



Food and Agriculture
Organization of the
United Nations



General Fisheries
Commission for
the Mediterranean

The implementation of the DSF Guidelines in the Mediterranean Sea

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OUTLINE

- Deepsea fisheries management in the GFCM
- Protecting VMEs
- Data collection on (deep-sea) sharks

A close-up photograph of a fishing net. The net consists of a green mesh made of small, interlocking knots. Several thick, braided brown ropes are woven through the mesh, creating a complex pattern. The lighting is even, highlighting the texture of the ropes and the fine details of the netting.

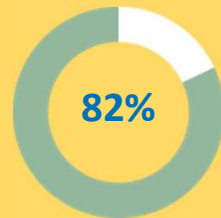
Deep-sea fisheries management in the GFCM

Deep-sea fisheries in the Mediterranean Sea

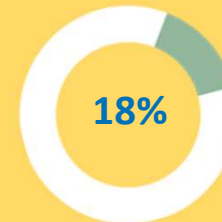


The Mediterranean is a semi-enclosed basin with many neighbouring countries; the identification of deep-sea fishing (DSF) has been made **considering gear, target species and depths** – i.e. *not based on the jurisdiction of the waters where they operate*:

- all fishing vessels above 15 m (LOA) operating **with bottom contact fishing gear fishing for *Aristaeomorpha foliacea*, *Aristeus antennatus*, or *Plesionika martia***
- all fishing vessels above 15 m (LOA) operating with **bottom contact gears** (bottom trawls, longlines, gillnets and pots and traps) at **depths deeper than 300* m** and all offshore seamounts;



82%
of the GFCM area of application is characterized by small-scale fisheries



18%
include larger vessels and those targeting deep-water resources are ~2 % of the total

*NB: in the GFCM area of application, bottom trawl below 1000 m is forbidden since 2005

GFCM Multiannual management plans

GFCM multiannual management plans nowadays:

- + Adopted as **binding recommendations**
- + Regional or subregional, typically focused on **large-scale fisheries and shared stocks**
- + All specify **adaptive mechanisms** in order to **achieve specific objectives within desired timeframes** and maintain results over time, while accounting for changing and evolving stocks, fisheries and environments
- + Have increasingly taken a more **participatory and collaborative approach**
- + Mostly foreseen to be **implemented in two stages**:
 - **Transitional phase** implementing transitional measures and advancing on scientific work to identify long-term measures
 - **Second phase that implements long-term adaptive measures** based on the information collected in the transitional phase
- + There are **10 multiannual management plans** in the GFCM area of application

Management plans are increasingly advocated as **essential tools for fisheries management** (FAO, 1996; 2003)

