Summary of STECF 2019 working groups on the WestMed

Stock Evaluation (EWG 19-10) and Management of fishing effort for demersal fisheries (EWG 19-14)

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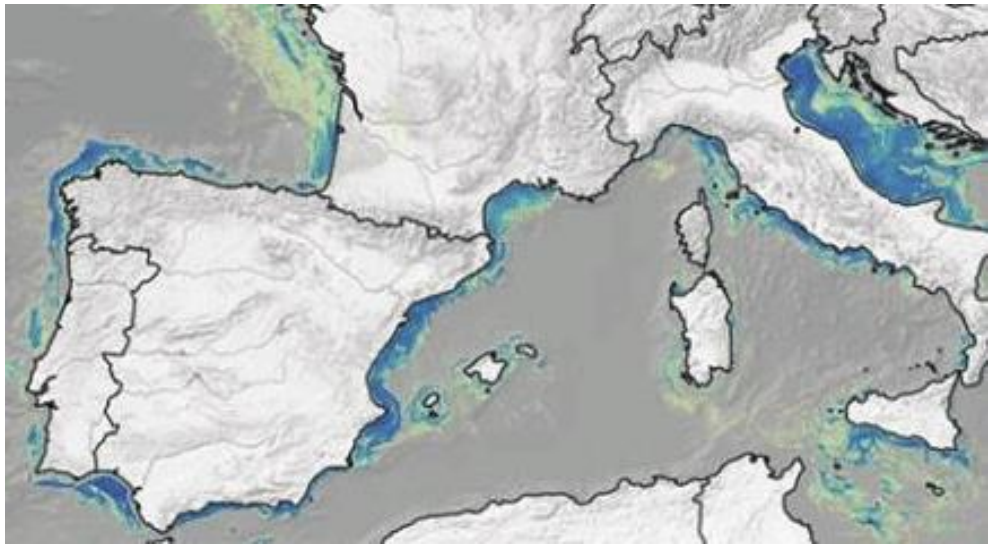

* The contents of this presentation include notes of the observer attending at the EWG. The aim is mainly to inform stakeholders on scientific evidences and observations raised during the experts meeting. Nevertheless the contents are not yet approved by STECF plenary. The results and observations reported in the presentation can be modified in the final report of STECF. Notes are not official and MEDAC is not responsible for the use which might be made of this presentation.

Stock Assessments: demersal stocks in the Western Mediterranean Sea (EWG 19-10)

Short Notes on Terms of Reference

- Stock assessment of species referred in the WestMed MAP
- Mainly update of the assessment 2018







Species	Area
Hake (*Merluccius merluccius*)	GSA **1-5-6-7 & 9-10-11**
Deep-water rose shrimp (*Parapenaeus longirostris*)	GSA **1-5-6**-7 & **9-10-11**
Red mullet *in the MAP 5-10 included (*Mullus barbatus*)	GSA **1 & 6 & 7 & 9 &10***
Striped red mullet (*Mullus surmuletus*)	GSA 5
Norway lobster (*Nephrops norvegicus*)	GSA **5 & 6 & 9 & 11**
Blue and red shrimp (*Aristeus antennatus*)	GSA **1& 5 & 6-7** & 9-10-11
Giant red shrimp – not done in 2018 (*Aristaeomorpha foliacea*)	GSA **9-10-11**

Short Notes on Terms of Reference

"ToR 7.To provide short and medium term forecasts of spawning stock biomass, stock biomass and catches.

including: - the status quo fishing mortality
- target F_{MSY} range or
- other appropriate proxy by 2020 and 2025."

Some of the raised issues

- The Spawning period in June/July (all the MAP species except hake) can influence the results of natural mortality and MSY
- Short term forecasts (2 years) can be affected by the F and fishing effort fluctuations, the most recent biological conditions and recruitment. Therefore some assumption are needed.

