



Food and Agriculture
Organization of the
United Nations



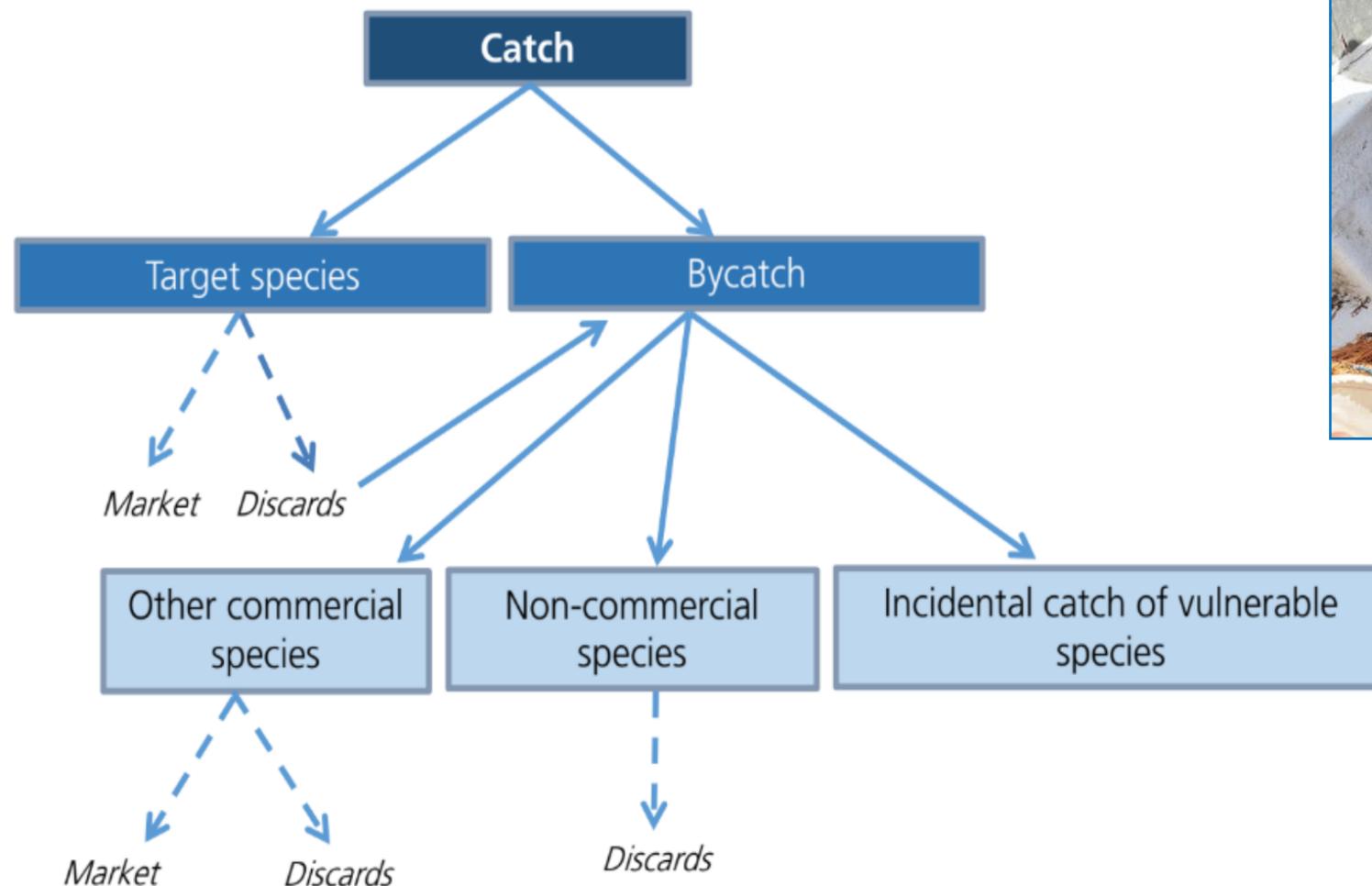
General Fisheries
Commission for
the Mediterranean

***The State of Mediterranean and Black Sea
Fisheries (SoMFi 2022):
Incidental catch of vulnerable species in the
Mediterranean and Black Sea***

**“ACCOBAMS-ASCOBANS Joint Bycatch Working Group (JBWG) -
Current cetacean bycatch issues in European waters”**,

SoMFi 2022: Incidental catch of vulnerable species in the Mediterranean and Black Sea

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**).