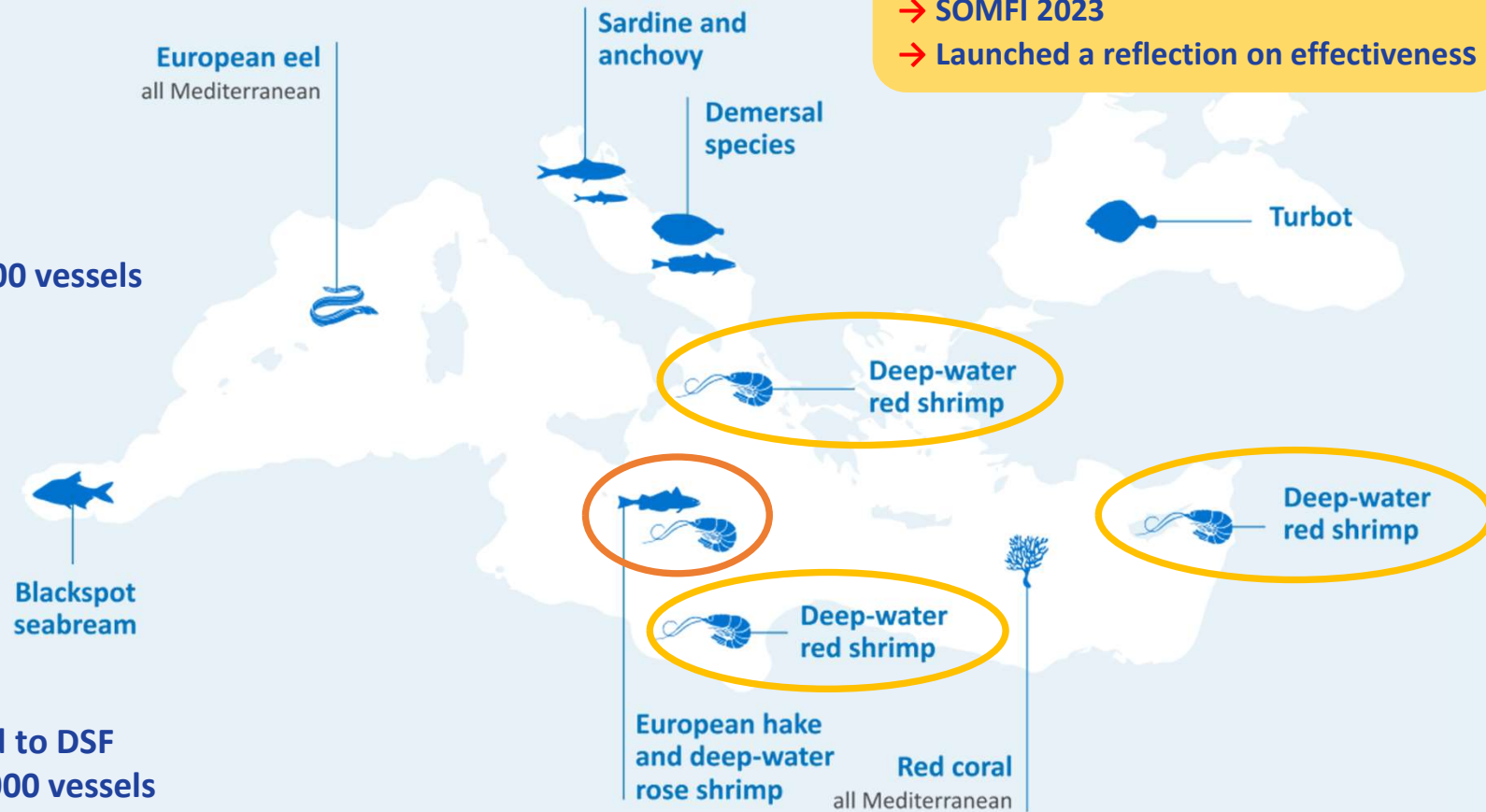
GFCM Multiannual management plans

10

management plans
involving 6 500+ vessels

3 MAPs for DSF
involving ~1000 vessels

1 MAPs related to DSF
involving ~1000 vessels



Multiannual management plans

3 management plans of DWRS (~1000 vessels)

Rec. GFCM/45/2022/5:
DWRS in the Strait of Sicily
(GSAs 12-16)

Rec. GFCM/45/2022/6:
DWRS in the Ionian Sea
(GSAs 19-21)

Rec. GFCM/45/2022/7:
DWRS in the Levant Sea
(GSAs 24 to 27)

Key measures in place



Fleet management measures



Yearly catch limits



Spatiotemporal measures



Sampling surveys



Eliminate IUU fishing



Annual closure in spawning season



Spatial protection



Adaptive approach



Authorised vessels and landing points



Compulsory permits and logbooks



MCRS



Regular stock assessments with identified target, precautionary and limit reference points + MSE requirements

+ **Transitional period:** 2023-2025 with a transitional precautionary measures:

- **Catch limits** by CPC aligned with annual reductions of 3 % in each of 2023, 2024 and 2025 in line with catches of 2021
- **Spatiotemporal measures + MCRS + MCS + international inspection scheme**
- **Annual advice on stock status** and MSE → with **safeguard provisions** based on biomass reference points (Bpa and Blim)
- Work towards the **identification of long-term adaptive management measures** e.g. establishing the **fishing footprint** and its **overlap with VME indicator species**