STECF Stock Assessment database in the MED

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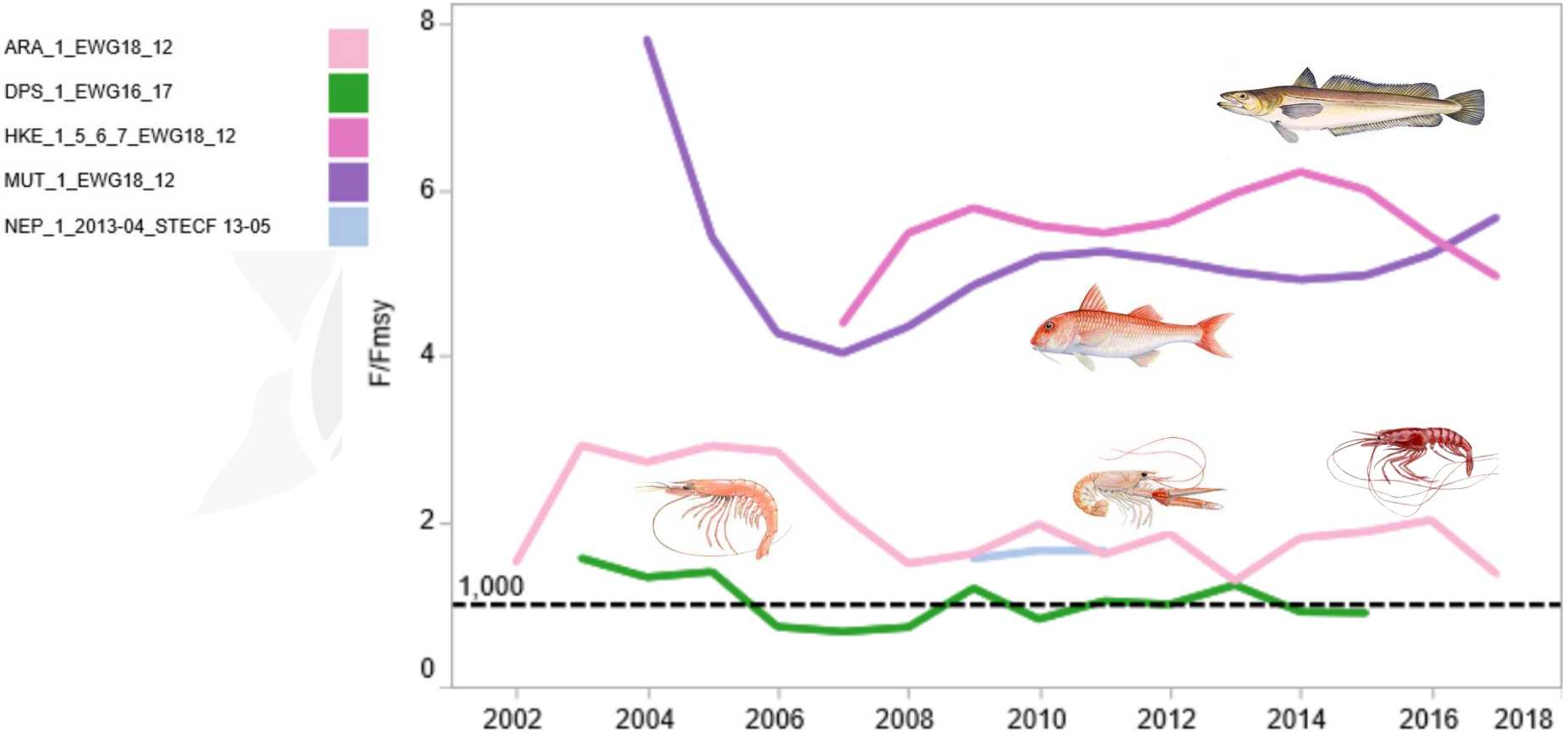
FISHING MORTALITY AND MAXIMUM SUSTAINABLE YIELD



Osio G., Gibin M., Mannini A., Villamor Martin Prat A., Orio A. The Mediterranean and Black Sea STECF Stock Assessment Database. EUR 29294 EN, Publications Office of the European Union, Luxembourg, 2018 ISBN 978-92-79-88954-7, doi: 10.2760/559579

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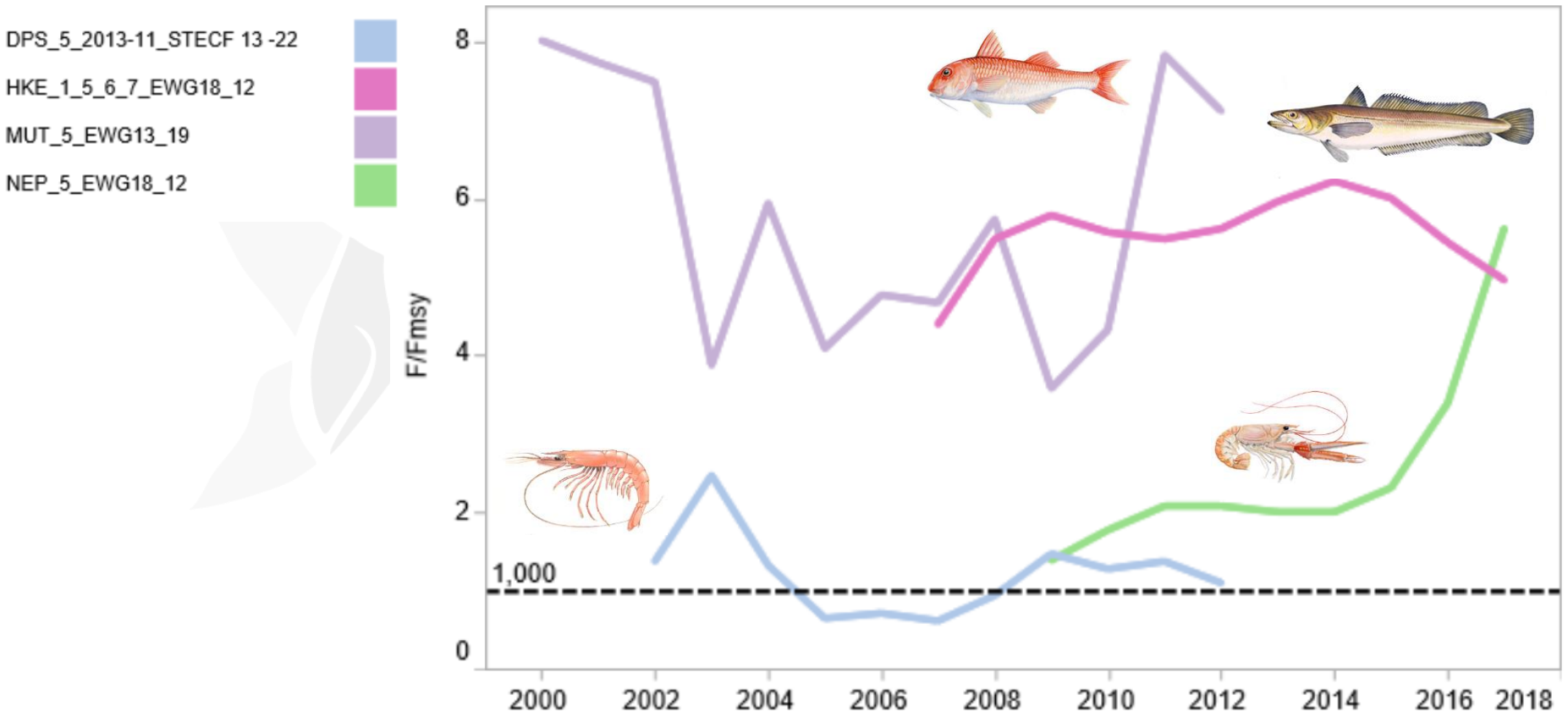

