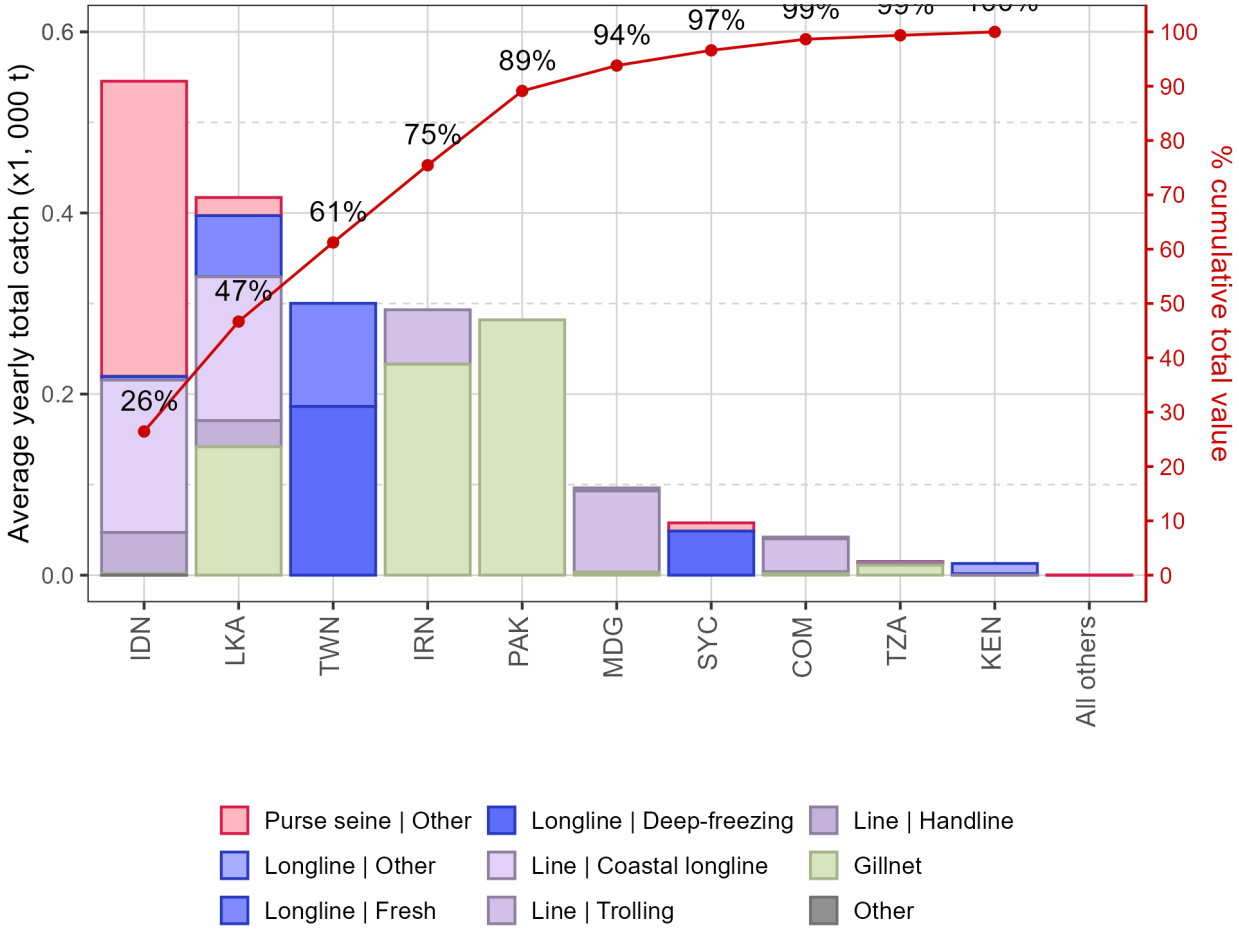

Figure 4: Mean annual nominal catches (metric tonnes; t) of silky shark over the period 2020-2024, by fishery and fleet ordered according to the importance of catches. The solid line indicates the cumulative percentage of the total combined catches of the species for the fleets concerned

Geo-referenced catches

Overall, the distribution of the catches of silky sharks shows improvements of data reporting over time, from an increasing number of CPCs and fisheries over the last four decades.

The reported geo-referenced catches in weights during 1990–1999 period catches were both the largest on record and the most geographically concentrated, represented almost entirely by gillnet fisheries of Sri Lanka in line with the historical catch peak documented in the time series (**Fig. 5**). The following decade (2009-2019) also reflects the dramatic reduction in catch magnitude previously described and remains similarly concentrated in the northeast Indian Ocean, with the gillnet fishery still dominant while a longline component begins to emerge, though it remains minor (**Fig. 5**) due that longline fisheries were mostly providing geo-referenced catches reported in numbers (**Fig. 6**).

The 2010–2019 period reflects improved reporting with a spatial expansion and diversification of fisheries when gillnet fisheries catch remains concentrated near the northern Indian Ocean coastal areas, and line fisheries and purse seine component appears for the first time (**Fig. 5**). The recent period (2020 -2024) consolidates the trends observed in the previous decade but with the lowest maximum catch values across all decades (**Fig. 5**).

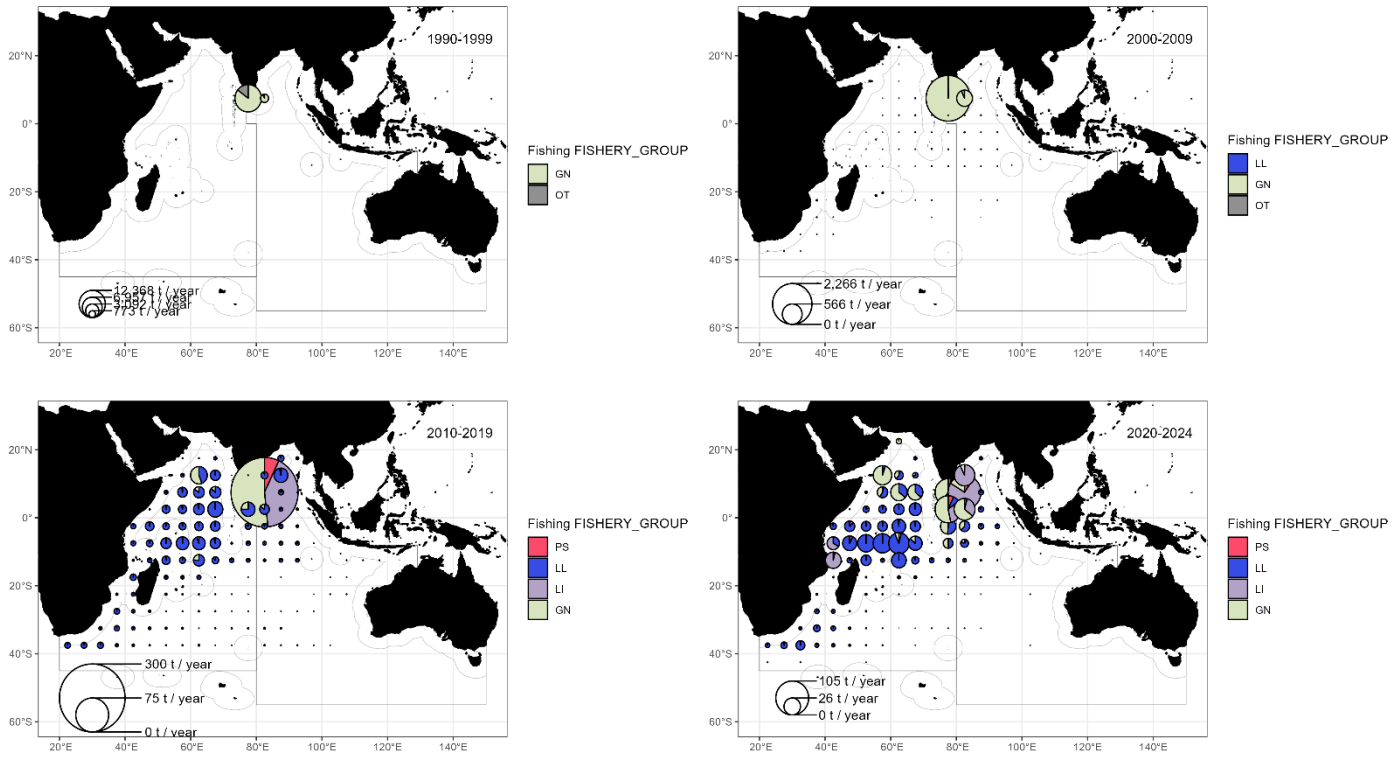

Figure 5: Mean annual geo-referenced retained catches reported by weight (metric tonnes; t) of silky shark by fishery group and decade reported to the Secretariat for the period 1990-2024