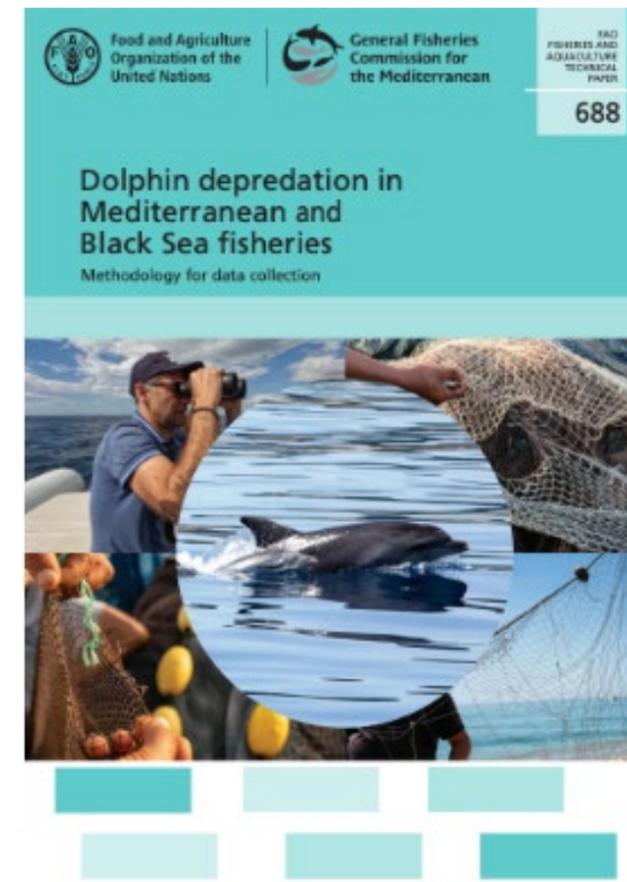
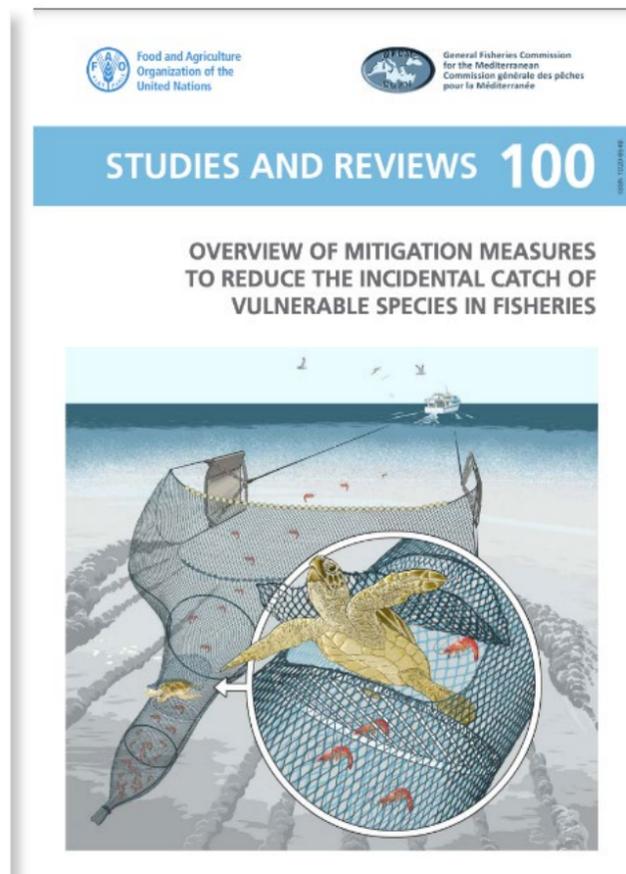
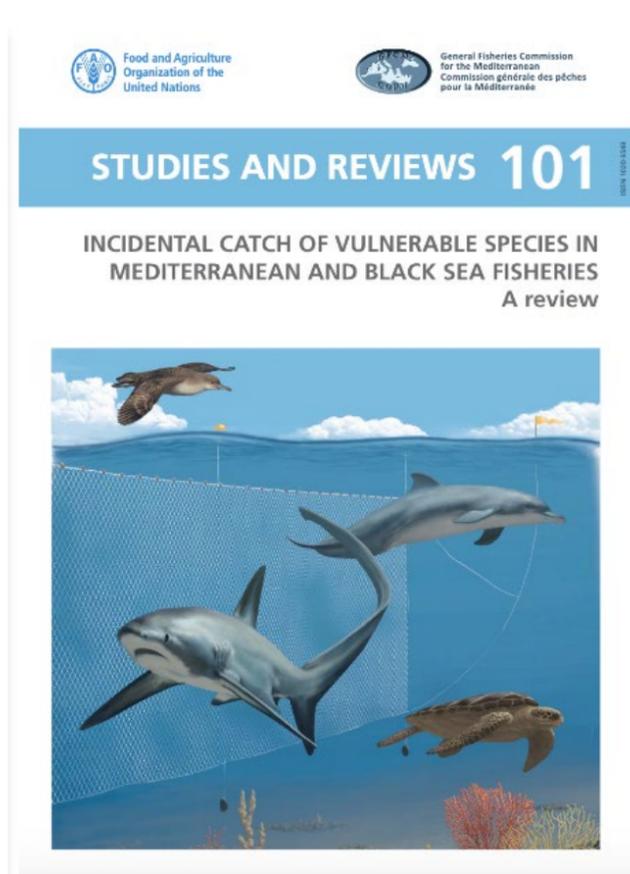
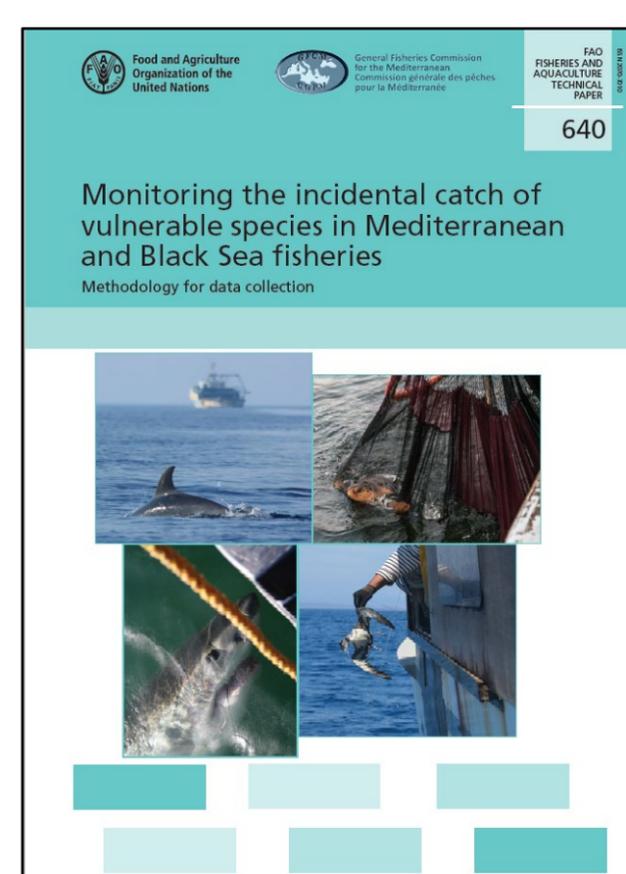
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In relation to vulnerable species, two GFCM resolutions and one recommendation have been recently adopted:

- . Recommendation GFCM/44/2021/13 on the mitigation of fisheries impacts for the conservation of **seabirds** in the Mediterranean Sea.
- . Recommendation GFCM/44/2021/14 on the mitigation of fisheries impacts for the conservation of **sea turtles**.
- . Recommendation GFCM/44/2021/15 on the mitigation of fisheries impacts for the conservation of **cetaceans**.
- . Recommendation GFCM/44/2021/16 on additional mitigation measures for the conservation of **elasmobranchs** in the Mediterranean Sea.

SoMFi 2022: Incidental catch of vulnerable species in the Mediterranean and Black Sea