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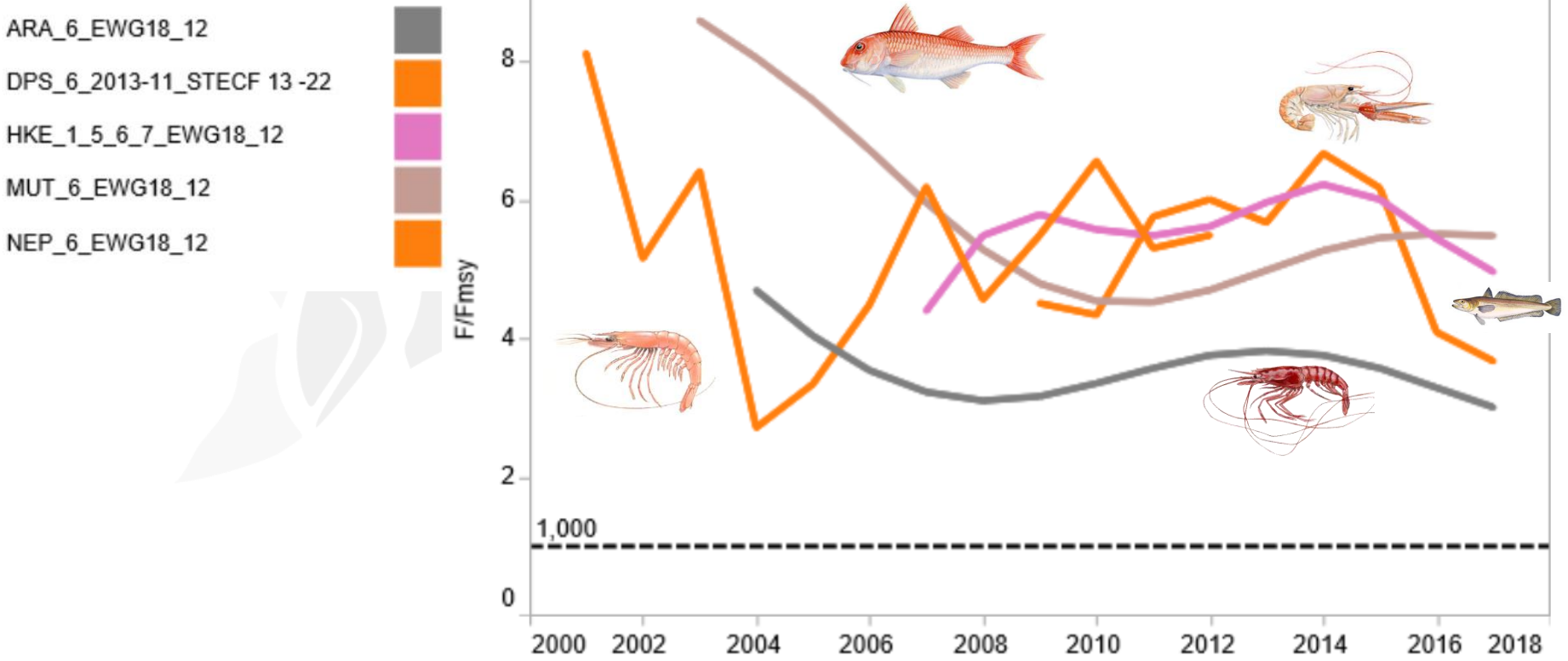

