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General Fisheries Commission
for the Mediterranean
Commission générale des pêches
pour la Méditerranée

The State of Mediterranean and Black Sea Fisheries - “SoMFi” 2020: *Summary of incidental catches of vulnerable species*

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This third edition of the SoMFi **provides a comprehensive overview of the status of fisheries in the region**, looking at their main features and trends, in order to better inform their management and better examine current and future challenges that they will face in the near future. **The aim of this report is to produce a document that could provide useful analysis and direction for decision-making and future action.**

The whole report is based to a large extent on the most up-to-date data available submitted by **GFCM contracting and cooperating non-contracting parties**, including information on stock status, national catches, fleet and socio-economic information up to 2018. It is also complemented with information from other sources.

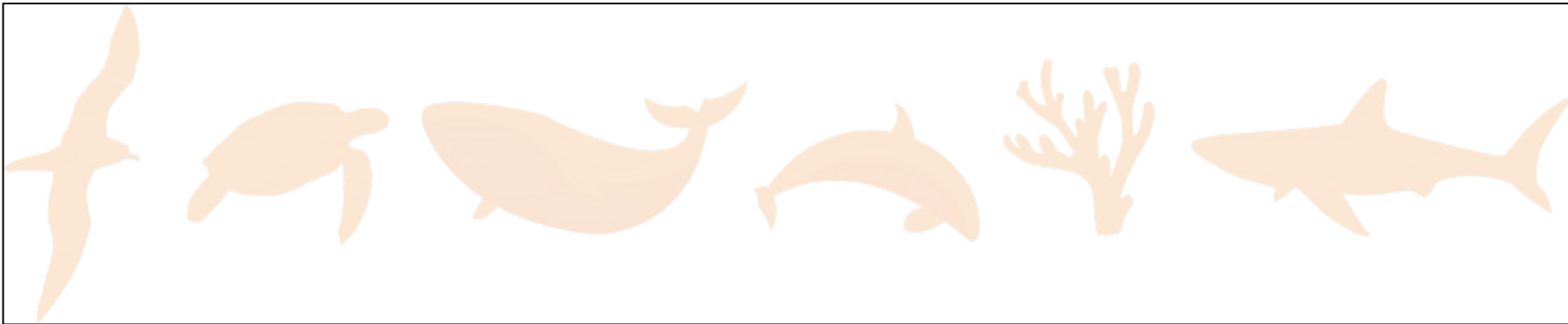


Chapter 4 is dedicated to Bycatch



Bycatch from fishing activities represent a complex concept with significant implications for the sector, including from an economical, regulatory and public perception point of view.

It affects the resources harvested through the mortality of juvenile and undersized individuals of the target species (**i.e. discards**) before they reach their optimal size from the point of view of future yield, and from a biodiversity conservation point of view generates a threat to vulnerable species (**i.e. incidental catch**).



Chapter 4 of SOMFi 2020 presents a compilation and a review of available information on the incidental catch of vulnerable species in different fisheries within the GFCM area of application

Methodology

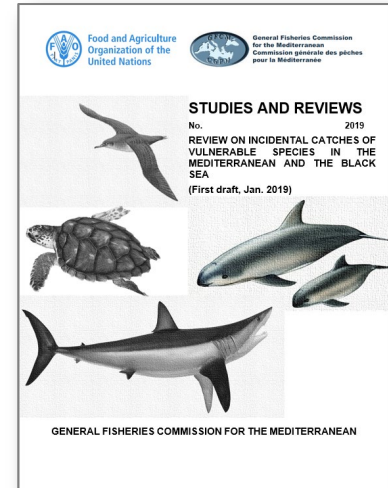
The information used to produce this overview has been collected from 2000 through the present, from the following sources:

- i) data from the forthcoming GFCM publication *Regional review of incidental catch of vulnerable species in Mediterranean and Black Sea fisheries* (Carpentieri et al., 2021);
- ii) FAO reports and technical papers;
- iii) the GFCM-Data Collection Reference Framework (DCRF).

It is worth noting that the *geographical and historical coverage* of the data analysed is very variable, and that only studies reporting individual values of vulnerable species were considered.