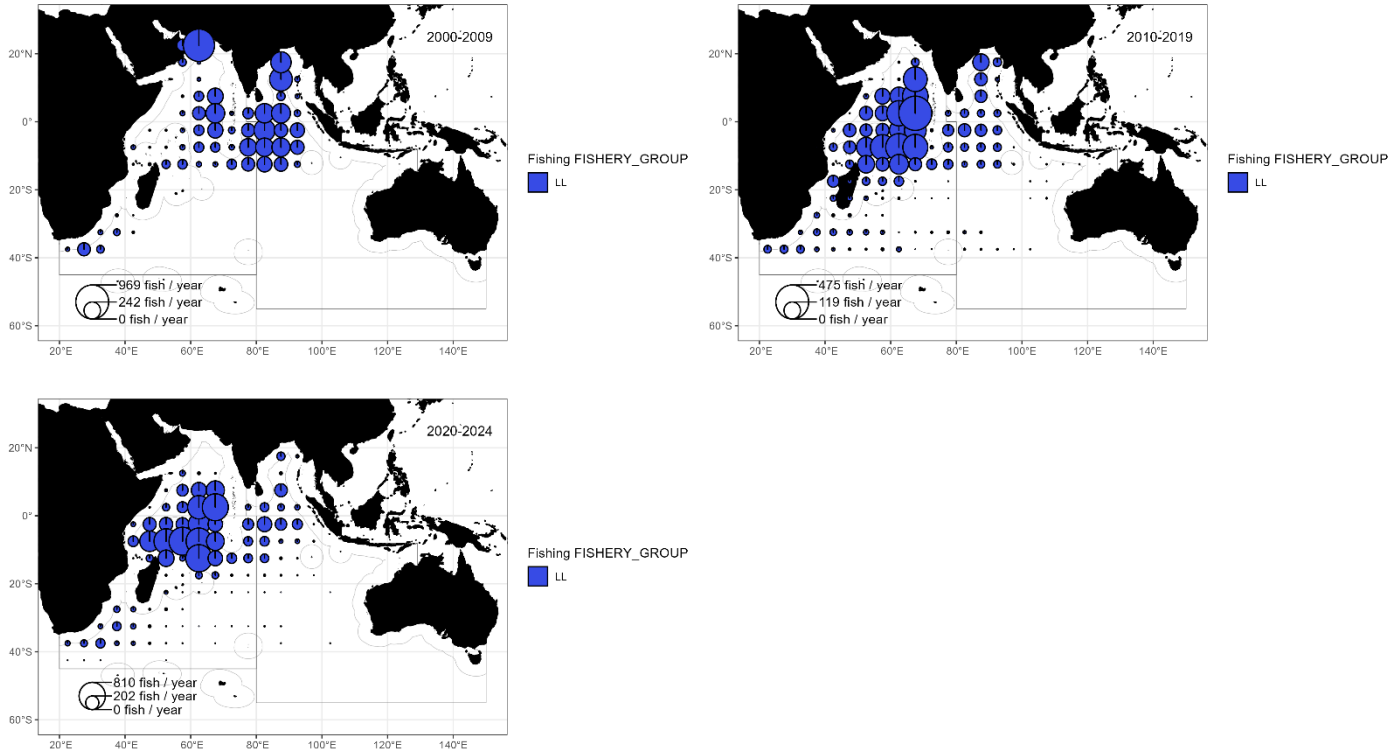

Figure 6: Mean annual geo-referenced retained catches reported by numbers of silky shark by fishery group and decade reported to the Secretariat covering the period 1990-2024

Size distribution

The silky shark size data samples combined 11 distinct fishery-source combinations with FL distributions that differ substantially across fisheries. The two dominant components are the deep-freezing longline from logbooks (LLD | non-observers, n = 359,240), which target relatively larger individuals with a mean size of 145.1 cm, and the purse seine on log schools from observers (PSLS | observers, n = 316,940), which predominantly capture smaller silky sharks with a mean size of 109.9 cm, in contrast with purse seine on free-swimming schools (PSFS | Observers) that records the highest weighted mean length (165.6 cm). For deep-freezing longline (LLD), the sizes recorded by observers (mean = 133.4 cm) are generally smaller than those recorded by non-observers (145.1 cm) (**Fig 7**).

Among the smaller fisheries size samples, the handline (LIH | Non observers) stands out for capturing the smallest size classes, with a mean of just 92.9 cm. The trolling (LIT) and gillnet (GN) fisheries similarly show high proportions of small individuals while at the opposite end, the fresh longline (LLF | Non observers) and coastal longline (LIC | Non observers) capture larger individuals, with means of 135 and 158.6 cm (**Fig 7**).

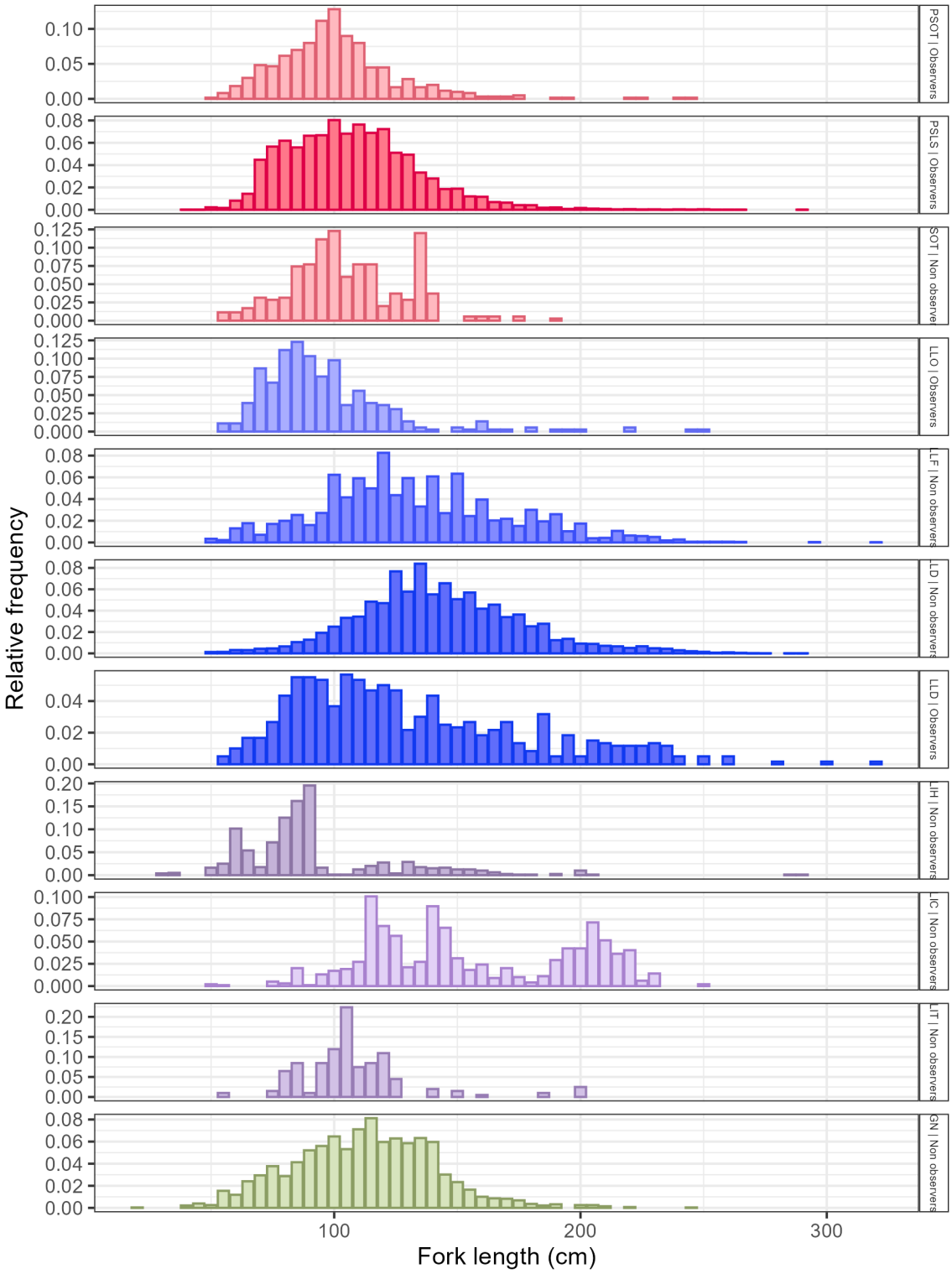

Figure 7: Relative distribution of fork lengths (cm) by 5 cm classes by fishery and source of information (i.e., observers vs. fishers or enumerators) of silky shark

Overall bycatch levels & trends - Oceanic whitetip shark

Since 1985, most reported catches of oceanic whitetip sharks in the Indian Ocean have been from artisanal fisheries, reaching 1,000 t in 1999. This was followed by an 80% decrease in catches compared to previous years between 2005 and 2010. Catches reported by industrial fisheries fluctuated between 20% and 70% year on year. Between 2017 and 2022, catches averaged 44 t, presumably following the adoption of a retention ban in accordance with the Resolution

13/06. The last two years have seen a peak in catches never recorded before, with 1,680 and 900 t reported for 2023 and 2024, respectively (**Fig. 8**).

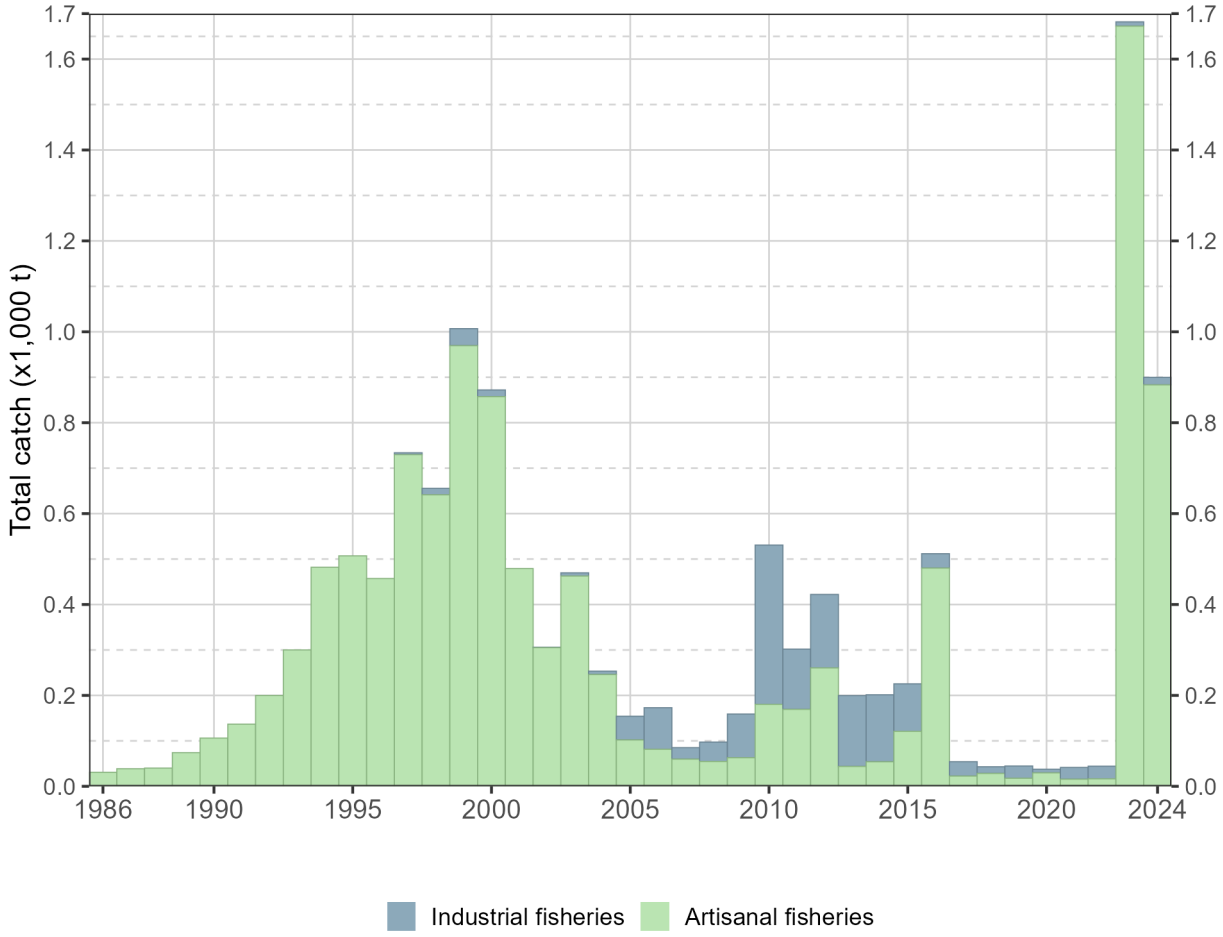

Figure 8: Annual cumulative absolute time series of retained catches (metric tonnes; t) of oceanic whitetip shark by fishery type for the period 1986-2024

Similarly to the previously described trends for the silky shark, the first period was mostly comprised of the Sri Lankan longline-gillnet fishery. Between 2005 and 2015, the contribution of industrial fisheries varied from year to year, representing 30% to 78% of the total reported catches, primarily due to the contributions of offshore gillnet fisheries and longline fisheries targeting swordfish (**Fig. 9**). Unusual catch levels were reported from small purse seine fisheries in Indonesia in 2023 (1,630 t), and in 2024 from coastal longline fisheries of Mozambique (677 t) and line and trolling fisheries from Madagascar (140 t) (**Figs. 9-10**).