+ **Long-term management plan:** 2026 – 2030:

- **LT adaptive measures** based on future annual advice on the evolution of the state of resources and fisheries

Multiannual management plans

- Stock assessment of DWRS stocks from WGSAD 2023

* % F reduction = $(1-(1/Fratio))*100$

| GSA | Species | Method | Current Levels | Ref. Points | Quantitative Status | Stock Status | Scientific Advice | % F reduction* | WG Comments |
|---------------------|--------------------------------------|---------------------------|------------------------|--------------|---|---|-----------------------------------|----------------|--|
| 12,13,14,15,16, 21w | <i>Aristaeomorpha foliacea</i> (ARS) | JABBA | | | F/Fref = 1.2 ↓ B/Btarget = 0.78 ↑ B/Bthreshold = 1.56 B/Blimit = 2.6 | Increased risk of being overexploited and in overexploitation | Reduce fishing mortality | 16.6 % | Full assessment update with increased uncertainty due to the missing MEDITS data for GSA 16. Immediate action to ensure a reduction in fishing mortality (Apply the catch limits recommended by GFCM for the transitional period 2023-2025) |
| 18, 19, 20 | <i>Aristaeomorpha foliacea</i> (ARS) | a4a | Fc = 0.56, Bc = 563 | F0.1 = 0.37 | F/Fref = 1.51 ↓ | In overexploitation | Reduce fishing mortality | 33.8 % | Align the assessment with the management plan expectations |
| 18,19,20 | <i>Aristeus antennatus</i> (ARA) | a4a | Fc = 1.09, Bc = 167 | F0.1 = 0.206 | F/Fref = 5.28 ↑ | In overexploitation | Reduce fishing mortality | 81.0 % | Partial updated advice with 1-year projection using total catch in weight, due to the lack of MEDITS survey data in 2022. Need to have a benchmark to address instability of the model and address MAP needs liaising with ARS 18-19-20 stock coordinator. |
| 24 | <i>Aristaeomorpha foliacea</i> (ARS) | LBB in addition to LB-SPR | | | | Possibly overexploited | Reduce fishing mortality | NA | New assessment |
| 24 | <i>Aristeus antennatus</i> (ARA) | LB-SPR | | | | Possibly sustainably exploited | Do not increase fishing mortality | NA | New assessment |