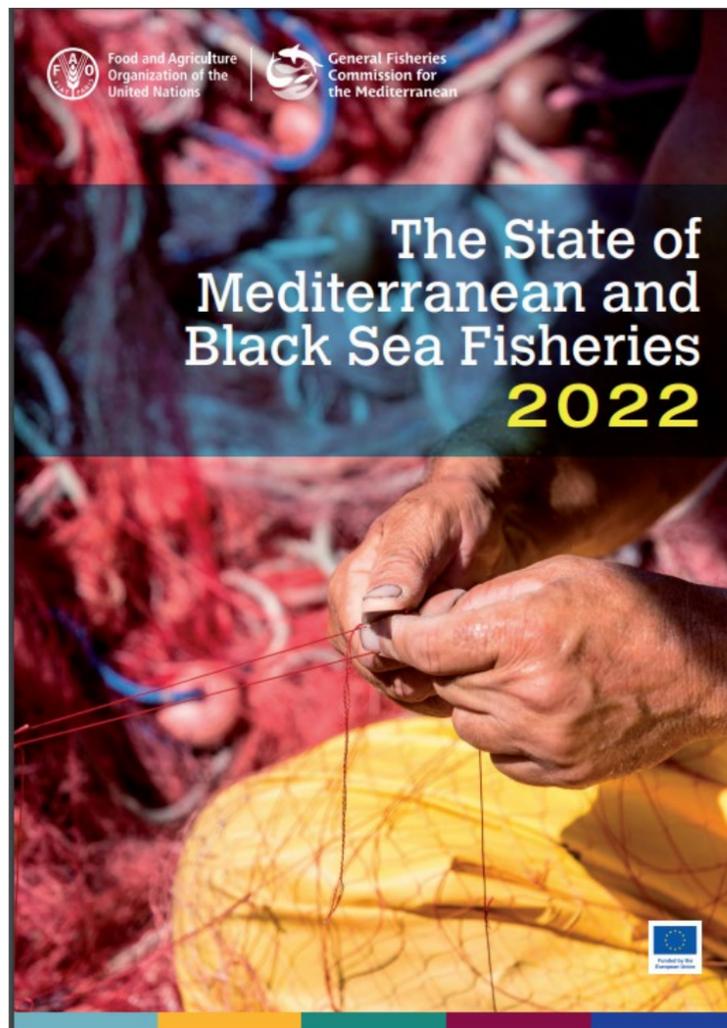
To address this issue and better understand bycatch, the GFCM working with fishers, national and international partners, organizations and researchers has developed a series of protocols, and a number of initiatives to improve knowledge on bycatch by fleet, to test new tools for reducing bycatch and to implement management measures



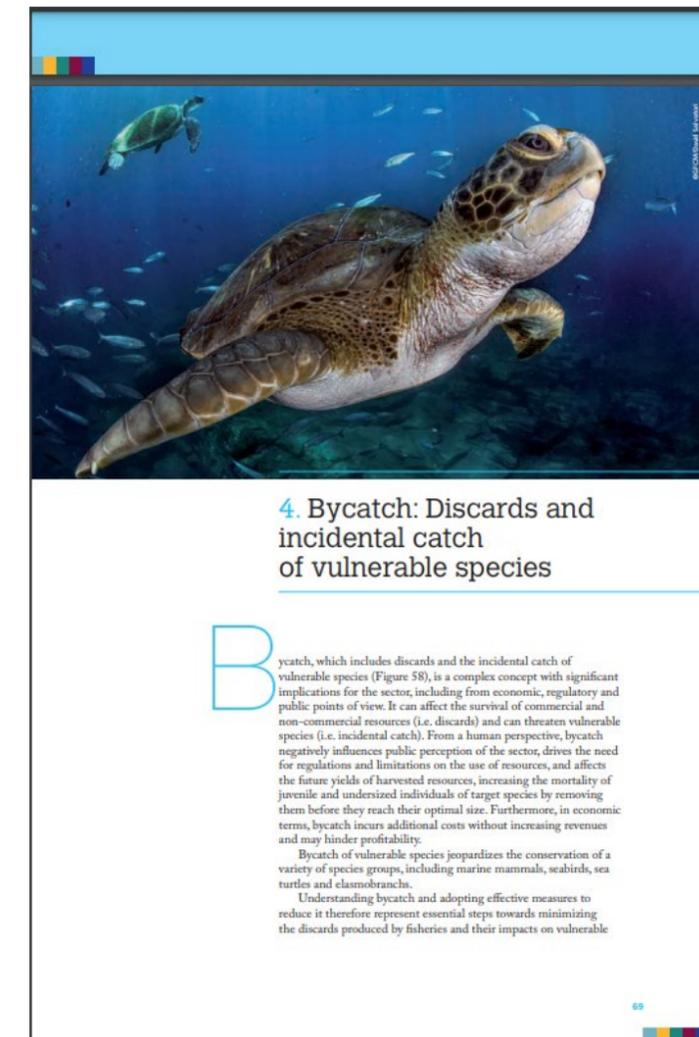
<https://www.fao.org/gfcm/publications/en/>

SoMFi 2022: Incidental catch of vulnerable species in the Mediterranean and Black Sea

The 2022 edition of the flagship publication of the GFCM, The State of Mediterranean and Black Sea Fisheries, provides an up-to-date overview of fisheries status, trends and governance in the region. Now in its fourth instalment, the publication updates the findings from previous editions while analysing emerging issues in the fisheries sector, including the effects of management plans. **The aim of this report is to produce a document that could provide useful analysis and direction for decision-making and future action.**



Chapter 4 of SOMFi 2022 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



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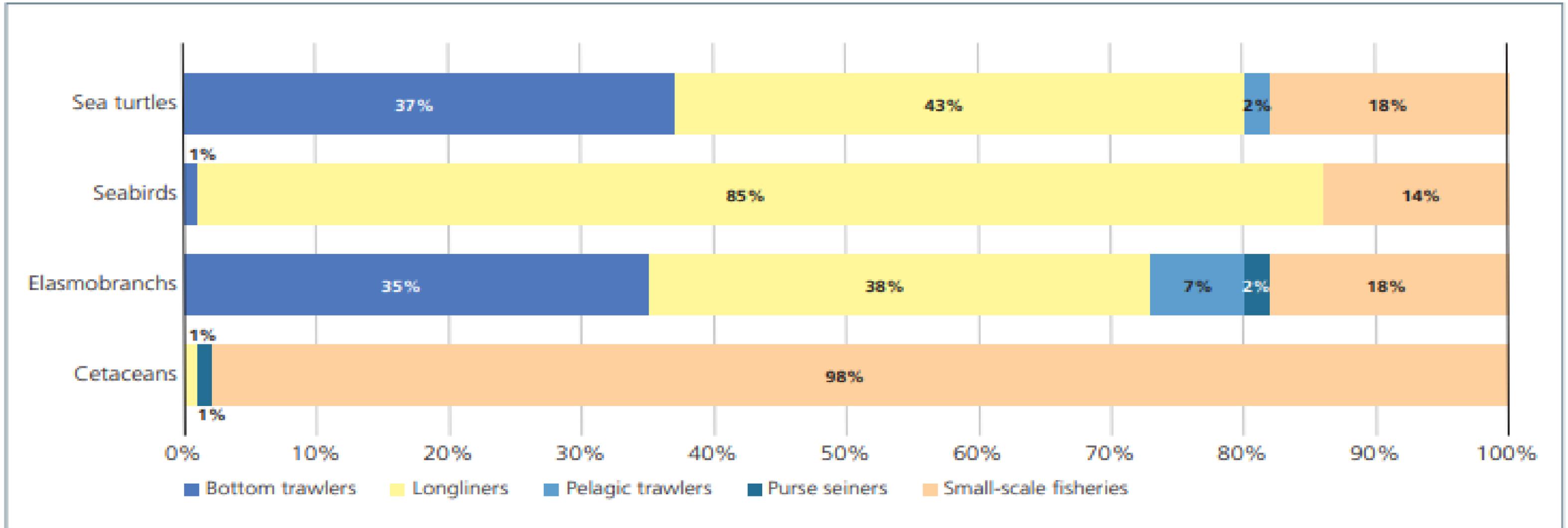
The analysis continues the overview presented in previous SoMFi 2020 with the insertion of new data obtained from the following sources:

- i) the GFCM publication titled Incidental catch of vulnerable species in Mediterranean and Black Sea fisheries: A review (Carpentieri et al., eds, 2021);
- ii) the DCRF (GFCM, 2018);
- iii) various FAO reports and technical papers; and
- iv) monitoring programmes carried out within the framework of the MedBycatch project – Understanding Mediterranean multi-taxa bycatch of vulnerable species and testing mitigation: a collaborative approach.