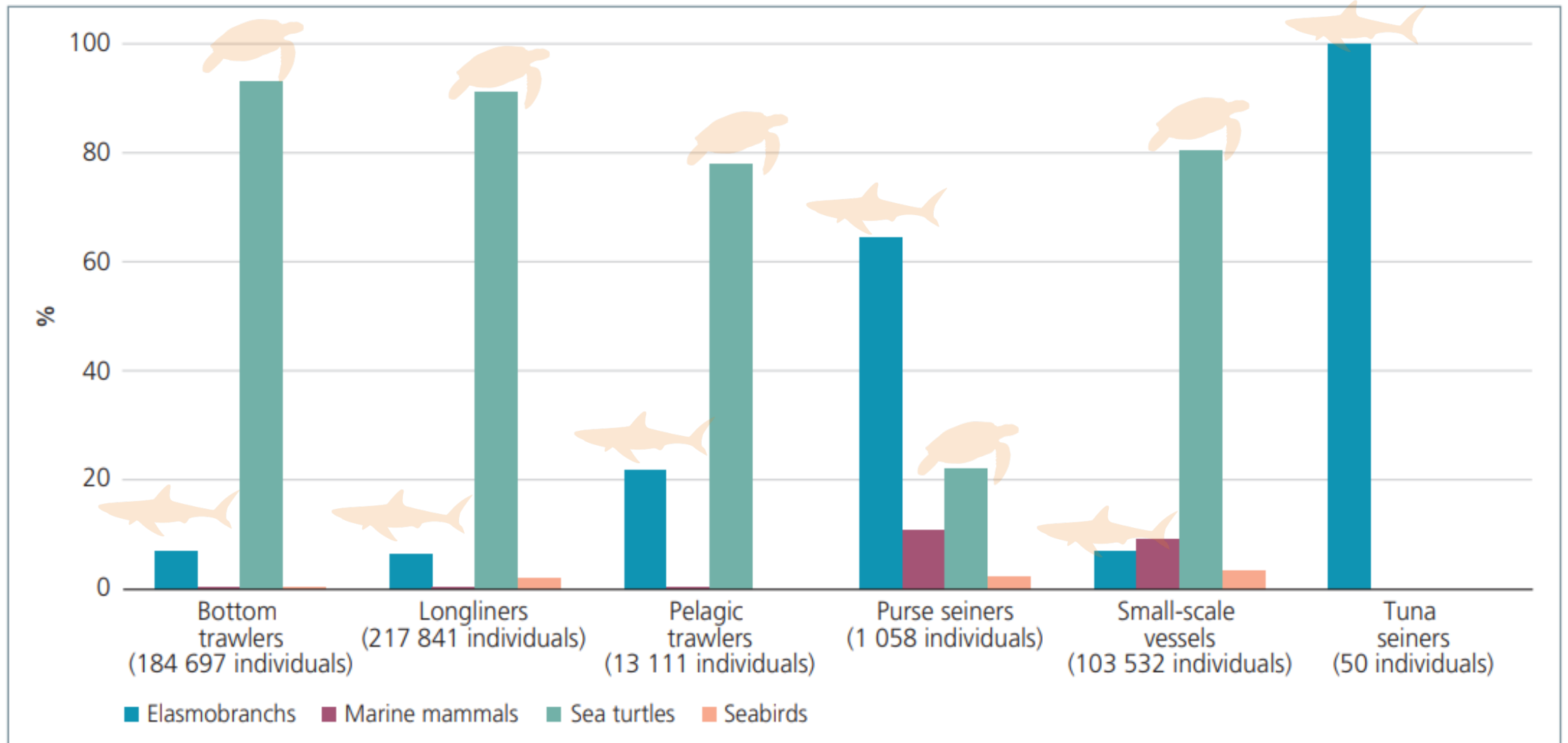
Therefore, the data presented could underestimate the real picture and the actual frequency of vulnerable species incidental catch in the GFCM area.

However, this analysis could provide an important figure for understanding the status and the impact of the different fishing activities on those group of species.