Protecting VMEs

Protecting VMEs

10 fisheries restricted areas (FRAs) covering 1 760 00 km²

4

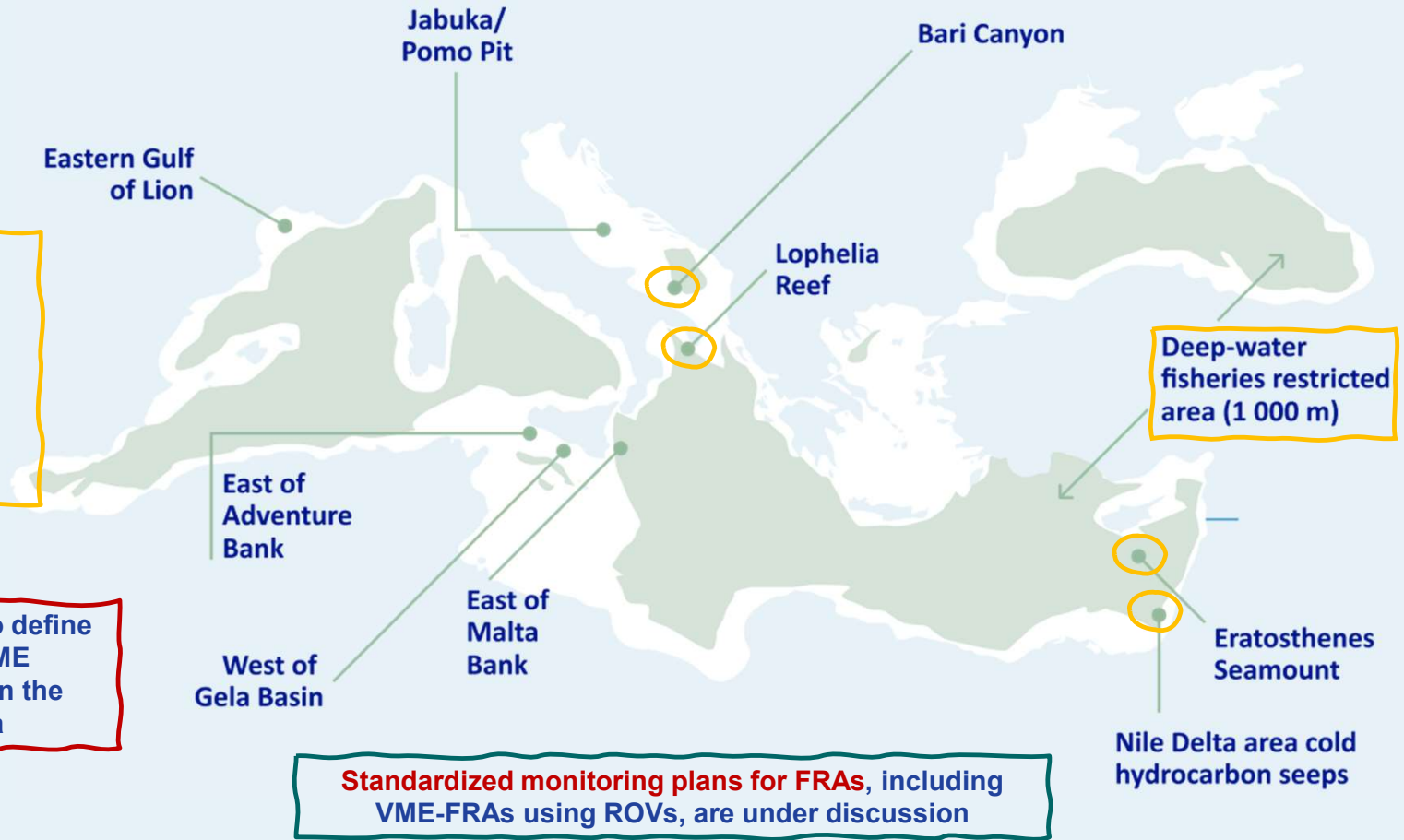
FRAs protecting VMEs

1

Deep-water fisheries restricted area (1 000 m), currently under revision and the potential expansion to 800 m is being assessed by the GFCM

2

Ongoing pilot projects to define the boundaries of two VME areas (deep-sea corals) in the western and Adriatic Sea



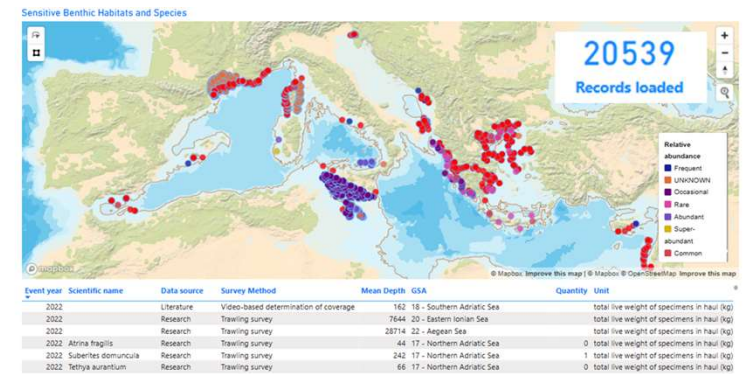
Protecting VMEs

1. Three technical protocols for the protection of VMEs in the GFCM area of application were endorsed in 2018 (GFCM 42 Report, Appendix 17)

- **A - VME encounter reporting protocol** in the GFCM area and Mediterranean VME indicator features, habitats and taxa list
- **B - Mapping existing deep-sea fishing areas** in the GFCM area
- **C - Exploratory deep-sea bottom fishing reporting protocol** in the GFCM area

2. Resolution GFCM/43/2019/6 on the establishment of a set of measures to protect vulnerable marine ecosystems formed by cnidarian (coral) communities in the Mediterranean Sea