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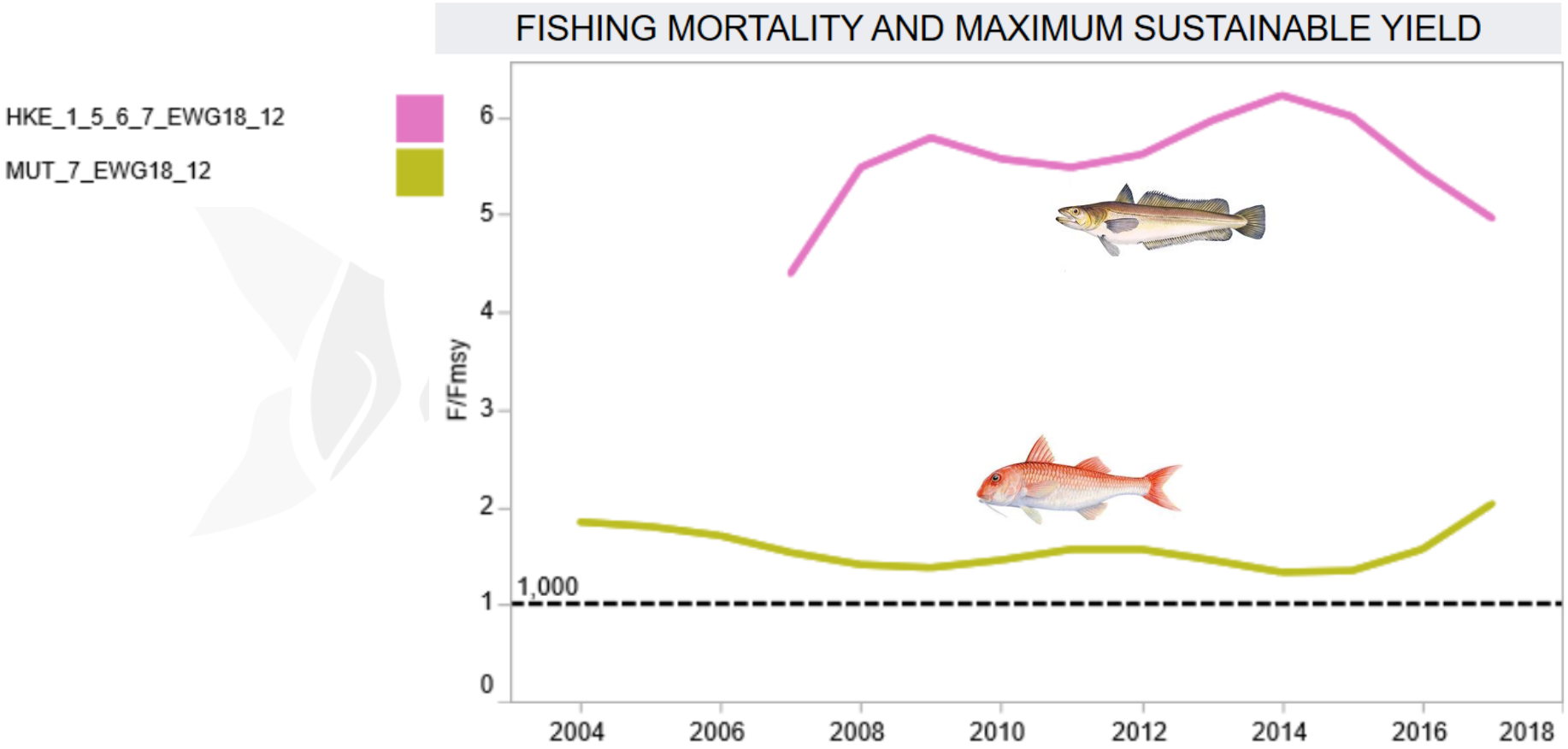