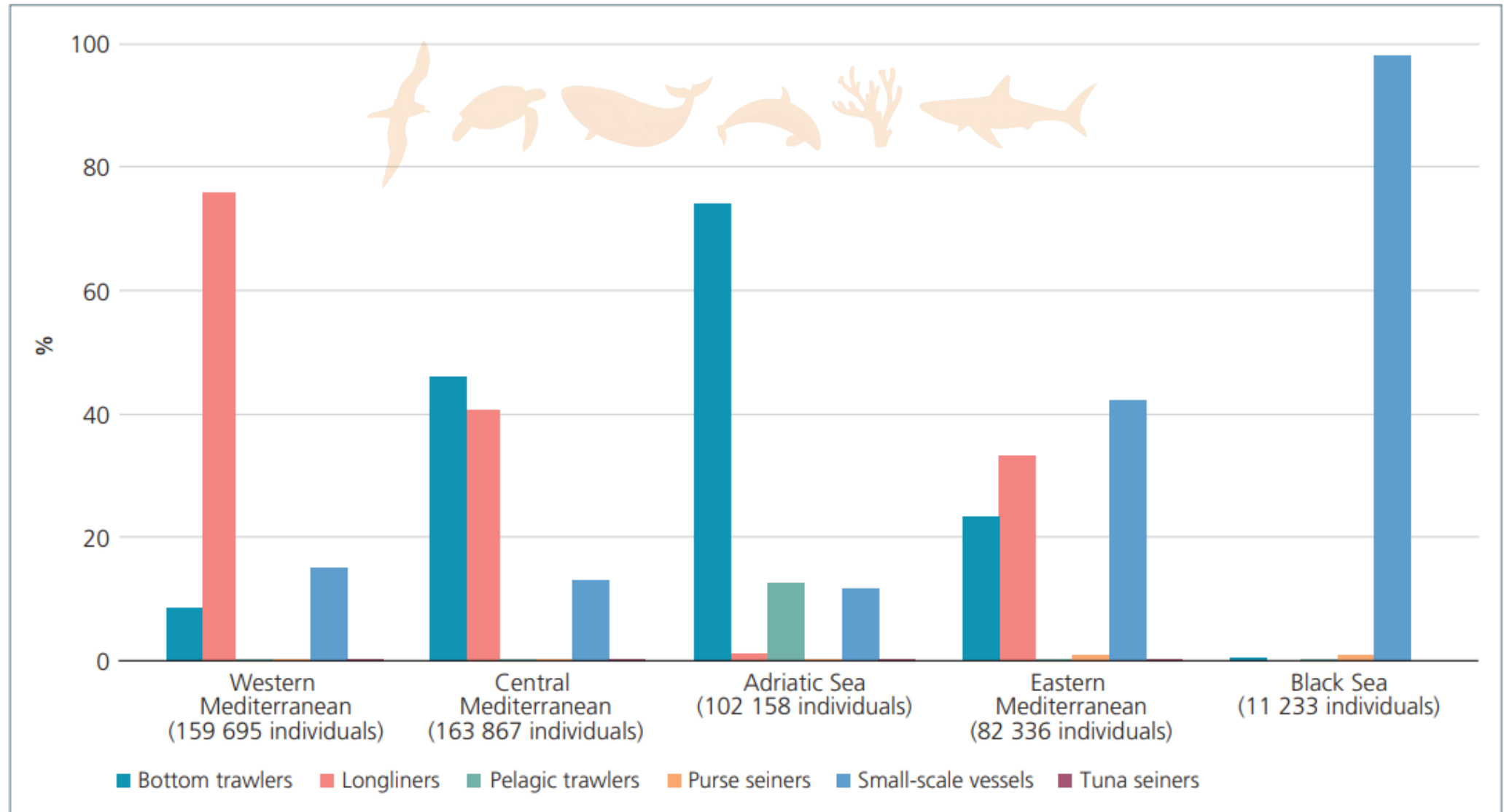



Results

Overall, from a strictly numerical point of view, **sea turtles** (around 89 percent) and **elasmobranchs** (around 8 percent) continue to represent the highest share of reported incidental catch of vulnerable species.



Longliners and bottom trawlers are the most relevant vessel groups affecting conservation-priority species in the whole region (with the exception of the Black Sea)





Marine mammals: The relationship between monk seals, cetaceans and fishing activities/fishers has been conflictual over time, more or less so depending on the historical period, type of fishing gear, species involved and socio-economic issues. Nonetheless, from a strictly numerical point of view, the datasets analysed indicate that in recent years, the incidental catch of cetaceans in Mediterranean fisheries has decreased with respect to earlier periods, when marine mammal bycatch, caused mainly by pelagic driftnets, was relevant