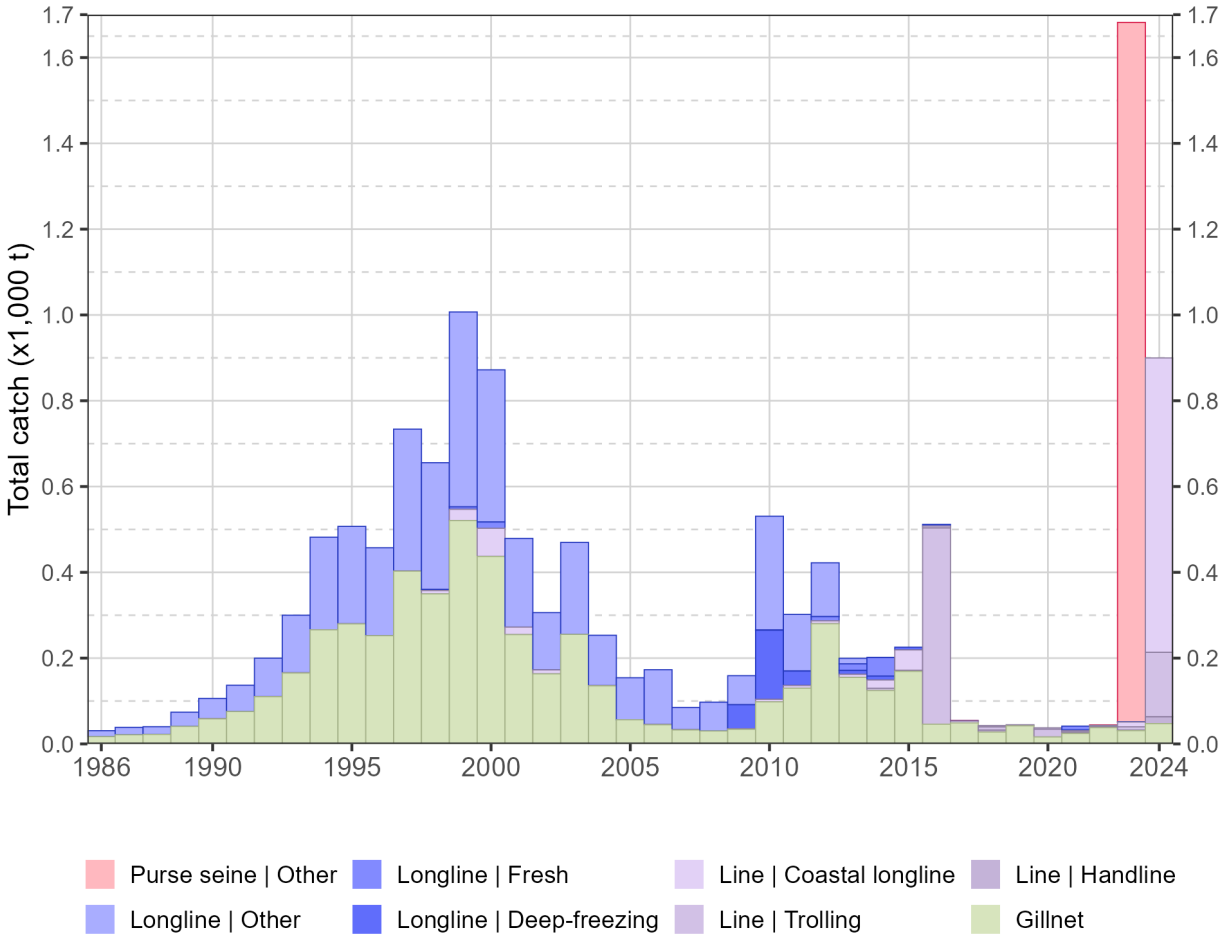

Figure 9: Annual cumulative absolute time series of retained catches (metric tonnes; t) of oceanic whitetip shark by fishery for the period 1986-2024

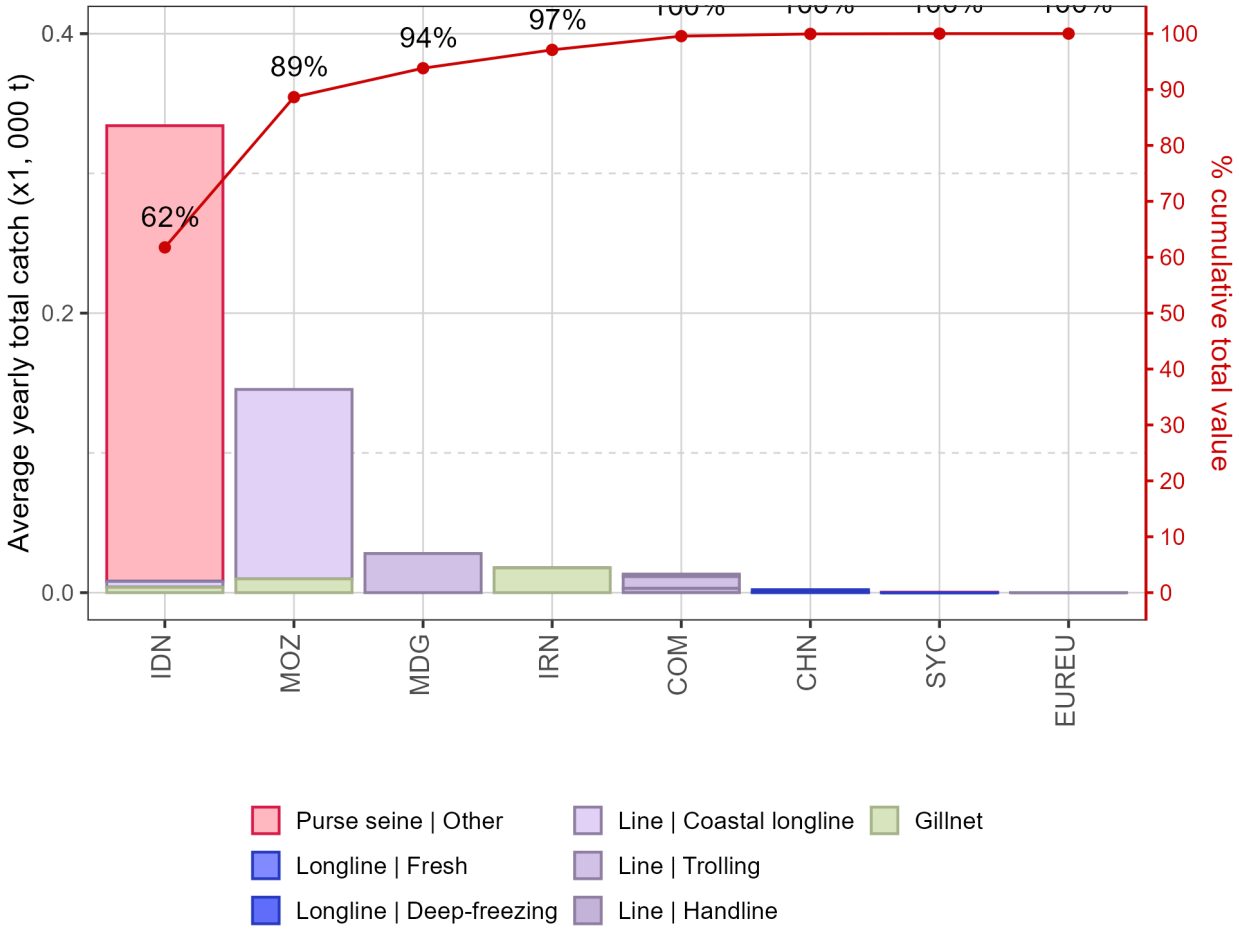

Figure 10: Mean nominal catches (metric tonnes; t) of oceanic whitetip shark over the period 2020–2024, by fishery and fleet ordered according to the importance of catches. The solid line indicates the cumulative percentage of the total combined catches of the species for the fleets concerned

Geo-referenced catches

The first two decades (1990–1999 and 2000–2009) of reported geo-referenced oceanic whitetip shark catches, as measured in weight, are dominated by gillnet fisheries and concentrated in the north-east Indian Ocean (**Fig. 11**). Longline fisheries contribute marginally (<1 t). The following decade (2010–2019) shows a more widespread distribution of catches and the addition (and dominance) of line fisheries. However, catch values were lower than in previous decades due to the implementation of the retention ban (**Fig. 11**). The latest period (2020-2024) shows a contraction in the reported catches of oceanic whitetip shark, although catches are still being reported for coastal line fisheries (**Fig. 11**). Longline fisheries were mostly providing geo-referenced catches reported in numbers Illustrating the fishery expansion and subsequent reduction of oceanic whitetip shark catches reported (**Fig. 12**).