- Requires **progressive implementation of transitional measures to prevent SAIs of deep-sea fisheries activities on VMEs formed by cnidarian (coral)** → consistent with the **precautionary approach** and that ensure a **low risk of SAIs on VME indicator species**
- These measures should be in line with the **protocols for the protection of VMEs in the GFCM area of application endorsed by the GFCM42** (see above)



3. GFCM Sensitive Benthic Habitats and Species database (since 2020) + technical assistance

- A **database on VME indicator species** presence (abundance)/absence in the Mediterranean sea, considered as providing **“a primary source of data on VME Indicators for the formulation of objective and standardized advice on priority areas for spatial management”** → Ad-hoc data call in January every year
- Support to CPCs to **collect data on VMEs using standardized protocols** during scientific surveys and/or on-board monitoring programmes

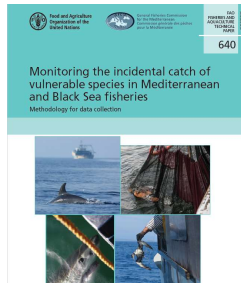
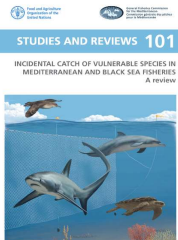


Data collection on (deep-sea) sharks

Elasmobranchs

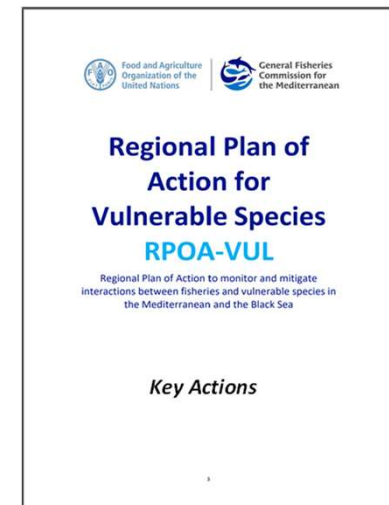
1. Standardized data collection

In line with the **GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea** the GFCM has launched **several monitoring programmes**, by means of **standardized/harmonized protocols** and capacity development actions, for the collection of data on vulnerable species (including on sharks and rays, and in the deep-sea)



