Assessment of a socio-economic analysis of Vulnerable Marine Ecosystems
Request to STECF

• STECF did not review the VMEs
• Socio-economic assessment to inform a possible review of the VMEs
• Based on two ad-hoc contracts with analyses of available data
  • GIS Analysis
  • Socio-economic Analysis
• STECF requested to:
  • Comment on the analysis of the EU fleet economic performance
  • Summarise assumptions and limitations
  • Consider gains of biodiversity due to the closures
Overview of Ad Hoc Contracts provided to STECF
Report 1

• Geographical analysis of spatial effort and landings data by fleet segment
• Data from DE, ES, IE, FR and PT
• 3 scenarios considered – Current list (87 VMEs), ICES Scenario C (115 VMEs) and Scenario D (104 VMEs)
• 9 “bottom contacting” gears for current list and ICES Scenario C, 8 gears for Scenario D
• Data extracted and merged from:
  • FDI Database
  • VME shapefiles for 3 scenarios
• Additional analysis of Spanish ICES VMS/logbook dataset and 7 gear types
• Discrepancies between pre and post 2018 data
### Fishing Activity in VMEs by MS

<table>
<thead>
<tr>
<th>country code</th>
<th>scenario 2 option 1</th>
<th>scenario C</th>
<th>scenario D</th>
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<td>PRT</td>
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Landings by volume and value for the period 2013-2021
Landings by volume and value for the period 2018-2021
Spanish estimated landings by scenario and year using VMS/logbook dataset
Report 2

- Assessment of available economic and transversal data for evaluation of economic impacts of the VMEs
- Based on the GIS analysis
- FDI data merged with AER fleet segmentation and VMS/logbook data
- Split into two evaluations:
  - Evaluation of impacted segments (GVA*, Gross** and Net Profit***, employment) and estimation of possible socioeconomic impacts by VME and by scenario
  - Evaluation of implications of displacement of fishing effort from VMEs

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*Gross Value Added is expressed as: GVA= (Landings Kg * Price Per Kg) + Other Incomes – Unpaid Labour – Var Costs – Fixed Costs
**Gross Profit is expressed as: Gross Profit = GVA – Personnel Costs
***Net Profit is expressed as: Net Profit = Operating Profit – Capital Opportunity Costs- (value Of Physical Capital * (100.0 Annual Depreciation Rate)/100.0)
Socio-economic impact assessment outcomes from AER dataset
Socio-economic impact assessment outcomes – Spatial Overlay

<table>
<thead>
<tr>
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<th>Closure2022</th>
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Percent in 2018_2021 of Impacted GVA inside VMEs areas

vessel_size
- VL0010
- VL1012
- VL1218
- VL1624
- VL2440
- VL40XX
Most impacted c-squares by VMEs for the three scenarios
Average effort 2018-2021 impacted by the closures for each scenario
Socio-economic impact assessment outcomes - Spatial Displacement

Before/After in NEA

<table>
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<th>Before 2022</th>
<th>ICESSecC</th>
<th>ICESSecD</th>
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log ratio of GVA/GVAinit

[Diagram showing vessel sizes and their impact on GVA/GVAinit before and after the assessment.]
STECF Advice
General Comments

- First-time for such an analysis
- Based on the best available information
- Using appropriate methodology
- Foundation for future work
- Data limitations clearly acknowledged
- Further consultation with stakeholders to ground truth the results
- Re-running the analysis based on Member States datasets
Analysis of fleet economic performance

- Studies show Spanish and French fleets most impacted
- Spanish data highly variable
- Data limitations for longliners and netters noted
- Assumptions on displacement effects may not be realistic
- Need for follow-up stakeholder engagement to verify
- Drivers in fleet dynamics not assessed (“spillover” effects)
- Short-term effects rather than medium to long-term impacts
Assumptions and data limitations

- Primarily data limitations
- FDI and ICES VMS data collected for different purposes
- Differences in fleets, vessel length classes, spatial and temporal aspects
- Results in differences in the impacts shown
- FDI data limited in terms of spatial resolution
- Assumption that effort and landings are constant may be unrealistic
- VMS data is a subset of FDI data
- No standardised list of species
Assumptions and data limitations

- AER aggregated at economic fleet segment level
- Coarser than FDI and VMS
- And not spatial data
- May underestimate impacts for some fleet segments
- Impacts on crew hypothetical
- Stakeholder engagement needed to understand sector reaction
- No VMS data available for netters and longliners
- Analysis based on AER data coupled to FDI data at different resolutions
- Need for VMS data for these fleets
Biodiversity Gains

• Not addressed in ad hoc contracts
• Longer-term gains could be assessed using displacement models
• Analyses provide insights on fishing patterns
• But not on impacts on stocks
• Future assessment could look at such impacts
Future Process and Follow-up Work
Future Process

• Regulation allows for review
• Consider most impacting VMEs
• More detailed analysis of short-term and longer-term impacts
• Carry out an assessment following STECF protocol:
  • Scoping meeting to identify data, methodologies and stakeholder perspective
  • Data analyses
  • EWG with stakeholder participation (ground truthing and additional data)
• STECF to discuss with MARE on a way forward
Thank you