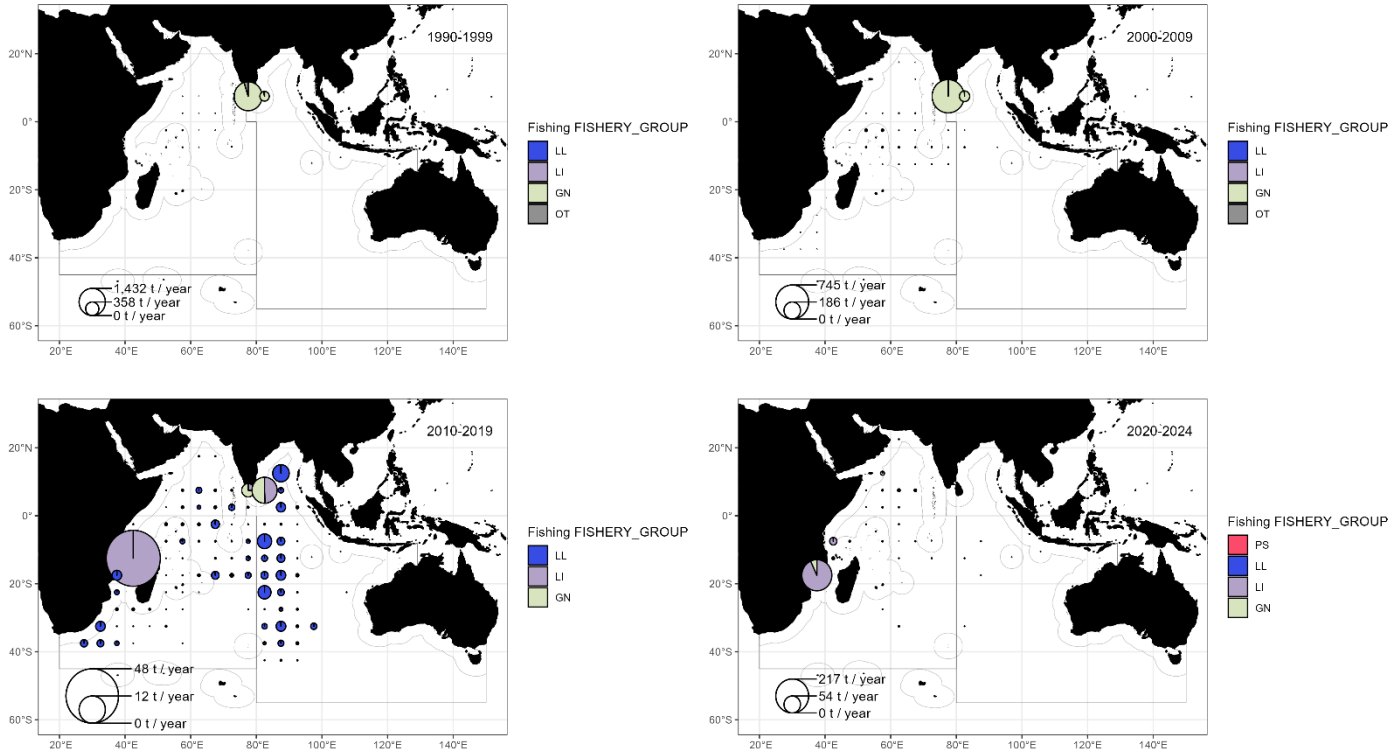

Figure 11: Mean annual georeferenced retained catches reported by weight (metric tonnes; t) of oceanic whitetip shark by fishery group and decade reported to the Secretariat covering the period 1990-2024

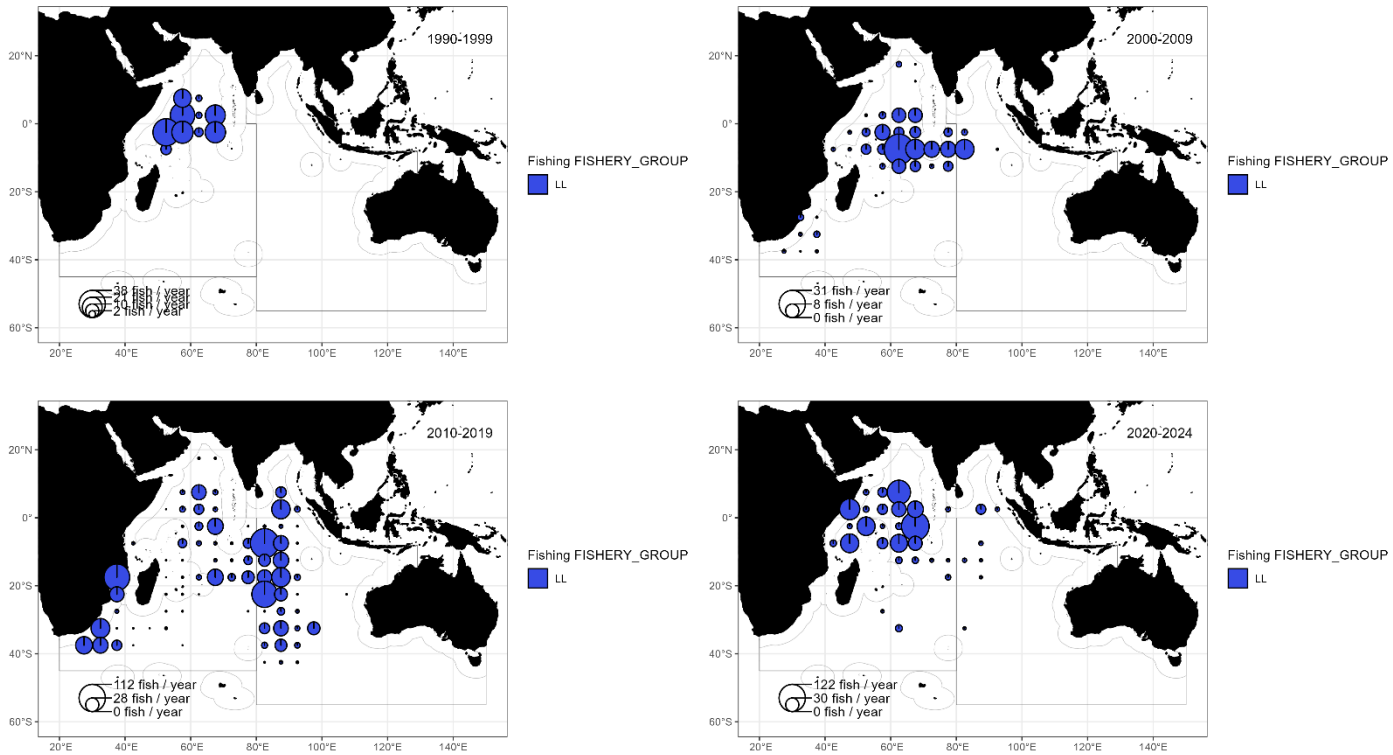

Figure 12: Mean annual geo-referenced retained catches reported by numbers of oceanic whitetip shark by fishery group and decade reported to the Secretariat for the period 1990-2024

Size distribution

The oceanic whitetip shark is mostly reported by deep-freezing longline and their size distribution spans 56.5 to 296.5 cm FL (weighted mean 135.1 cm). As in the case of silky shark the sizes recorded by observers (mean = 110.2 cm) are generally smaller than those recorded by non-observers (137.6 cm) (**Fig 13**).

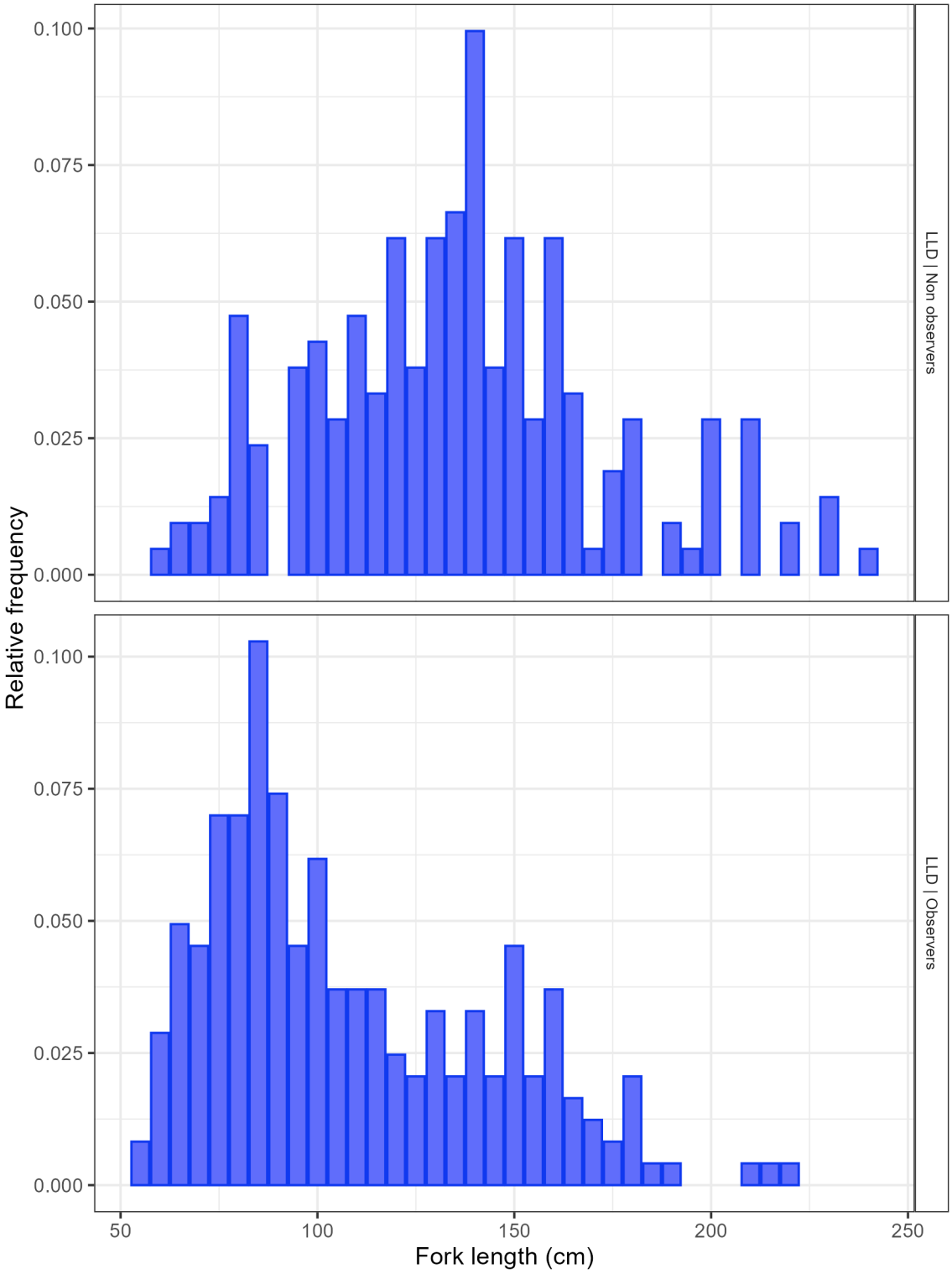

Figure 13: Relative distribution of fork lengths (cm) by 5 cm classes by fishery and source of information (i.e., observers vs. fishers or enumerators) of oceanic whitetip shark

Overall bycatch levels and trends - Hammerheads sharks

Most of the hammerhead sharks reported were aggregated species, accounting for 84% of the total catch series. Catches at species level have been reported since 1986, with smooth hammerhead and scalloped hammerhead sharks

dominating and making a similar contribution to the total over the entire period, although there has been high variability within years (**Fig. 14**).