2. Regional Plan of Action on Vulnerable Species (RPOA-VUL) – Resolution GFCM/46/2023/4

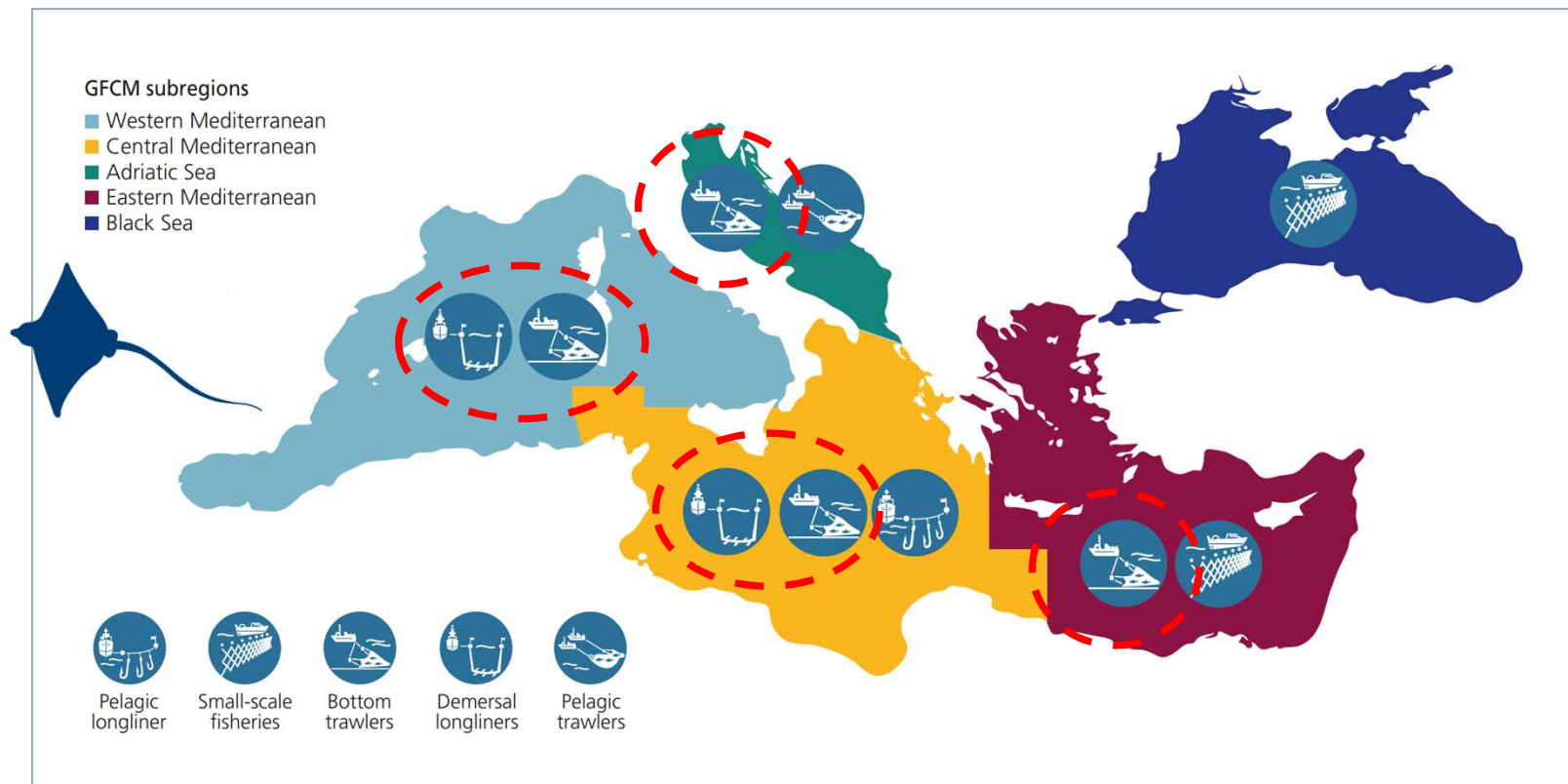
- + **Objective:** the development of adequate monitoring, testing and development of mitigation measures to reduce and where possible eliminate:
 - a) the **incidental captures** and the related fishing mortality of vulnerable species
 - a) marine megafauna **depredation** activity in gear
- + Covers **monitoring, management, and capacity development**
- + Provides **work plan 2024–2030**, including:
 - short-term actions (2024-2025)
 - mid-term actions (2026-2029)