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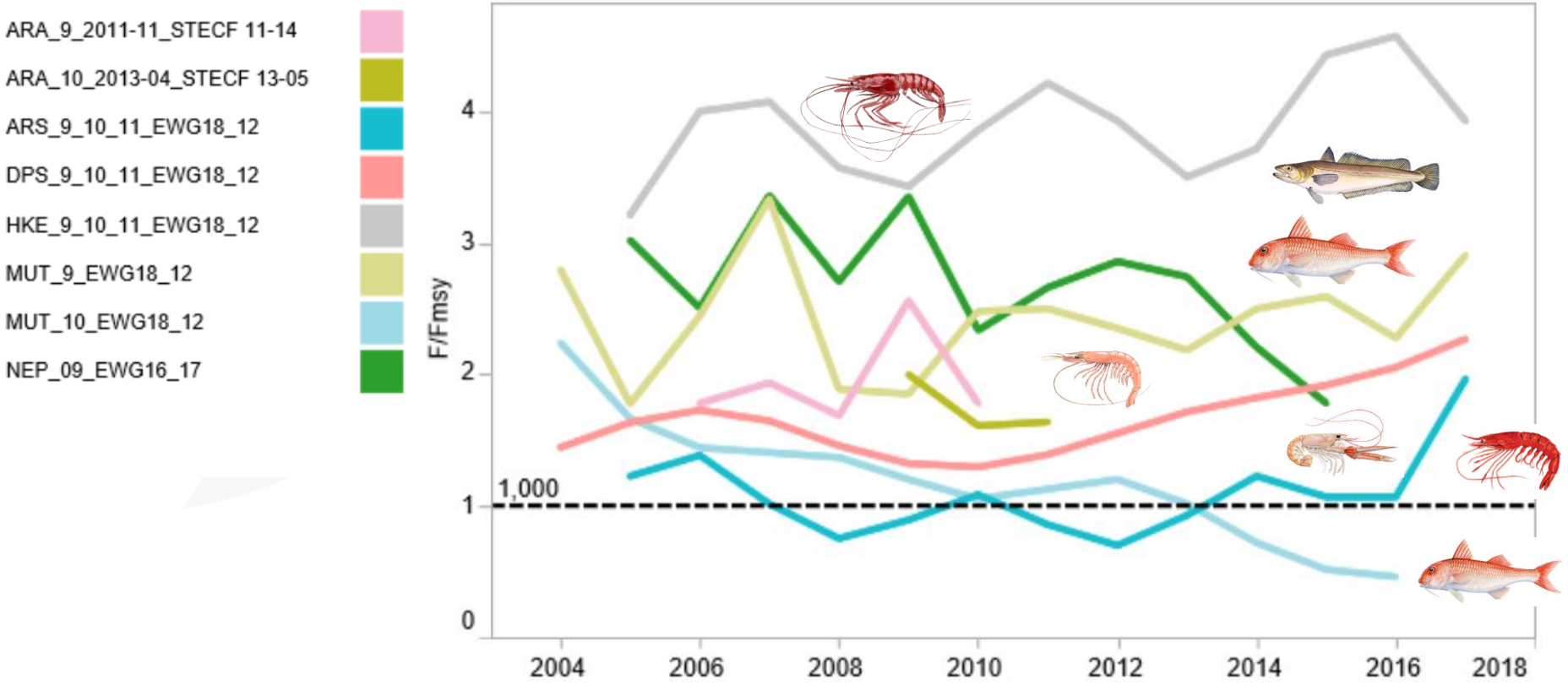

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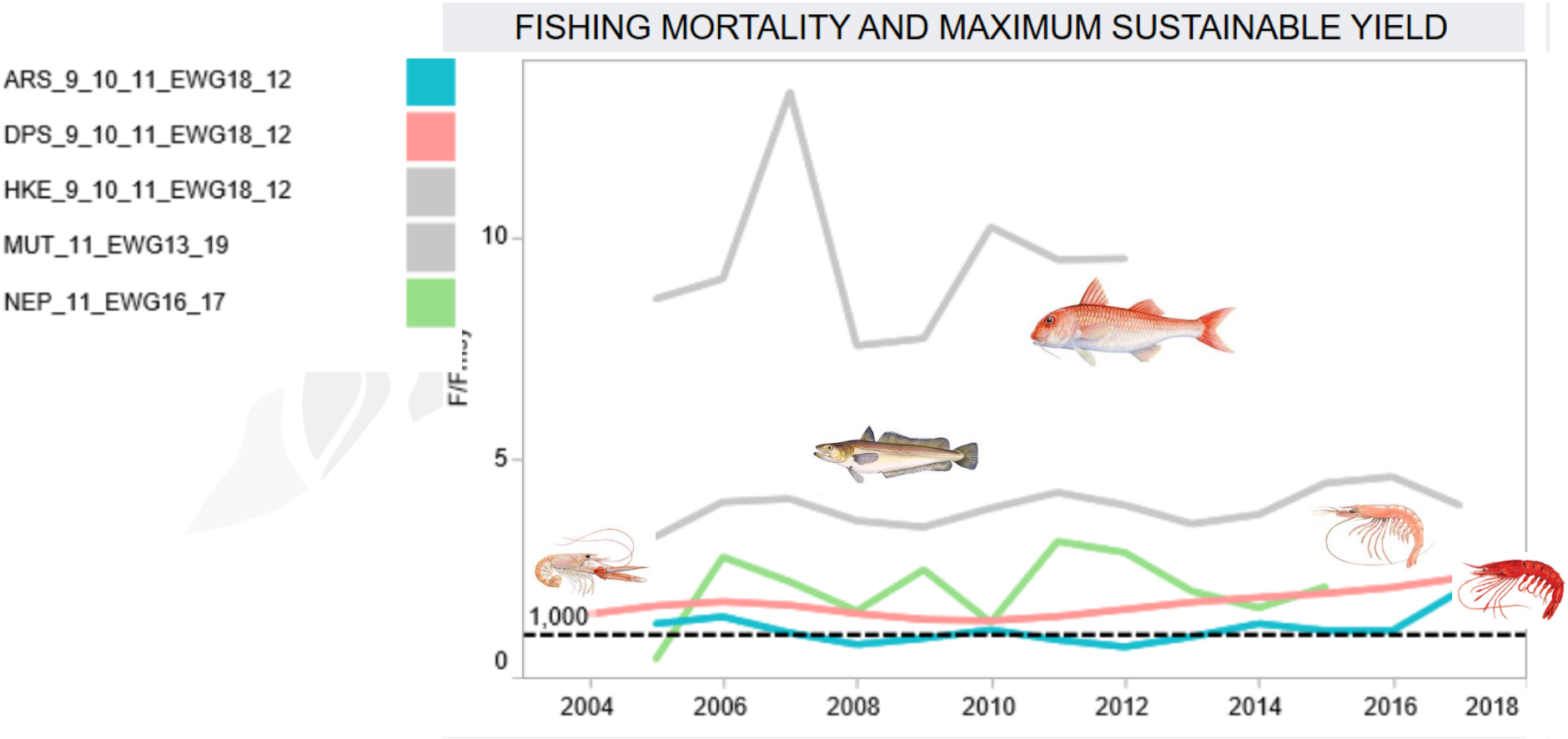