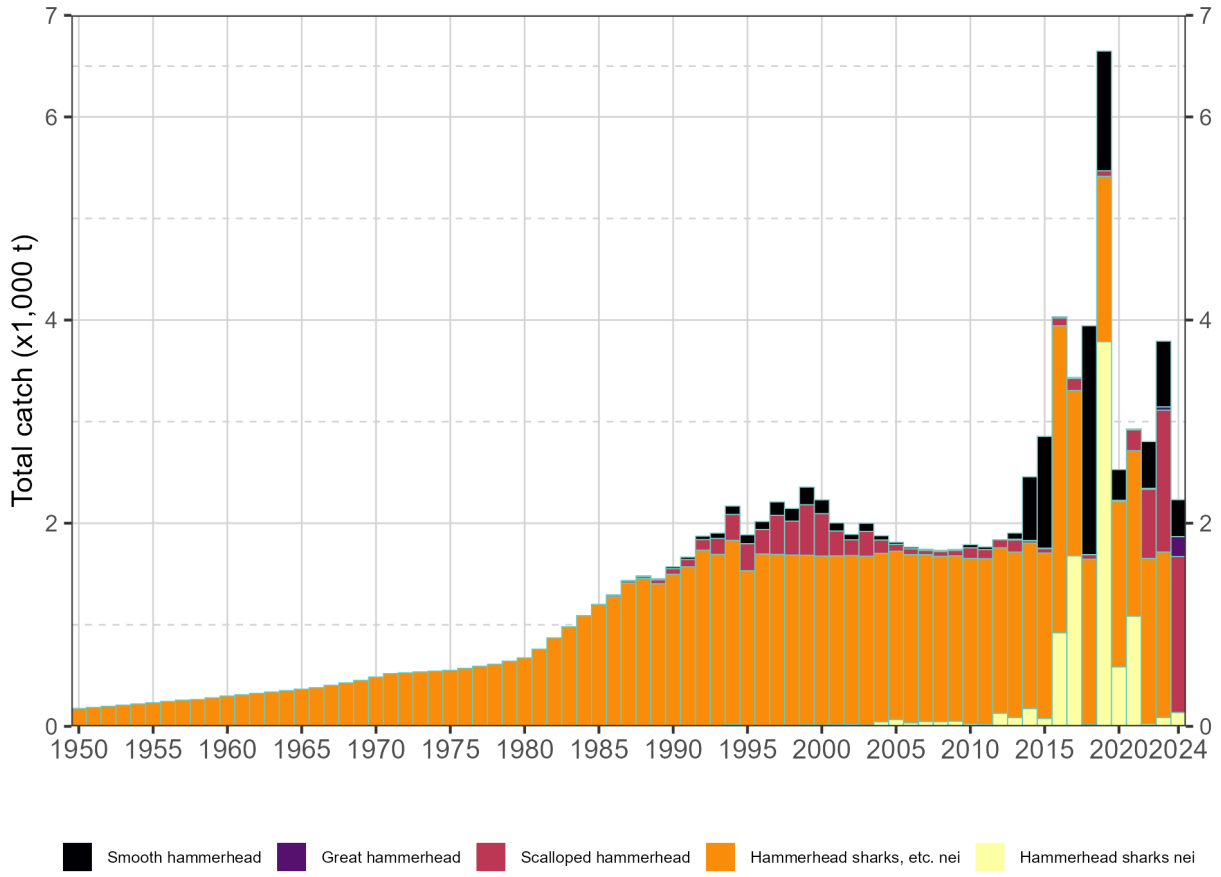

Figure 14: Annual cumulative absolute time series of retained catches (metric tonnes; t) of hammerhead shark by species or species groups for the period 1950-2024

Retained catches of scalloped hammerhead shark caught by Indian Ocean fisheries have been reported since 1986, mostly comprising artisanal fisheries' catches. Since 2003, industrial fisheries have also reported catches of scalloped hammerhead shark, representing 17% of the full catch series, but with high variability within years, ranging from 1% to 52% of the total retained catches reported (**Fig. 15**).

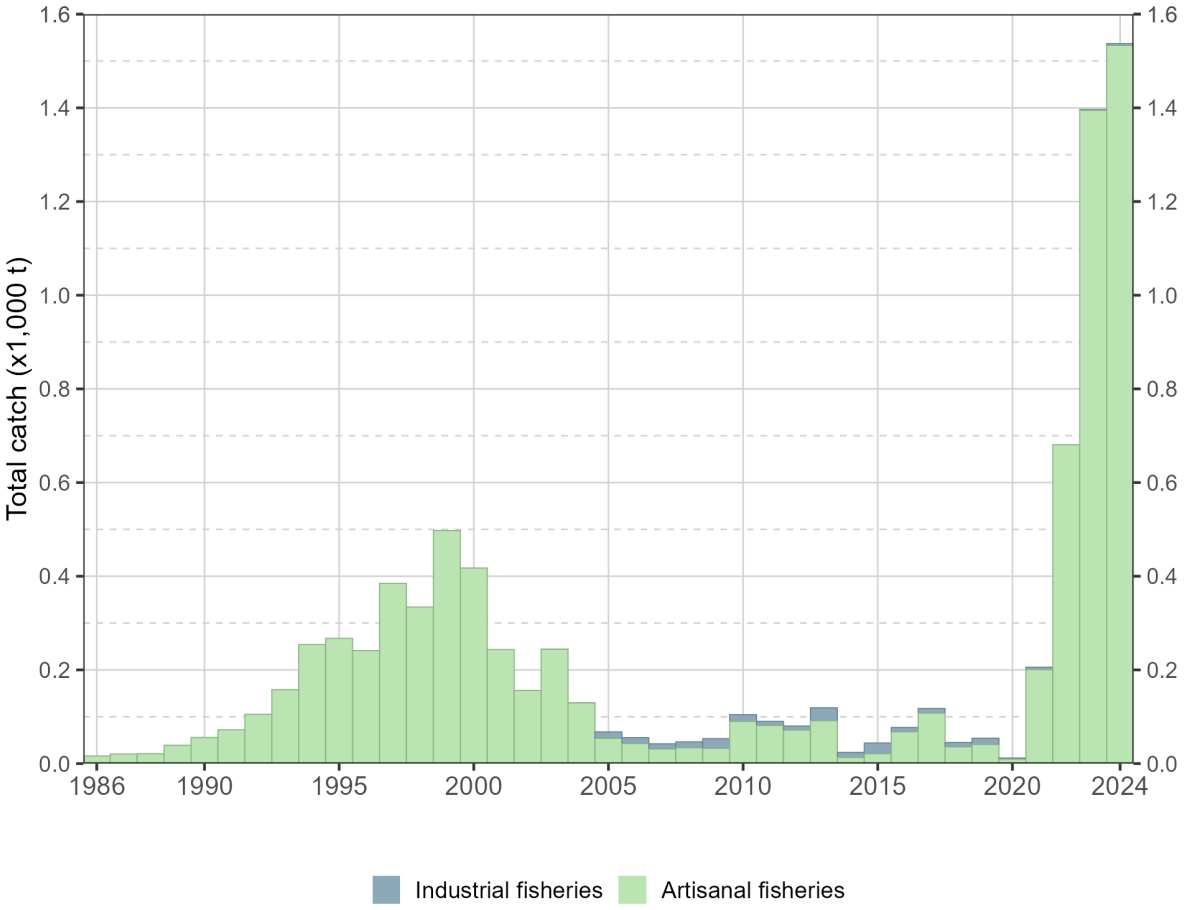

Figure 15: Annual cumulative absolute time series of retained catches (metric tonnes; t) of scalloped hammerhead shark by fishery type for the period 1986-2024

Catches of the scalloped hammerhead shark reached a peak of 498 t in 1999, followed by a sudden decrease to an average of 65 t per year from the mid-2000s until 2020. However, since 2021, catches have sharply risen, reaching a maximum reported value of 1,537 t in 2024 (**Fig. 16**). The first period, characterized by the Sri Lankan longline-gillnet fishery catches, was followed for an increase of reporting fisheries and fleets, although with lower catch levels. The final period (2021-2024) is dominated for the gillnet fisheries (54%), followed by beach seine (16%), handline (14%) and coastal longline fisheries (12%) (**Fig. 16**). Mozambique and Kenya gillnet fisheries are responsible for the 74% and 16% of the reported catches of scalloped hammerhead shark with catches reported for 2023-2024, and 2022, respectively (**Fig. 17**).