All the information collected and available for the four groups of vulnerable species considered has been subsequently stored and organized in a dataset

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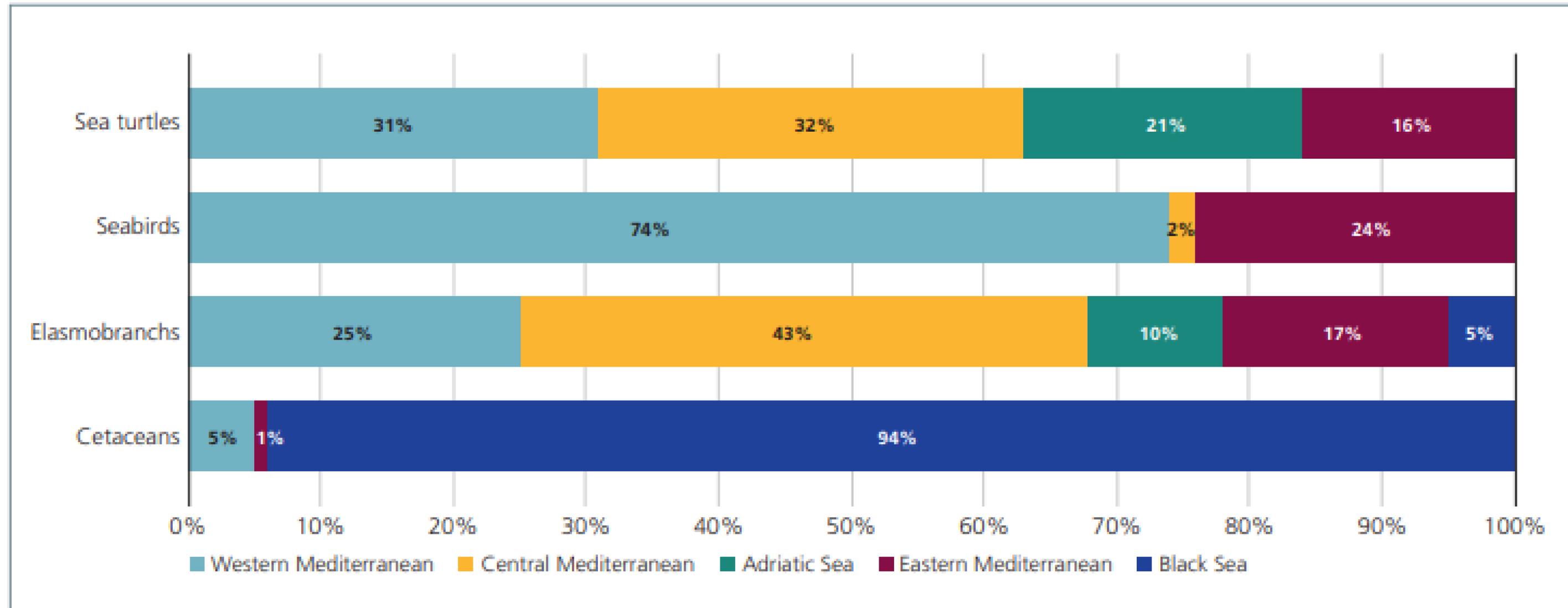
Relative contributions of main vessel groups to the total incidental catch of vulnerable species groups in the GFCM area of application, 2000–2022



Sea turtles (around 470 000 individuals) and elasmobranchs (40 253 individuals) showed the highest numbers of reported individuals incidentally captured in the whole region, with longliners (211 864 total individuals between both species groups) and bottom trawlers (187 449 total individuals) representing the most relevant vessel groups impacting the conservation of these two species groups. Seabirds (7 004 individuals) and cetaceans (9 829 individuals) are the two vulnerable species groups with the lowest numbers of **reported** interactions and individuals incidentally caught

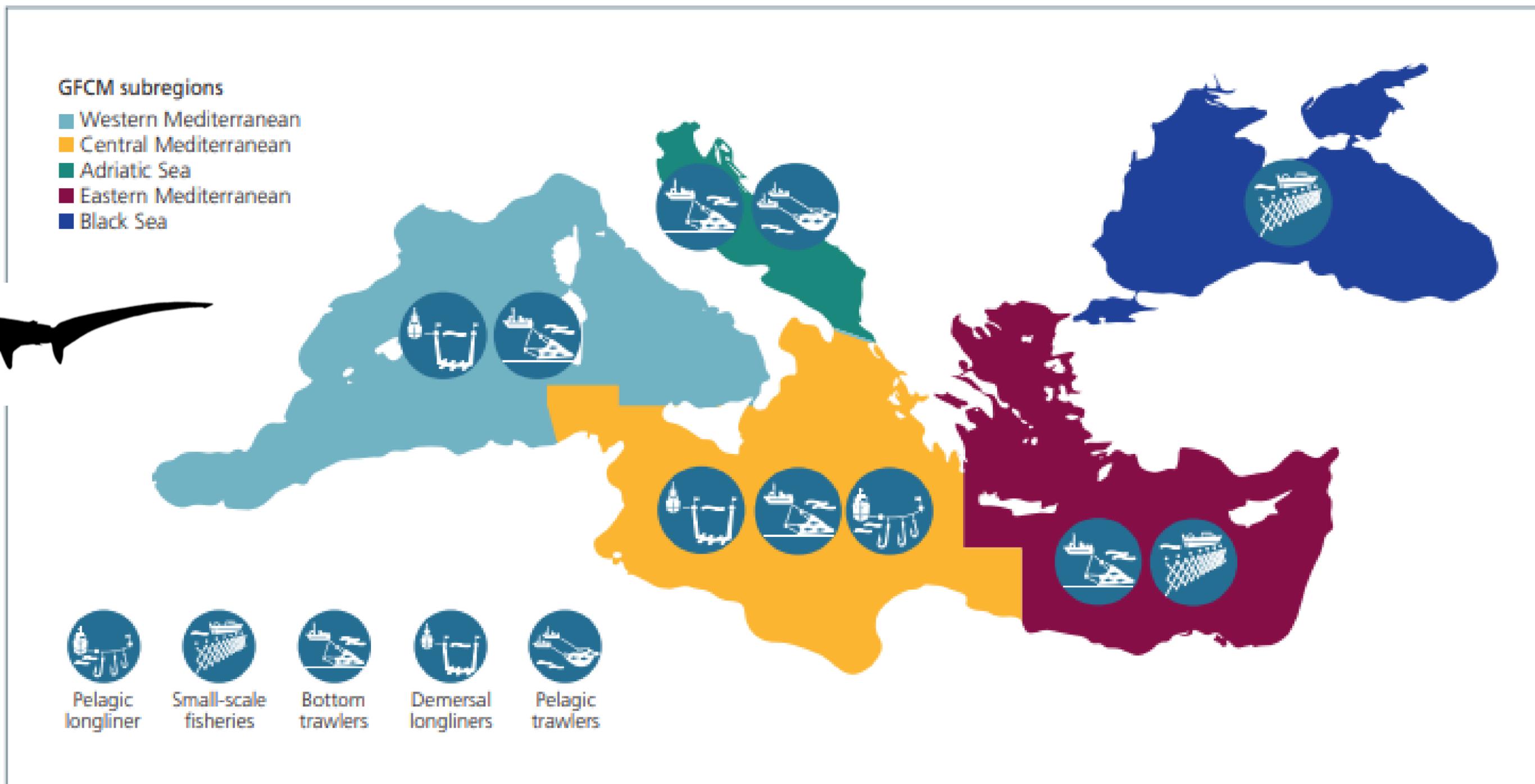
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Relative contributions of GFCM subregions to the total incidental catch of vulnerable species groups in the GFCM area of application, 2000–2022