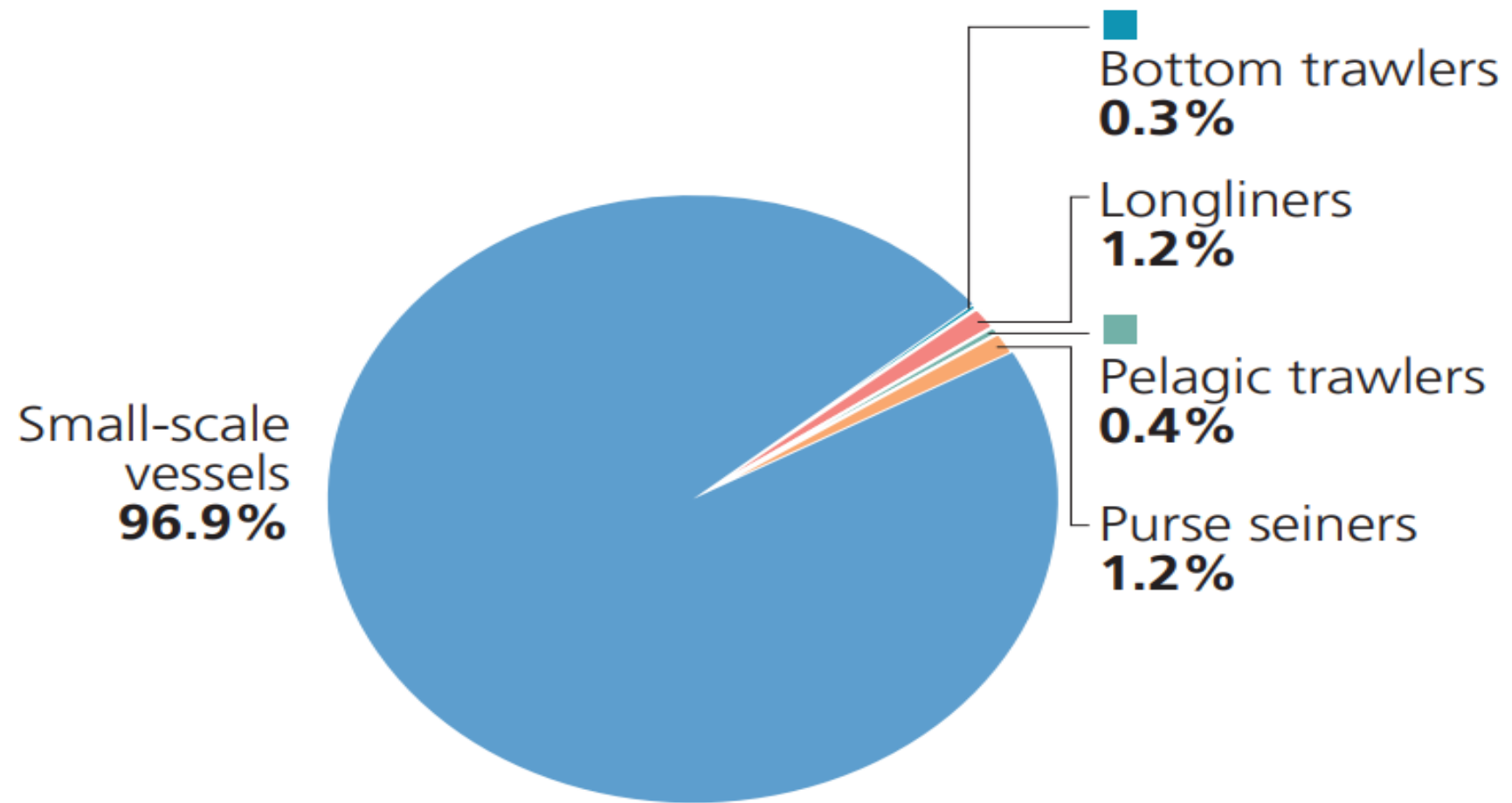


The use of these nets was banned in 2005, and since then, only a few studies have reported on the bycatch of marine mammals from other fisheries in the Mediterranean Sea. Over the last decade, studies conducted on incidental catch have declined considerably, while research on direct interactions (i.e. depredation) between marine mammals and fishing gear continues to increase, often with the aim of quantifying its importance and, if possible, also assessing the damage inflicted on fishers from an economic point of view.