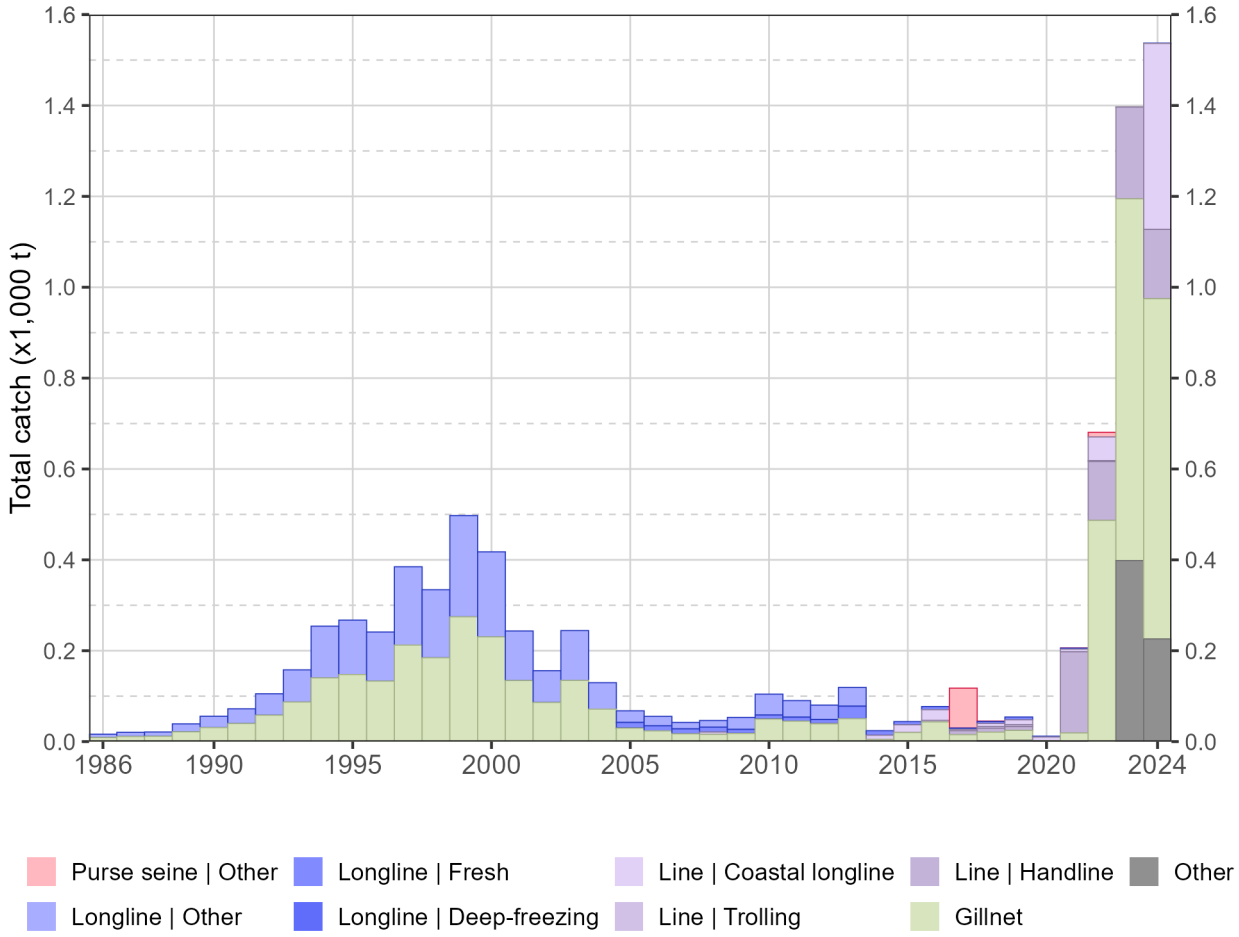

Figure 16: Annual cumulative absolute time series of retained catches (metric tonnes; t) of scalloped hammerhead shark by fishery for the period 1986-2024

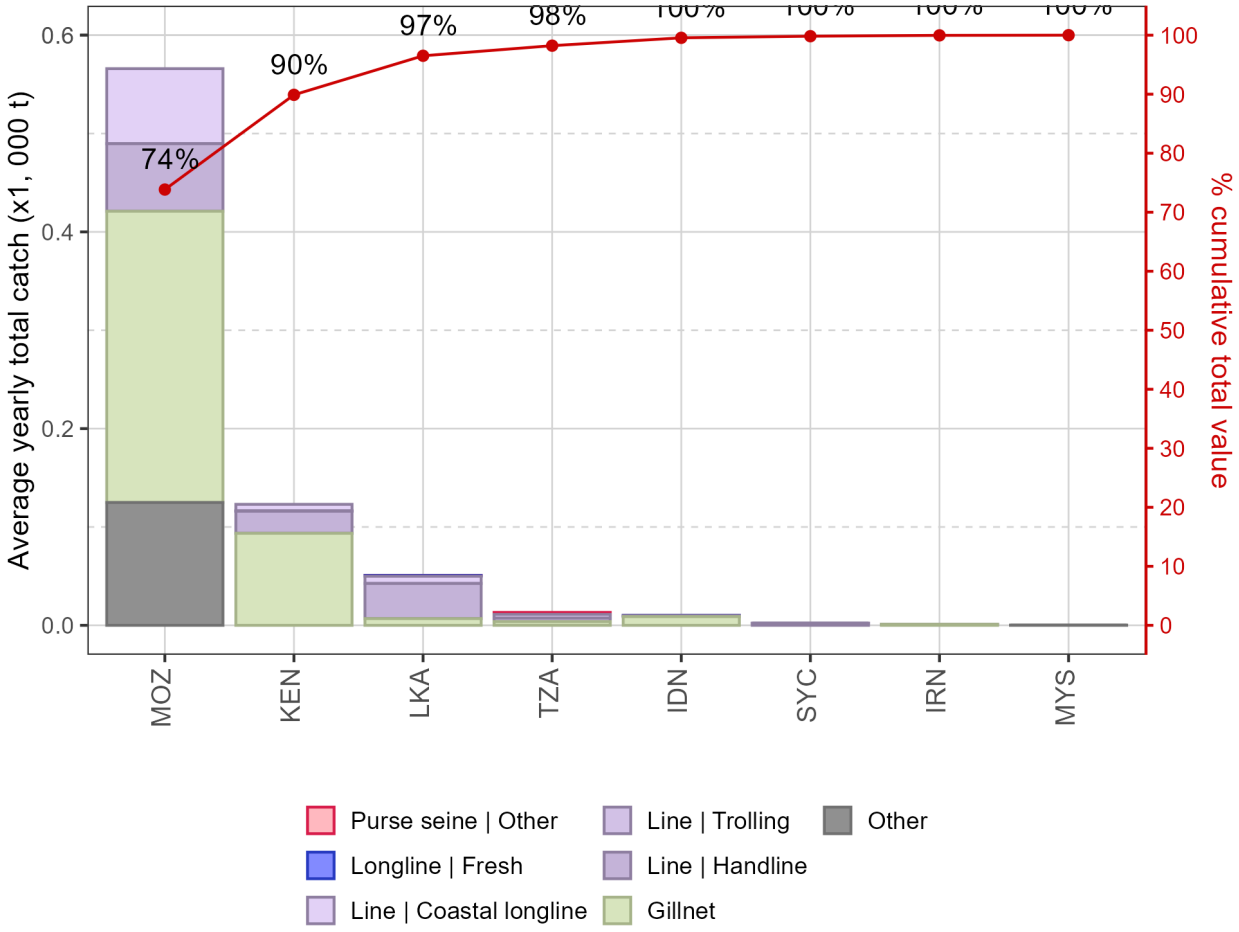

Figure 17: Mean nominal catches (metric tonnes; t) of scalloped hammerhead shark over the period 2020–2024, by fishery and fleet ordered according to the importance of catches. The solid line indicates the cumulative percentage of the total combined catches of the species for the fleets concerned

Geo-referenced catches

In the first decade (1990–1999), geo-referenced catches of hammerhead sharks in weights were exclusively reported from the gillnet fisheries of Sri Lanka (**Fig. 18**). The second decade (2000–2009) also showed a dominance of reported aggregated catches (88%), mostly from Sri Lankan gillnet fisheries and with small contributions from the EU swordfish longline fishery (6%) (**Fig. 18**). The following period (2010–2019) was characterised by the diversification of fisheries reporting geo-referenced catches at the species level, dominated by catches of scalloped hammerhead shark (78%), followed by smooth hammerhead catches (20%) (**Fig. 18**). For the most recent period (2020–2024), the scalloped hammerhead shark continued to be the main species of hammerhead shark reported, although the spatial distribution shifted, highlighting the importance of coastal fisheries in the western Indian Ocean (**Fig. 18**).

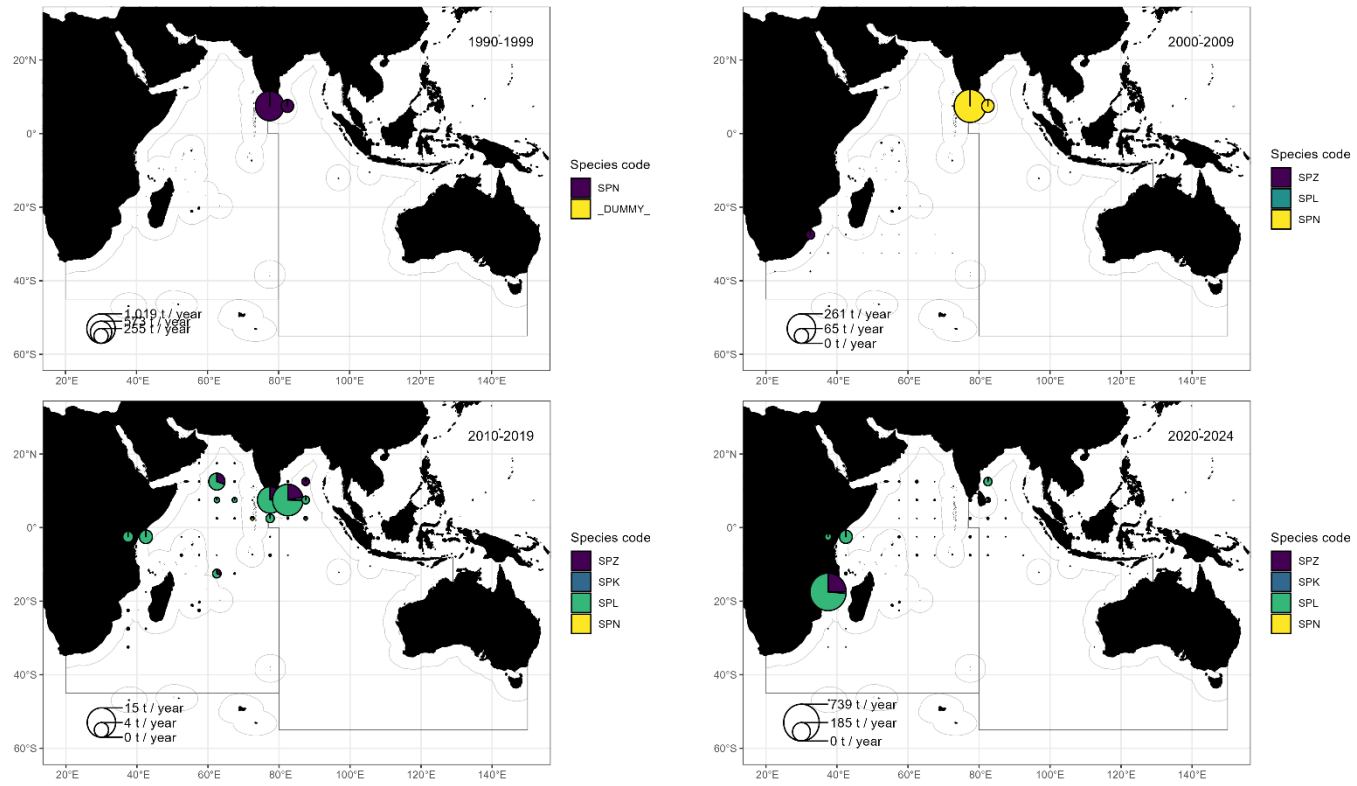

Figure 18: Annual cumulative absolute time series of georeferenced retained catches (metric tonnes; t) of hammerhead sharks by fishery type for the period 1986-2024

As previously described for other species, longline fisheries also report geo-referenced catch numbers. The available data for the period 2010–2019 are only provided for the years 2012 and 2015, and these are mostly reported as aggregated hammerhead shark species. The recent period is also dominated for the aggregated reported catches and more concentrated in the northwestern Indian Ocean (**Fig. 19**).