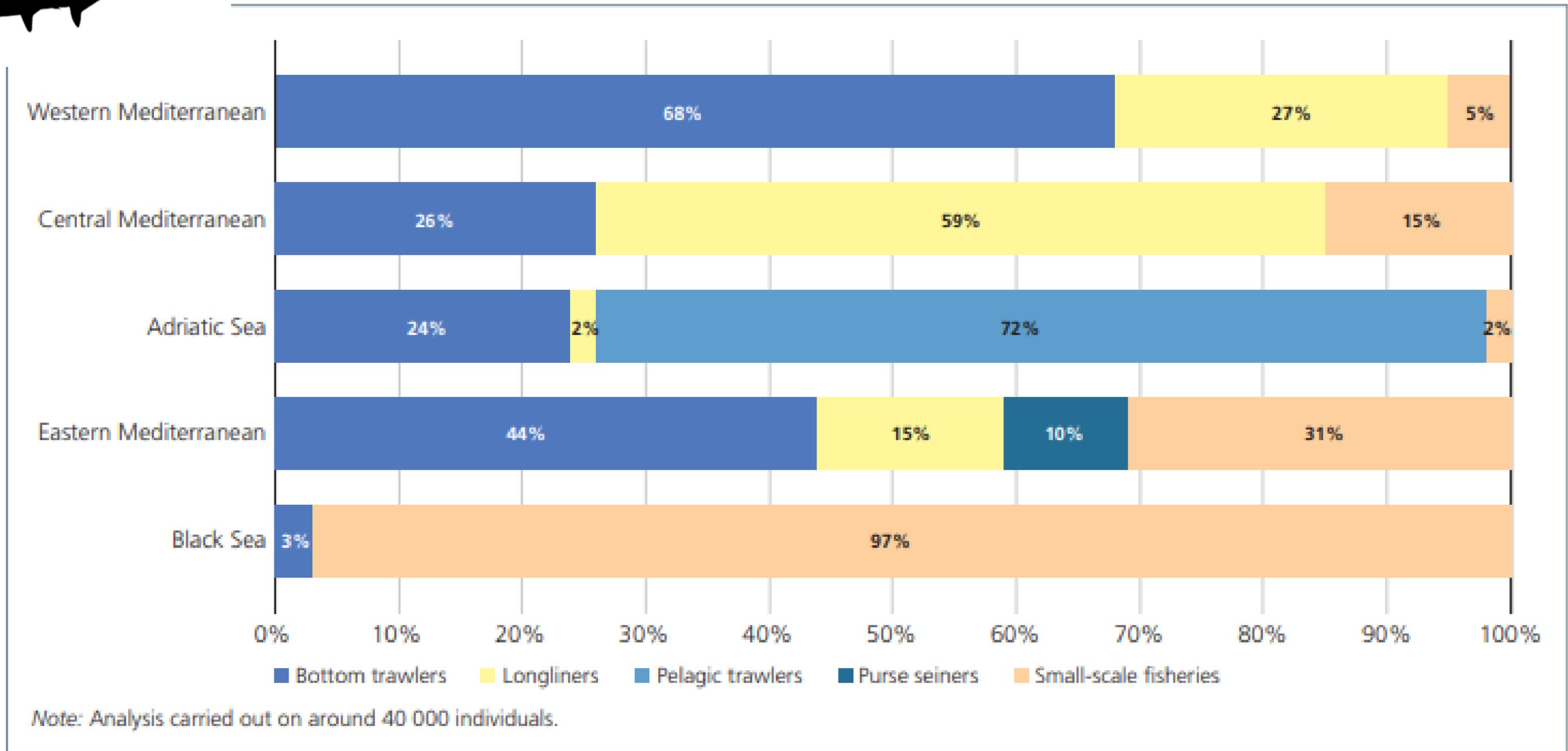


Concerning the spatial distribution of reported incidental catch in the region, the bulk of information (i.e. the number of individuals bycaught during fishing operations) is equally distributed between the western (around 161 000 individuals) and central Mediterranean (around 164 000 individuals). Information is more scattered in the Adriatic Sea (around 102 000 individuals) and the eastern Mediterranean (around 81 000 individuals), and in the Black Sea it is limited to only cetaceans (9 159 individuals) and elasmobranchs (2 074 individuals).