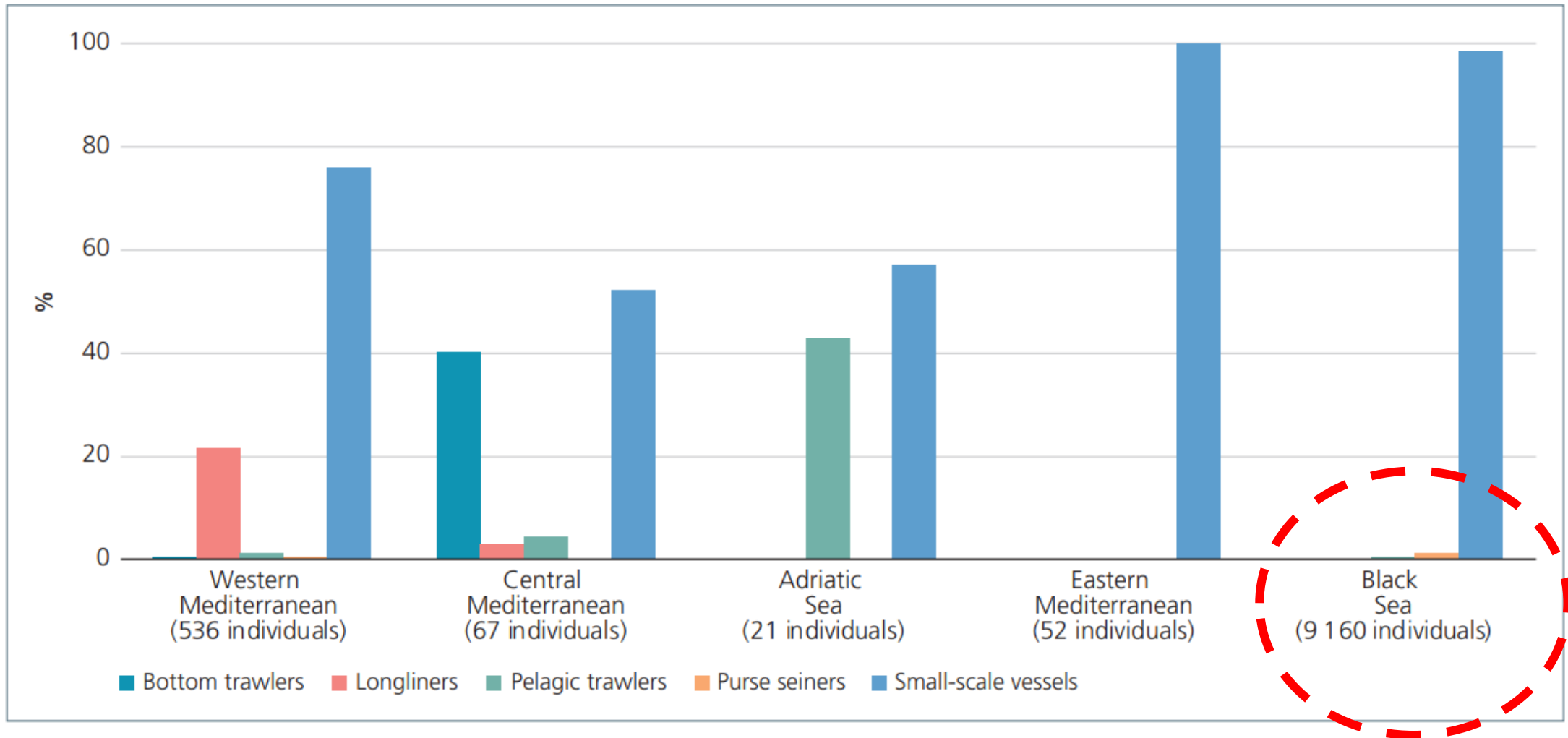
The situation is quite different in the Black Sea, where the coastal fisheries targeting Black Sea turbot continue to have an impact on the cetacean population – which is composed of three endemic species – particularly on the Black Sea harbour porpoise (*Phocoena phocoena relicta*).

Currently, the types of vessel groups with the greatest rates of interactions with marine mammals seem to be those using set gillnets and trammel nets in coastal areas