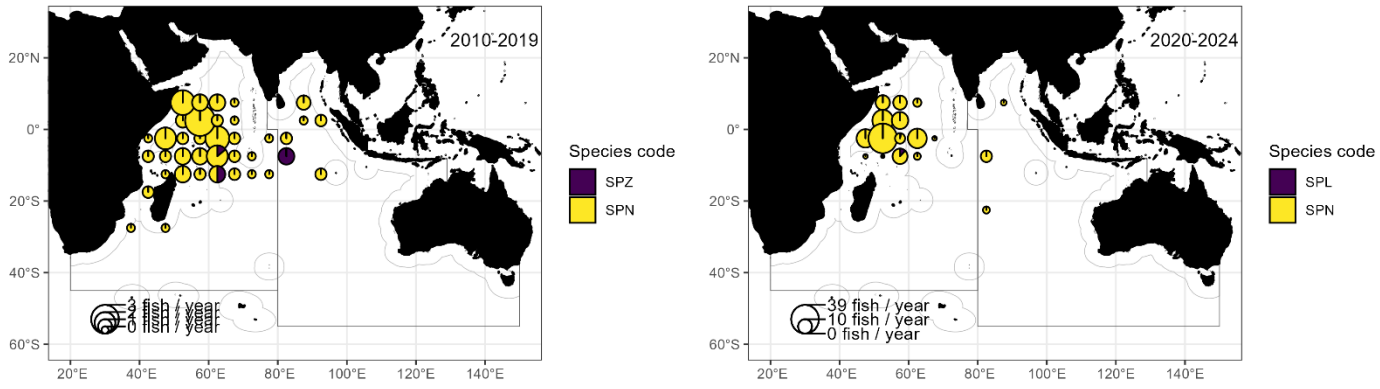

Figure 18: Annual cumulative absolute time series of geo-referenced retained catches reported in numbers of hammerhead sharks by fishery type for the period 1986-2024

Size distribution

Size data for scalloped hammerhead are mostly recorded from gillnet non-observers' fisheries, with an average length for hammerhead shark of 75.6 cm (**Fig 19**).

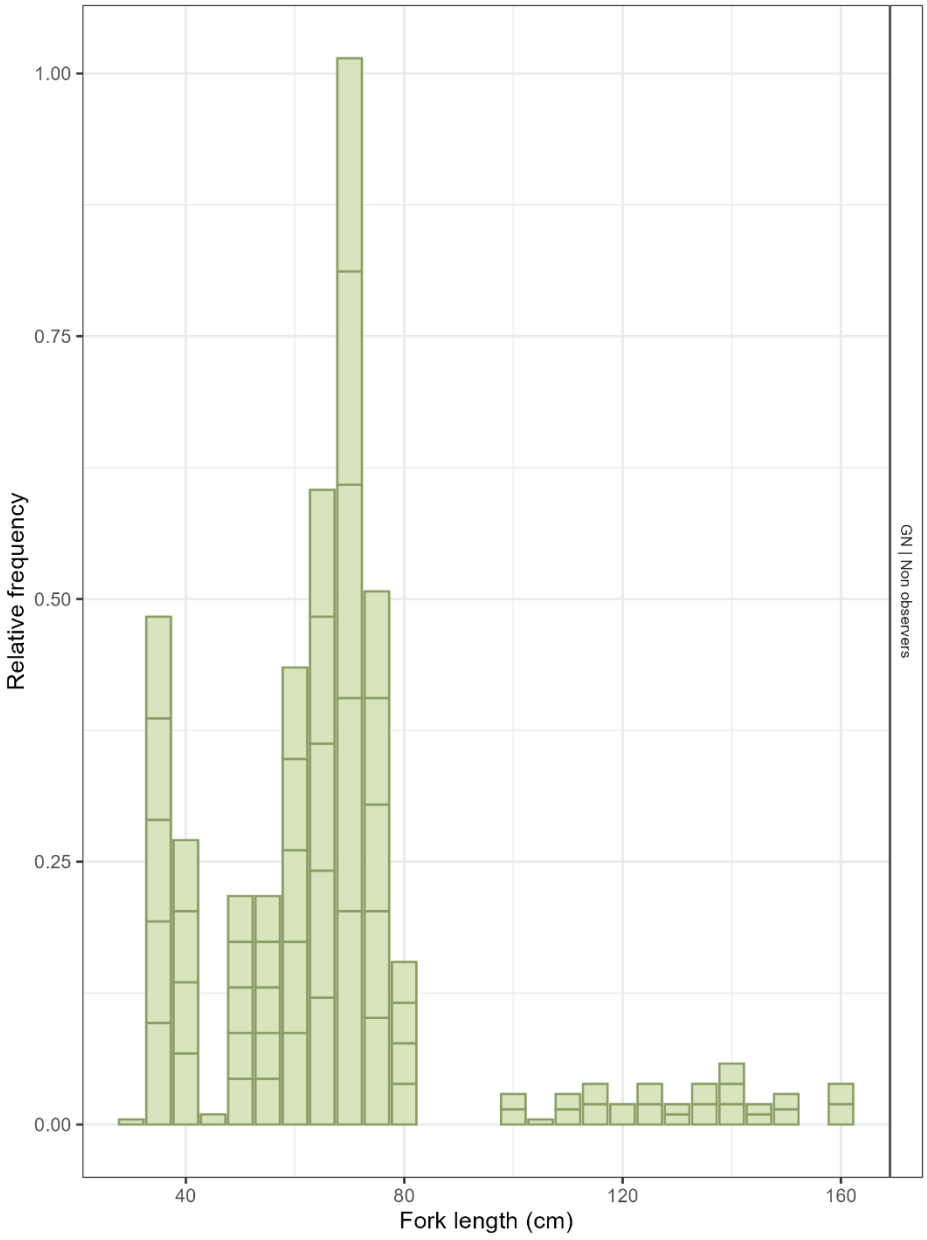

Figure 19: Relative distribution of fork lengths (cm) by 5 cm classes by fishery and source of information (i.e., observers vs. fishers or enumerators) of scalloped hammerhead shark.

Regional observer scheme

As the available data on total discards in most fisheries remain sparse and fragmented, discards are inferred from observer data collected through the ROS. In previous years the main obstacle to incorporating the data sent by the CPCs into the database was the variety of report formats (IOTC, 2025b) along with development of the ROS database and its associated applications (IOTC, 2025c).

Interactions with purse seine fisheries

Data from observers on board purse seine vessels has been reported since 2005, with contributions from the EU, France, Spain, and the Seychelles. Although ten species of shark have been recorded (blue shark, great hammerhead shark, oceanic whitetip shark, pelagic thresher shark, scalloped hammerhead shark, shortfin mako shark, silky shark, smooth hammerhead shark, thresher shark, and whale shark), only silky shark and oceanic whitetip shark have been reported consistently over time, while records of the other species are sparse or occasional.

Silky shark is the dominate shark species recorded by observers (98%) in relation with purse seine fisheries activities, and 96% of the recorded silky sharks are discarded (**Fig. 16**).

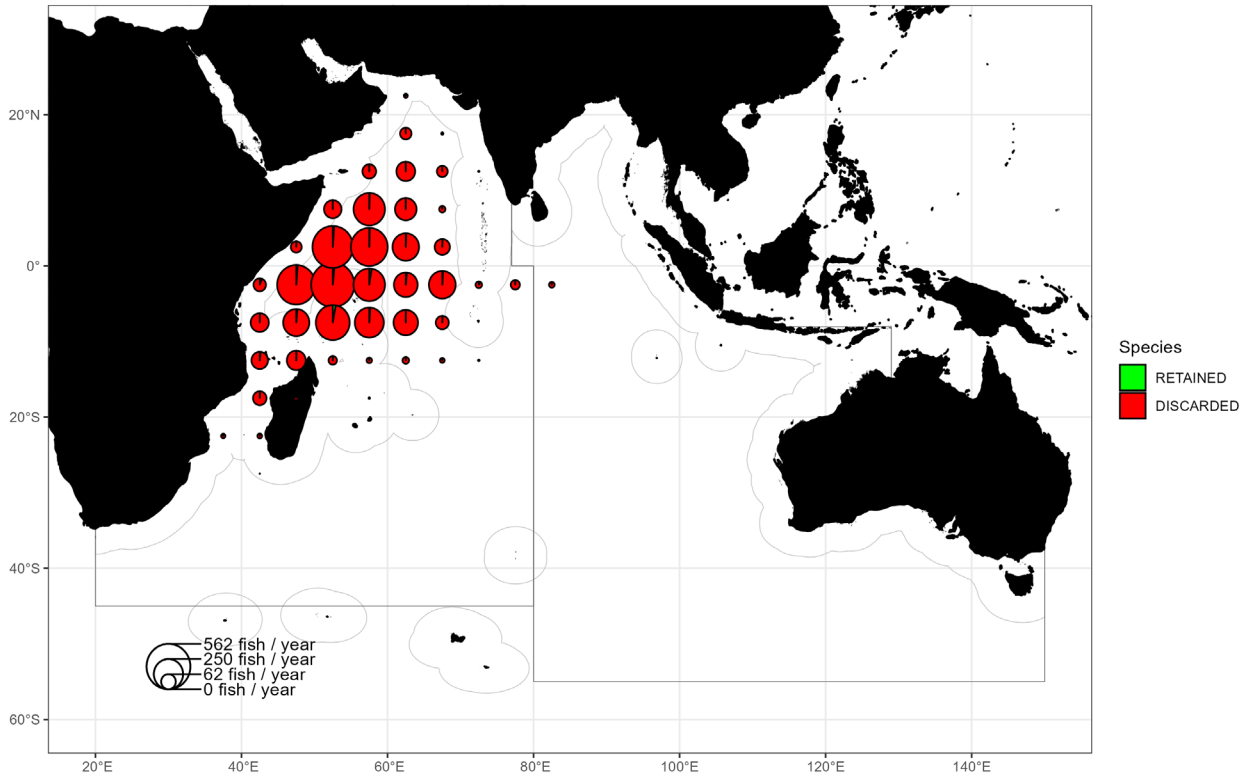

Figure 16: Mean annual number of silky shark interactions (numbers of individuals per year) with purse seine fisheries by fate as reported to the Secretariat through the ROS

On board observers recorded oceanic whitetip shark in purse seine fisheries over time with an interaction that represent only 1.5 % of the observed shark interactions with purse seine fisheries. Similarly to silky shark 90% of oceanic whitetip sharks are discarded (**Fig. 17**).