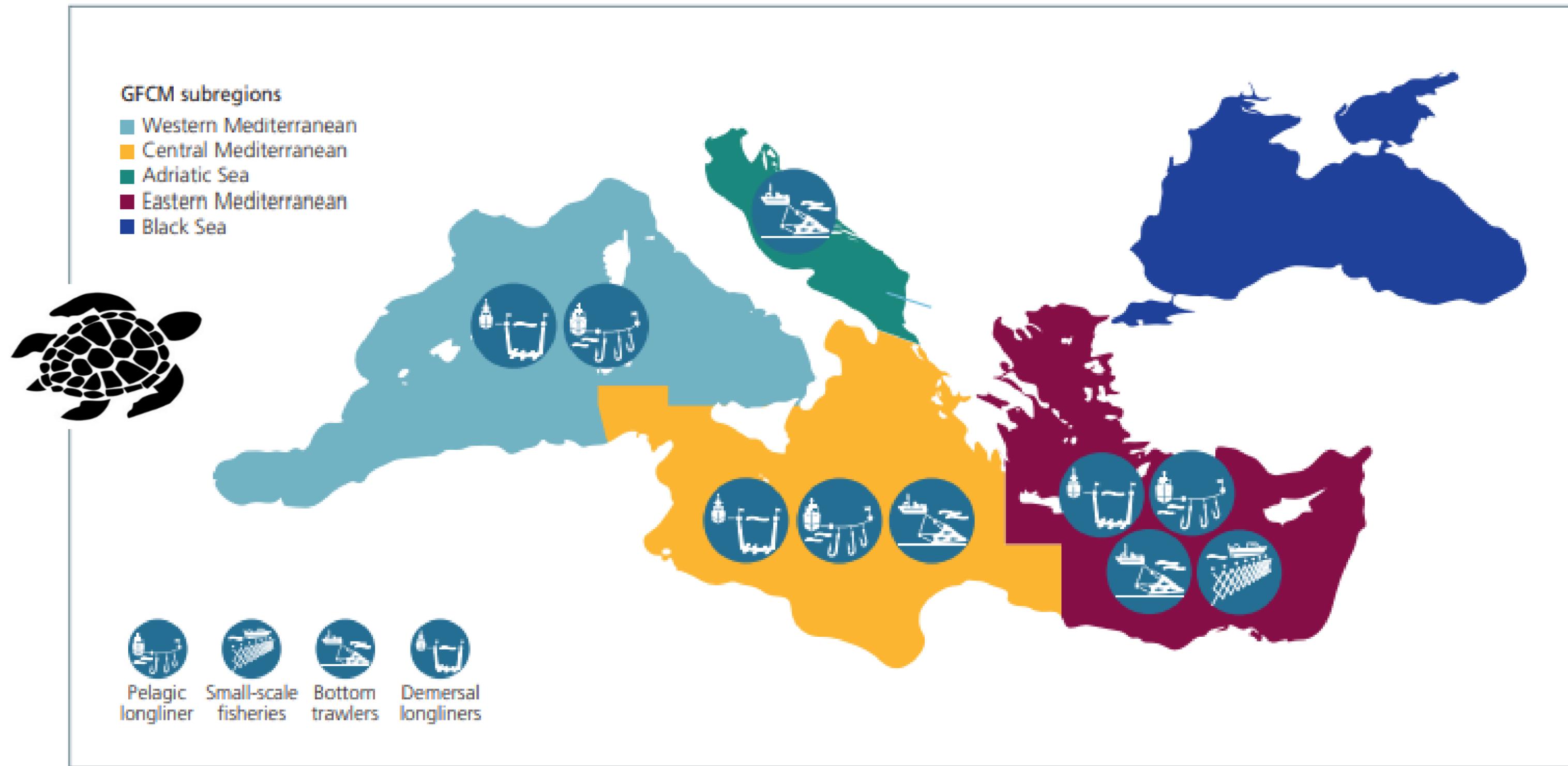
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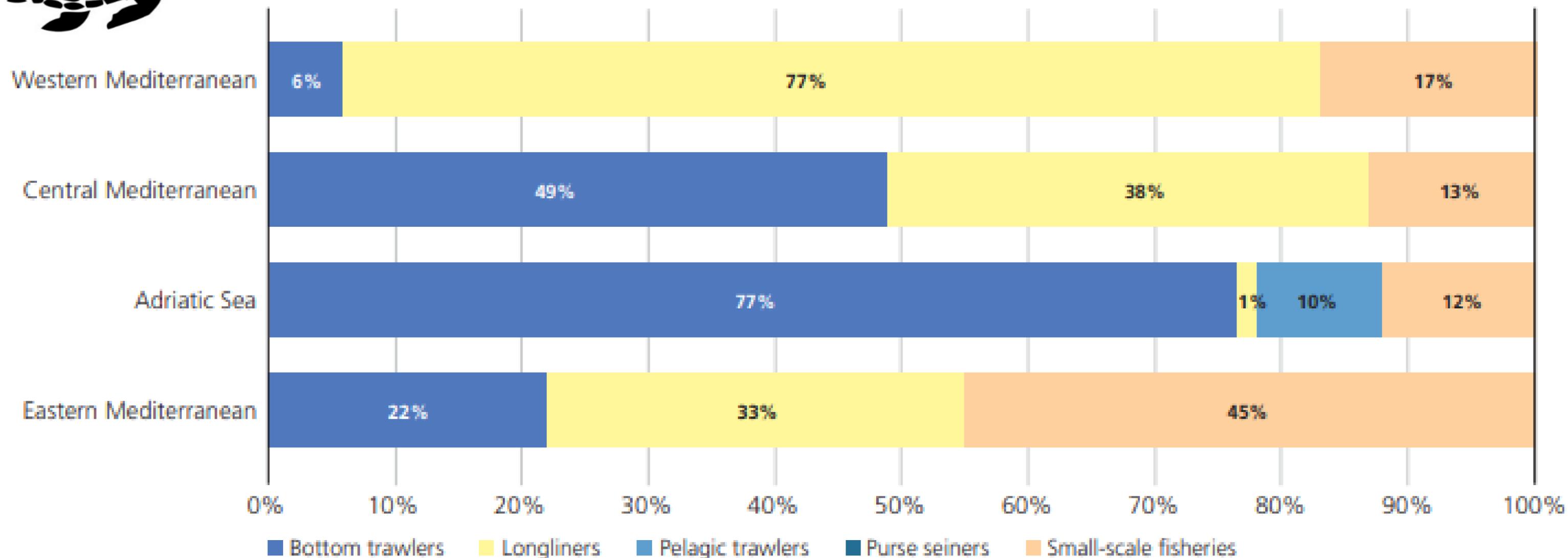
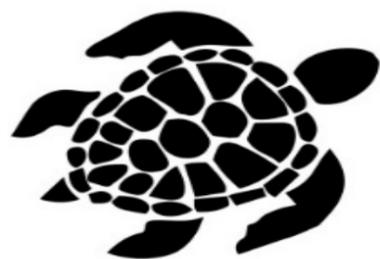
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SoMFi 2022: Incidental catch of vulnerable species in the Mediterranean and Black Sea