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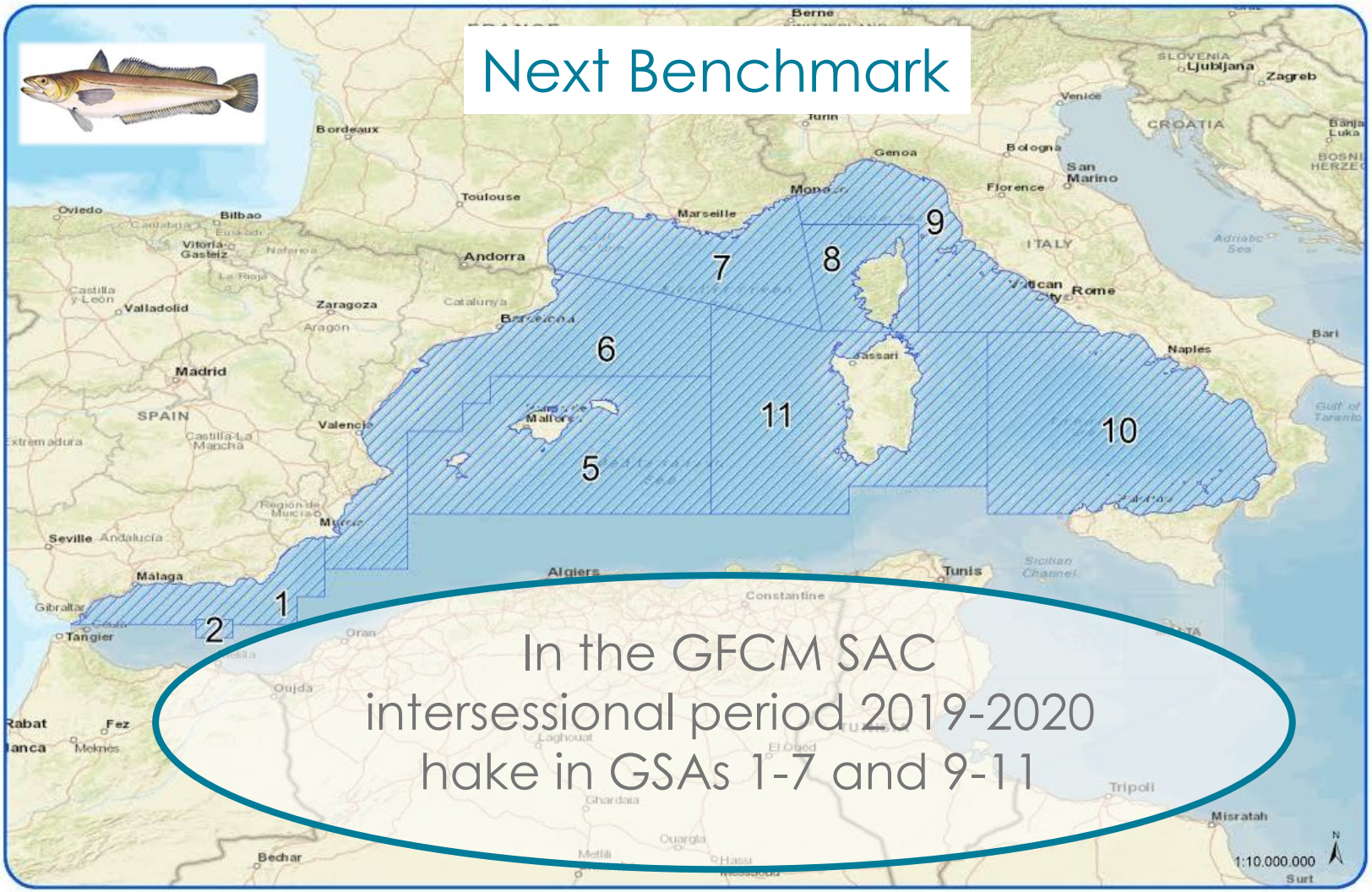
Stock Assessments: demersal stocks in the Western Mediterranean Sea (EWG 19-10)



Main STECF conclusions on EWG 19-01

"EWG 19-01 proved the capacity of the models tested to produce a bioeconomic assessment of different scenarios in the frame of the demersal fisheries West Med MAP."