Elasmobranchs

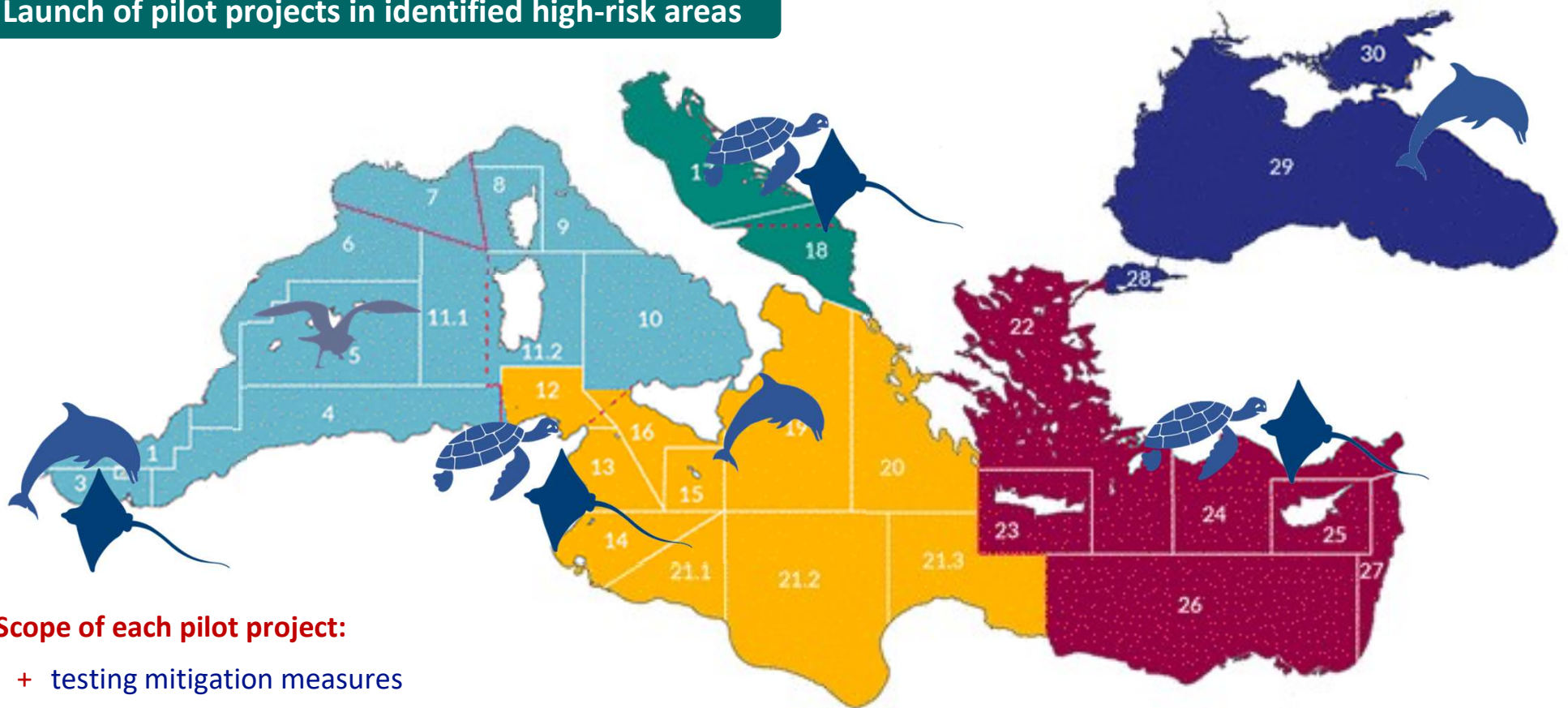
3. Identified areas and gear with a high risk of interactions between fishing activities and vulnerable species (collaboration with CPCs and partners - i.e. ACCOBAMS, SPA/RAC, WWF, BirdLife, etc.)

Main vessel groups responsible for the higher contribution in elasmobranch incidental catch by GFCM subregion



Elasmobranchs

4. Launch of pilot projects in identified high-risk areas

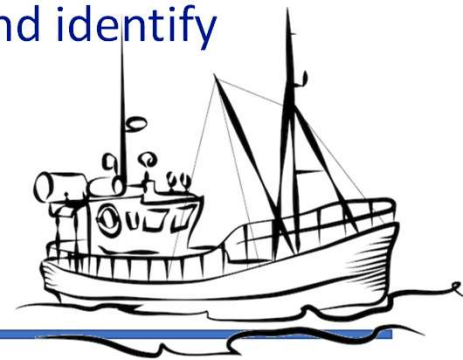


Scope of each pilot project:

- + testing mitigation measures
- + improving data collection
- + reinforcing scientific grounding to adaptive conservation strategies

Challenges and future perspectives

- + Assessing the **effectiveness of DSF management plans**
- + **Ensure a level playing field among all Contracting Party Countries (CPCs)**, for example, by ensuring that all relevant vessels are equipped with Vessel Monitoring Systems (VMS)
- + Ensure the **regular collection of data on VME indicator species and deep-sea sharks** (from both fishery-independent and fishery-dependent) from all CPCs
- + Finalize the **mapping of the DSF fishing footprint and overlap with VME indicator species distribution** to consolidate effective management strategies and identify long-term measures
- + Establish a **scientific observer programme on DSF**



Thank you for your attention

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