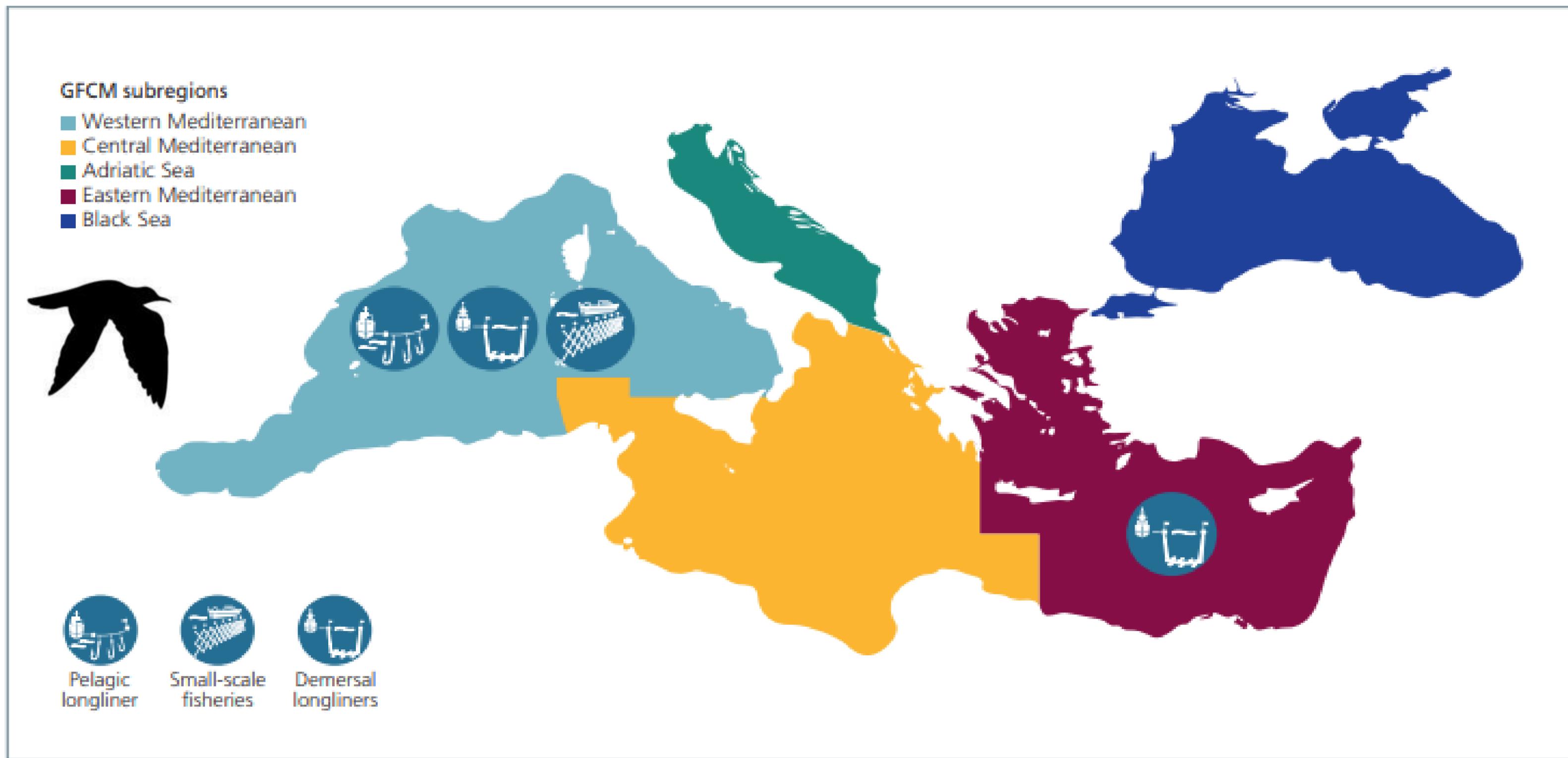


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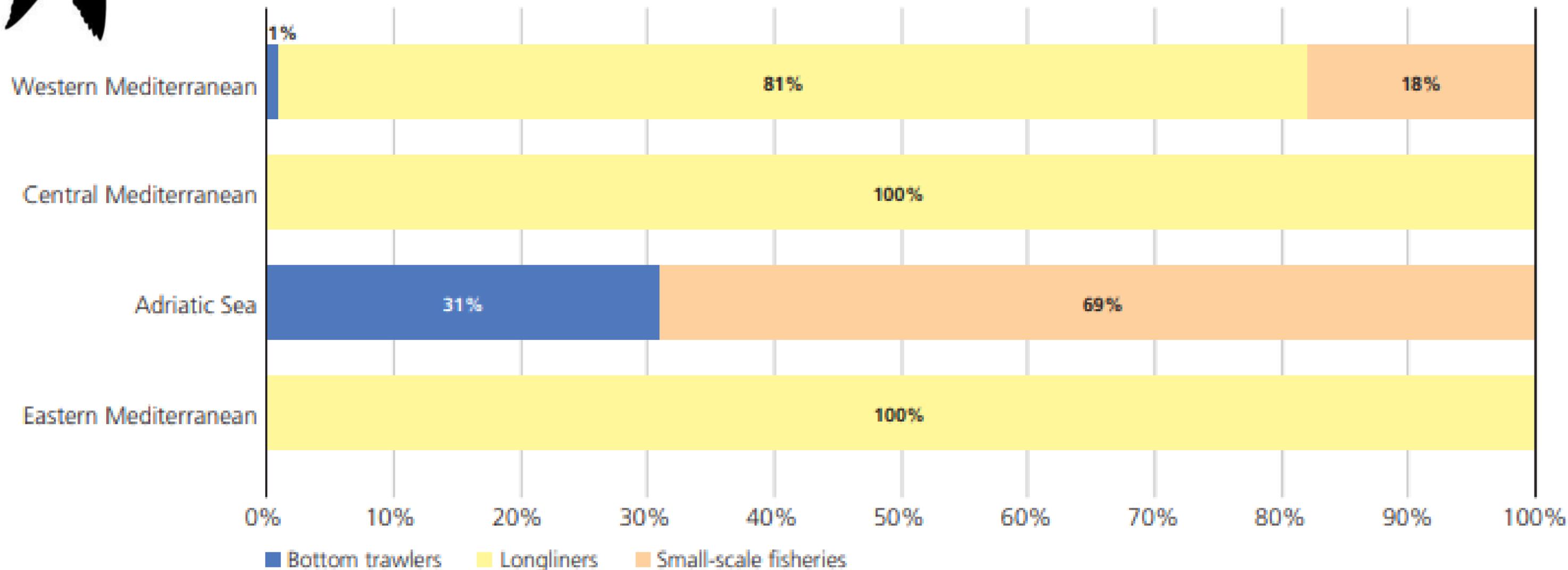


Note: Analysis carried out on around 470 000 individuals.

SoMFi 2022: Incidental catch of vulnerable species in the Mediterranean and Black Sea



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Notes:

Analysis carried out on around 8 000 individuals.

Percentages for the central Mediterranean and the Adriatic Sea are based on few records.