In the previous EWG and the STECF plenary

it was suggested that

a scoping meeting with DG Mare and MS/managers could be held to agree on the desired next steps and scenarios.

Notes related to Terms of reference

- ✓ ToRs of EWG 19-14 were provided by the Chair on the basis of the previous EWG on this topic and the measures of the MAP.
- ✓ Some uncertainty on timing of the of the MAP implementation:
  - ❑ **10% reduction of the fishing effort in 2020.**

Considering the previous points, the EWG focused on the possible alternative scenarios, considering hypotetical spatial closures.

Short Notes on results of the previous EWG (19-01)

All simulations

- Do not include the uncertainty regarding the actual relationship between fishing effort and fishing mortality

2020 -10% effort reduction -> F reduction ?

- Shows that while effort reductions are expected to have a positive effect on the status of stocks, they will likely not be adequate for reaching F_{MSY} in 2025.

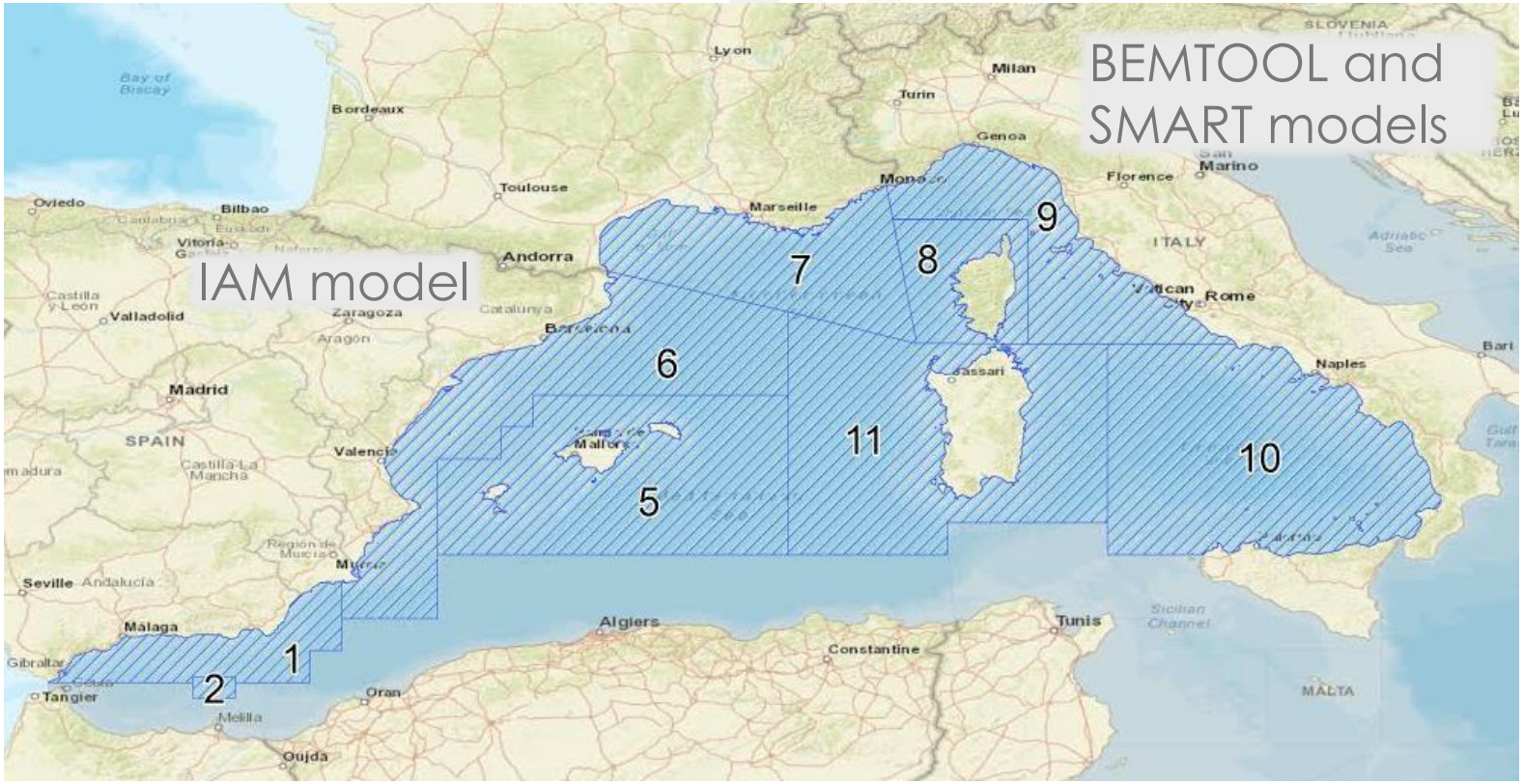
…When reaching the end of the transition period in 2024, it might be necessary to call for larger adjustments of fishing effort