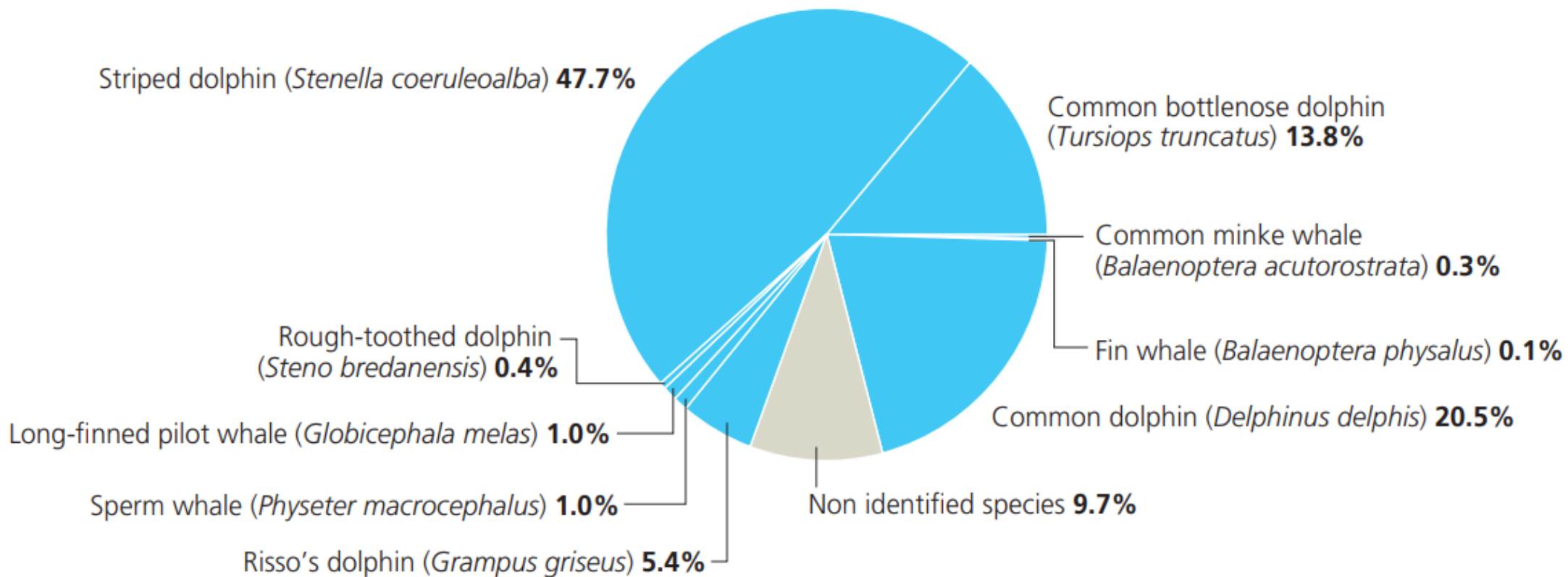


Note: Analysis carried out on 9 836 individuals (676 in the Mediterranean and 9 160 in the Black Sea).

Reported incidental catch of marine mammals by vessel group and GFCM subregion, 2000–2020