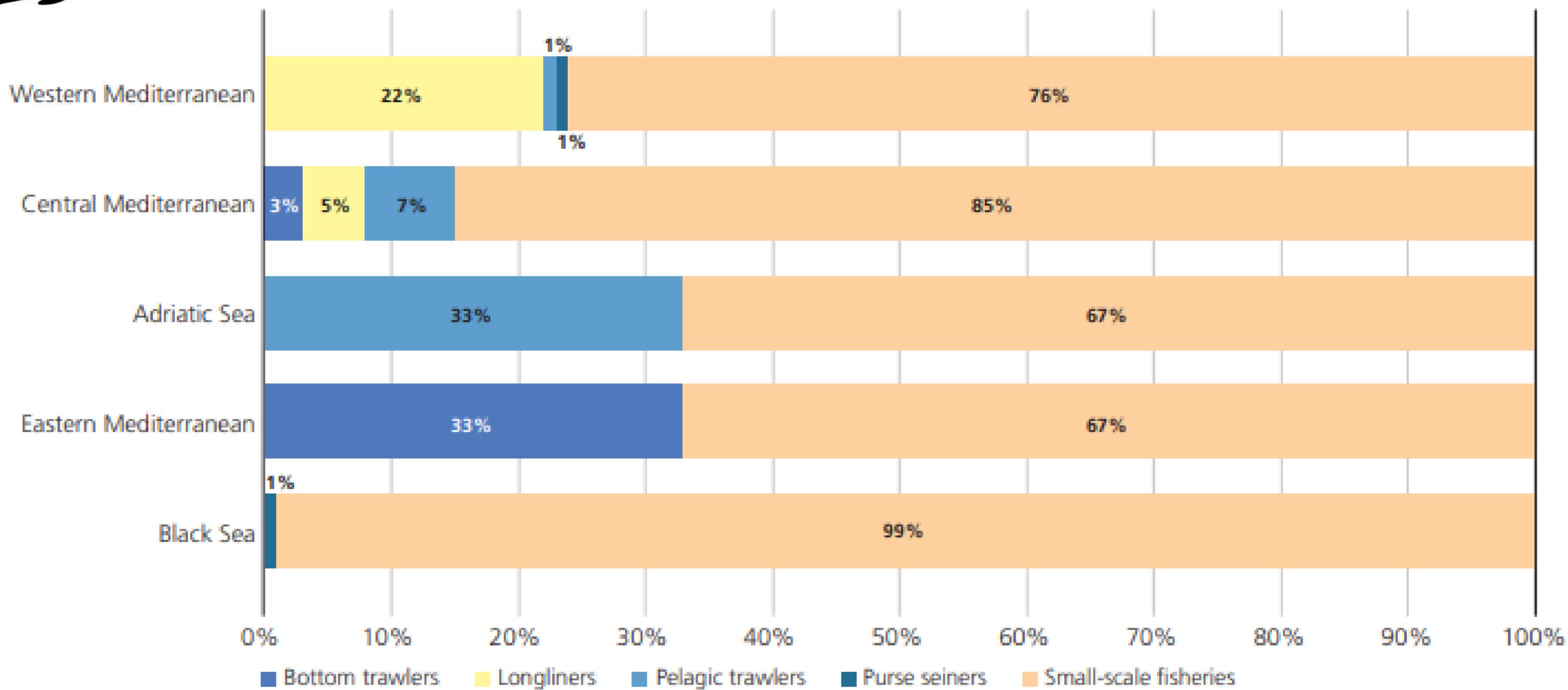
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GFCM subregions

- Western Mediterranean
- Central Mediterranean
- Adriatic Sea
- Eastern Mediterranean
- Black Sea



The majority of data are reported from the Black Sea (9 159 individuals), where coastal fisheries targeting Black Sea turbot (*Scophthalmus maximus*) continue to have an impact on the cetacean population – which is composed of three endemic species, Black Sea common dolphin (*Delphinus delphis ponticus*), Black Sea bottlenose dolphin (*Tursiops truncatus ponticus*) and the most impacted, Black Sea harbour porpoise (*Phocoena phocoena relicta*). A smaller number of records come from the western Mediterranean, with Morocco and France recording 236 and 164 individuals, respectively. Few data are reported from the other subregions.



Small-scale fisheries using set gillnets and trammel nets in coastal areas have shown the greatest rates of interactions with cetaceans in all subregions (9 531 individuals). The overall reported incidental catch records (298 individuals) of other vessel groups (bottom trawlers, pelagic trawlers, purse seiners) presented lower values but cannot be considered negligible.

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Cetaceans have been highly impacted by Mediterranean and Black Sea fishers using pelagic drift nets since the early years of the nineteenth century. It is evident that the banning of drift nets in the early 2000s had positive and tangible effects on considerably reducing cetacean incidental catch. Since then, studies report a decline in the incidental capture of cetaceans, while it can be inferred that other human-induced stressors (e.g. pollution, underwater noise, plastics and microplastics) may have a relatively greater impact on Mediterranean populations.

In the Black Sea, on the other hand, the status of the populations of the three subspecies of harbour porpoise and of common dolphin and bottlenose dolphin appear to be of concern. Even if current data overestimate cetacean bycatch when extrapolated in relation to fishing effort and vessel groups for the Black Sea, urgent management measures aimed at ensuring both lower incidental catch and mortality rates should be immediately put in place.

Conclusions: the geographical and historical coverage of the data analysed is highly variable, covering neither all areas nor all vessel groups. Therefore, the data presented could greatly underestimate the actual frequency of incidental catch of vulnerable species in the GFCM area of application.

The analysis also highlights the general difficulties in obtaining solid estimates of the incidental catch of vulnerable species, as the available information is subject to a number of shortcomings (e.g. lack of onboard observer programmes, species identification issues, inadequate spatial and temporal coverage), all of which add to uncertainty.

However, despite the scattered nature of the data, it is clear that the scale and dimension of the incidental catch of vulnerable species in the Mediterranean and the Black Sea is not negligible, especially for certain species in specific areas and for some vessel groups and types of gear.

Conclusions: More systematic data collection and studies should be carried out regularly throughout the entire basin, with a view to accurately recording the nature and extent of incidental catch and related mortality rates of vulnerable species.

Monitoring programmes, following standard protocols can contribute to better understanding the different types of impacts, filling knowledge gaps and indicating which types of fishing gear are most harmful and whether fishing patterns reveal any geographical or seasonal trends.

This information may, in turn, be useful in applying adequate mitigation measures in order to reduce the fishing industry's negative impacts on marine living resources and to ensure the survival of Mediterranean and Black Sea vulnerable populations.

Thank you for your attention

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General Fisheries Commission for the Mediterranean (GFCM)

Food and Agriculture Organisation of the United Nations

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