MAP objective: F_{MSY} in 2025

Notes on methodology

West Western Mediterranean Sea - EMU1 (GSAs 1,2,5,6,7)

East Western Mediterranean Sea - EMU2 (GSAs 8,9,10,11)



Multi-species and Multi-fleet bio-economic models for mixed fisheries

Notes on the ToR1

TOR 1. Progress on an operational mixed-fisheries model for Effort Management Unit 1 (i.e. GSAs 1-2-5-6-7) according to EWG 19-01 conclusions.

- ✓ some lack on available data required additional effort to represent all the fleet segment in the area
- ✓ The simulations should be shown to the member states in order to improve:

  - their data submission,
  - the resultant scenarios and
  - a better definition of metier.

Notes on the ToR1

- ✓ Some of the scientists attending at the EWG underlined the relevance of the forthcoming benchmark of hake in the Mediterranean (in december), whereas:
  - it is one the **most important species** in terms of objectives of the WMed plan;
  - **Additional data and information** shared during the benchmark should be included in the models.

Notes on the ToR1

✓ Simulations carried out in GSA7:

A coastal closure as defined in the MAP risks to increase fishing effort in the deeper areas, which can also be sensitive areas for hake juveniles

Various scenarios **agreed with the fishers** have been tested providing better results also in terms of sustainability

Major uncertainty is the effort **displacement after the closure enforcement**

…Nevertheless all the scenarios improve the sustainability of the fishing activities in the area respect to the status quo.

Notes on the ToR2

TOR 2. Update mixed fisheries models and F-E analyses with the most recent data and the most recent stock assessments.

The experts are estimating:

- ✓ the **F for each gear** and GSA in order to understand the contribution to the overall F coming from each fleet segment
- ✓ The **effort associated to each stock** processing the data of Fishery Dependent Information (landings) for each GSA.

The effort data in FDI are available by fleet segment **from 2015 to 2018**. Nevertheless some data are lacking or are not consistent.

Management of fishing effort for demersal fisheries (EWG 19-14)

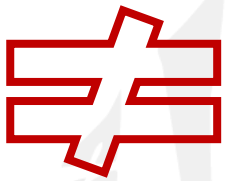
*TOR 3. Develop a **draft mixed-fisheries advice** including relevant scenarios and displays. To the extent possible, the following management scenarios should be tested in each Effort Management Unit (EMU)*:*

a) Baseline;
b) 10% reduction in 2020 + 30% from 2021 to 2024;
c) 10% reduction in 2020 + 30% from 2021 to 2024 + closures areas;
d) F within the range of FMSY of the most vulnerable stock by 2024; and
e) F within the optimal harvest by 2024.

** Linear reductions (in fishing days) and equally distributed by fleet segments.*

Notes on the ToR3

"Fishing day" definition

WestMed MAP  Data Collection Reg.

Then, attention should be paid when DCF data are processed in the models.

✓ In the EMU2:

- the BEMTOOL model has been updated by processing the most recent results of stock assessments (BEMTOOL time scale by month, while stock assessment by year)

- SMART model more detailed grid (6X6 nm).
  Status quo, coastal closure, nursery areas, concentration of discards of juveniles and 100m closure have been included in the scenarios.

Notes on the ToR3

- ✓ The **SMART model** (spatially explicit)
  - should be applied in **simulations year by year** avoiding projections too long in the next years
  - The temporal coverage of the available data processed is 2012-2018
  - **Is not based on the stock assessment results**
  - More comprehensive results can be achieved in **cooperation with BEMTOOL** (F is an input in BEMTOOL and an output in SMART): results can be available by the beginning of the WestMed MAP.

TOR 4. Discuss future steps.

Not yet addressed in the first days of the EWG, but some project results could be deepened, such as:

- ✓ STOCKMED - Identification of distinct biological units (stock units) for different fish and shellfish species and among different GFCM-GSA
- ✓ REC-FISH - Recovery of fisheries historical time series for Mediterranean and Black Sea stock assessment (RECFISH)
- ✓ Other scenarios carried out for the national management plans

TOR 4. Discuss future steps.

Not yet addressed in the first days, but some project results could be deepened, such as:

- ✓ SAFEnets: Sustainable fisheries in EU Mediterranean waters through network of MPAs
  - ↳ Maps showing the overlapping between fishing grounds, nursery areas and spawning grounds. Moreover the project results shown that multiple local closures (both simultaneous closure or by rotation in order to assure a balanced distribution) should be preferred instead one large area.
    - ↳ In case of spatio-temporal closures attention shall be paid to the socio-economic impact at harbor level

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Thanks for your attention!

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