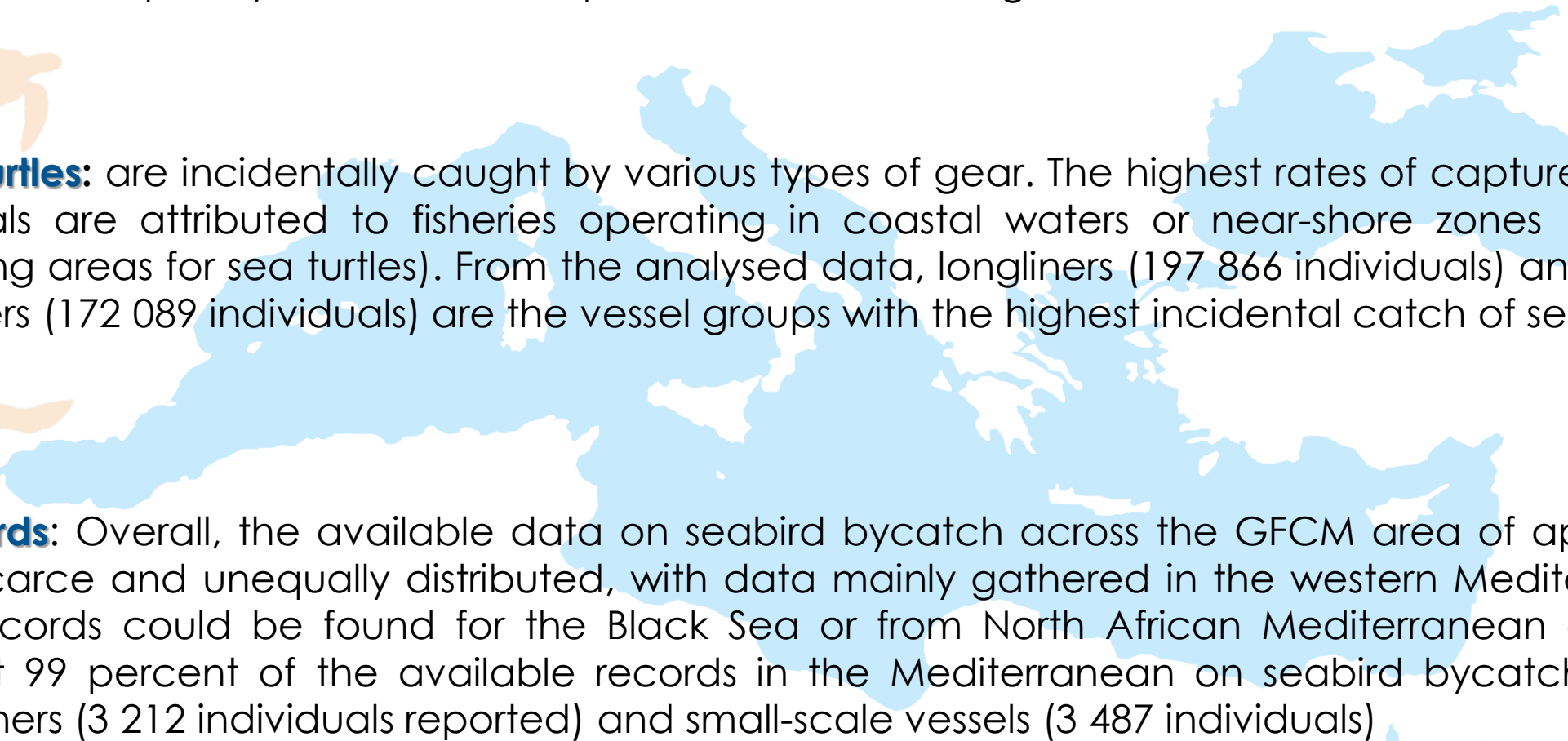



Reported incidental catch of the main cetacean species in the Mediterranean Sea




Note: Analysis carried out on 669 individuals.


In terms of species bycatch composition, the recorded species of cetaceans decreased considerably once large driftnets were banned and subsequently dismissed. Currently, medium-small cetacean species, such as the striped dolphin, the bottlenose dolphin and the common dolphin are sporadically found in bycatch reports



Elasmobranchs: Longliners (with 14 064 individuals reported) – set and drifting grouped together – and bottom trawlers (12 351 individuals) are by far the vessel groups with the greatest impact on conservation priority elasmobranch species in the whole region



Sea turtles: are incidentally caught by various types of gear. The highest rates of capture of these animals are attributed to fisheries operating in coastal waters or near-shore zones (potential feeding areas for sea turtles). From the analysed data, longliners (197 866 individuals) and bottom trawlers (172 089 individuals) are the vessel groups with the highest incidental catch of sea turtles.



Seabirds: Overall, the available data on seabird bycatch across the GFCM area of application are scarce and unequally distributed, with data mainly gathered in the western Mediterranean. No records could be found for the Black Sea or from North African Mediterranean countries. About 99 percent of the available records in the Mediterranean on seabird bycatch refer to longliners (3 212 individuals reported) and small-scale vessels (3 487 individuals)



Conclusion

- In general, it has always been difficult to make reliable estimates of the incidental catch of vulnerable species in each area and by vessel group/gear type.
- One of the main obstacles involves the different methods used by researchers in different countries, which are not standardized and make it extremely difficult to compare the results obtained.
- Most of the available data on the bycatch of vulnerable species are derived from opportunistic and irregular surveys.
- Currently, only a few national programmes are active and major knowledge gaps persist in most of the GFCM subregions
- Some of the variability between GFCM subregions and/or vessel group types may also be due to a number of shortcomings in the quality of data (lack of onboard observer programmes, species identification issues, inadequate spatial and temporal coverage, etc.), which increases uncertainty.

Improving data collection within a standardized framework therefore remains an urgent priority. Monitoring programmes on the incidental catch of vulnerable species are essential and represent a fundamental step towards developing and implementing appropriate conservation and management measures for the protection of vulnerable species with resident populations in the Mediterranean and the Black Sea and the concomitant sustainability of the fisheries sector.



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Thank you for your attention