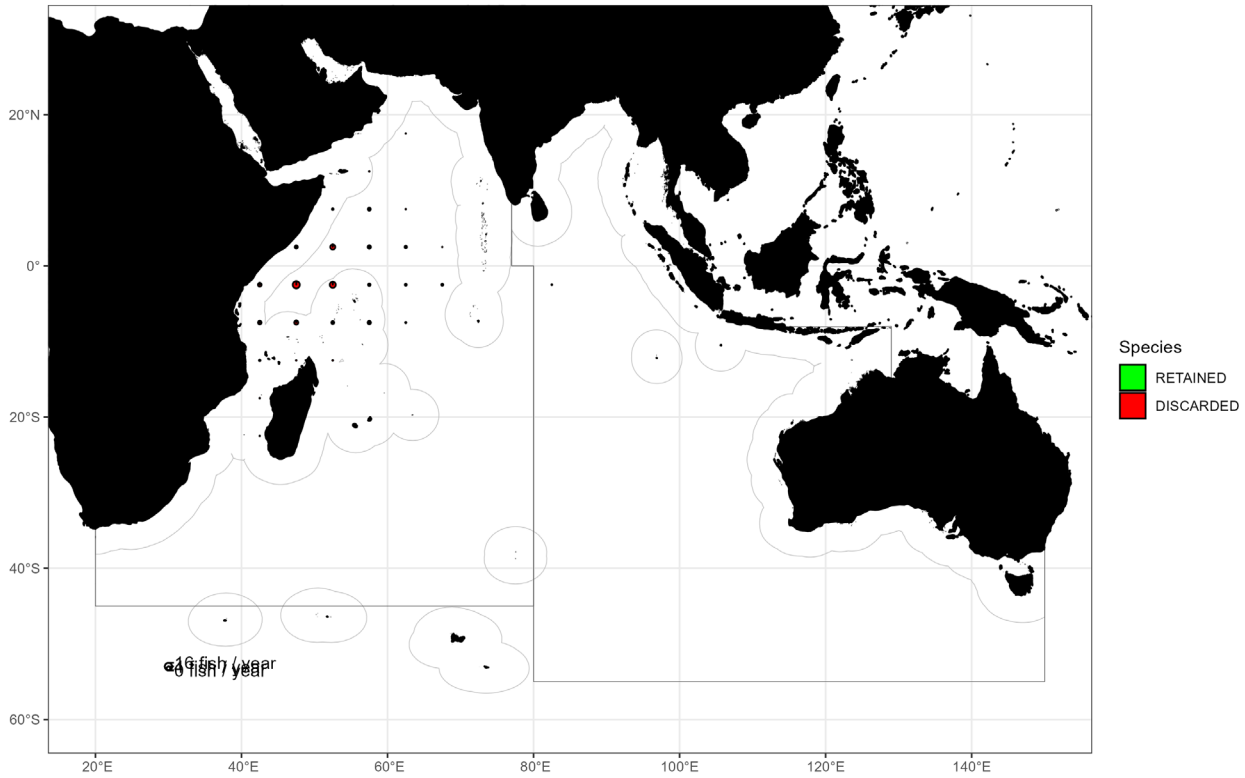

Figure 17: Mean annual number of oceanic whitetip shark interactions (numbers of individuals per year) with purse seine fisheries by fate as reported to the Secretariat through they ROS

For scalloped hammerhead shark only two individuals were recorded by observers in 2013.

Interactions with longline fisheries

As mentioned before the limited observer data from observations at sea on the IOTC database only covers a small part of the longline fishing grounds, and is mostly composed with data of EU France, with some years of data from Japan and Sri Lanka. The species under revision were reported over time (period 2009-2020) when silky shark and oceanic whitetip shark represent 3.4% and 3.8 % of the interactions reported respectively followed by scalloped hammerhead shark representing 0.24 % of the shark reported interaction with longline fisheries.

Additionally, the Secretariat compiled data from observer trip reports from Australia, United Kingdom, Korea, Taiwan, and South Africa, covering the period from 2010 to 2023, in order to better understand interactions between longline fisheries and the shark species under review. Silky sharks are the most recorded species, followed by oceanic whitetip sharks, which are both widespread in the western Indian Ocean (**Fig. 18**). Hammerhead sharks, on the other hand, are more concentrated in coastal areas (**Fig. 18**).

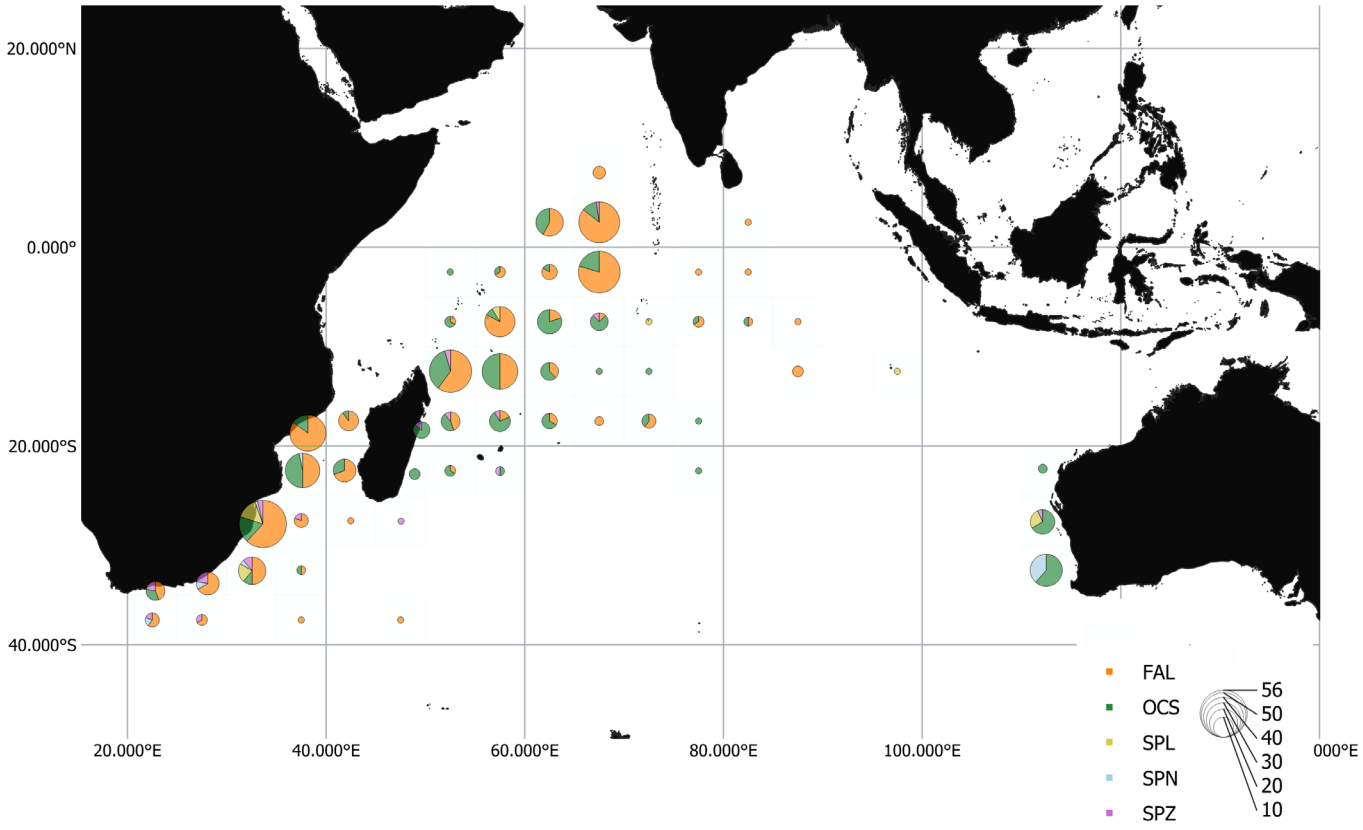

Figure 17: Recorded shark discarded (number of individuals) by longline fisheries as reported to the Secretariat through observer trip data

Discussion

For the three species under review, the available data indicate that coastal line and gillnet fisheries are primarily responsible for the reported retained catch. Although catches of silky sharks have declined and remained stable in recent years, catches of oceanic whitetip shark and scalloped hammerhead sharks have increased suddenly. This sharp increase may be linked to changes in sampling methodology adopted by some CPCs and data reporting, particularly Indonesia. However, it is important to note that some CPCs, with historical reporting of largely aggregated shark catch data, have recently improved their monitoring programmes by collaborating with NGOs. Given that reported aggregate shark catches still account for around 60% of total shark catches, the increases could be due to improved collection and reporting at species level rather than an actual increase in catches, particularly in the case of hammerhead sharks.

For oceanic whitetip shark, and bearing in mind that has been subject to a retention ban since 2014, the reported geo-referenced catches reflect the contraction of fisheries that usually caught them suggesting the successful implementation of the Resolution 13/06.

Regarding the size data reported silky sharks is numerically dominating the available samples although the size distribution differs substantially across fisheries. Deep-freezing longline and purse seine on free-swimming schools reporting the larger individuals, although below the length at maturity previously reported by studies in the Indian Ocean (Clavareau et al., 2020; Hall et al., 2012; Varghese et al., 2015). With very limited coverage and the concentration of samples from coastal and artisanal gears (gillnet) the size distribution of scalloped hammerhead shark and smooth hammerhead sharks are strongly dominated by small sizes as previously documented (Thomas et al, 2021; Kyalo and Ndegwa, 2013)

Observer data supports the relative importance of silky shark as one of the main bycatch shark species on the industrial longline and purse seine fisheries when there are mostly discarded (Amandè et al., 2012; Ruiz et al., 2018; Romanov, 2002). Nevertheless, recent studies suggest unreported captures, indicating that rates of mortality of the species may be underestimated (Perez et al., 2024). The compiled data from longline trips reports, although still preliminary, offers a better understanding of the distribution of the species under review in this working party and seems to be aligned with the fishing grounds reported trough catch and effort mandatory statistics.

Finally, in a view of the WPEB objectives and understanding the limitation and uncertainties related with the data available, the reconstruction of previously reported aggregate shark catches is essential for assessing the susceptibility of some species in future risk assessments (Murua et al., 2018; Cortés et al., 2010).

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