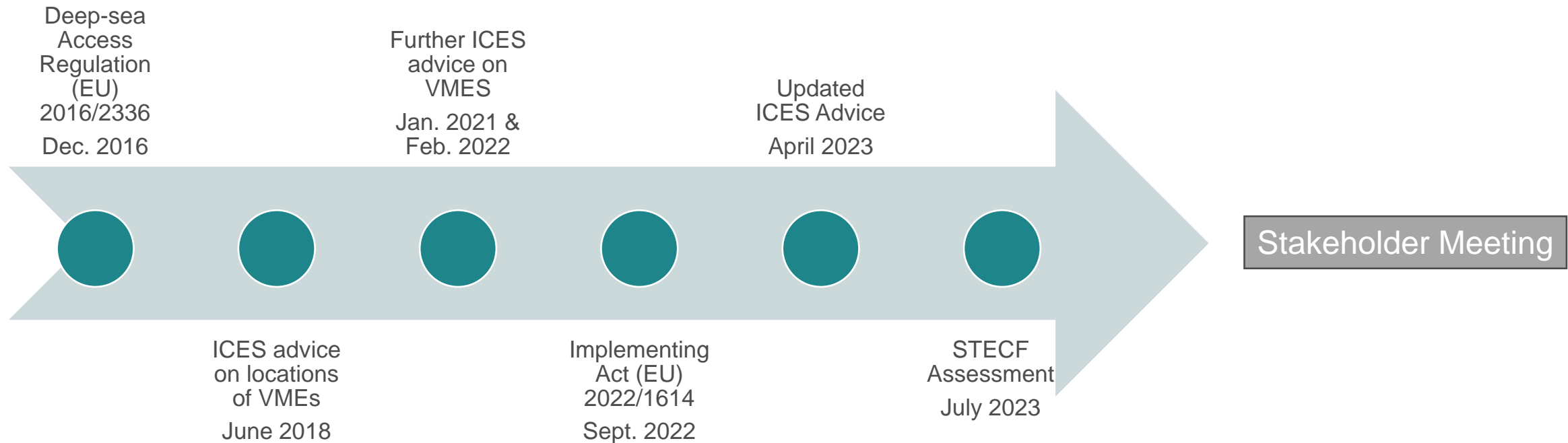




Assessment of a socio-economic analysis of Vulnerable Marine Ecosystems

*Dominic Rihan
STECF
Stakeholder Meeting
26 September 2023*

Background



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

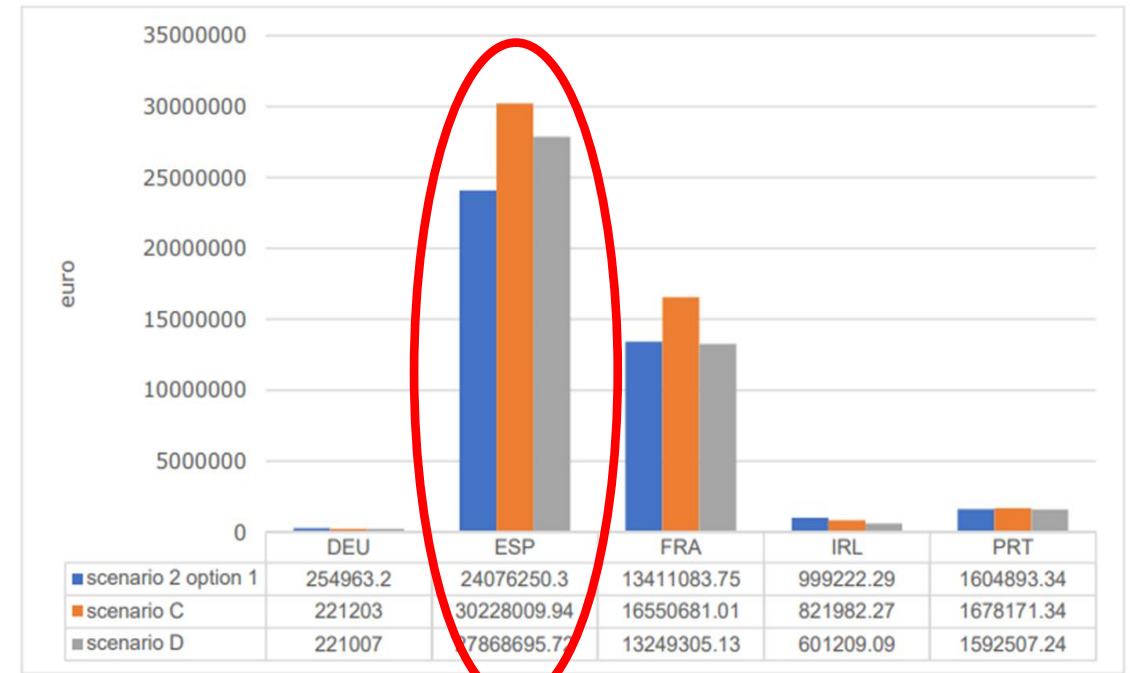
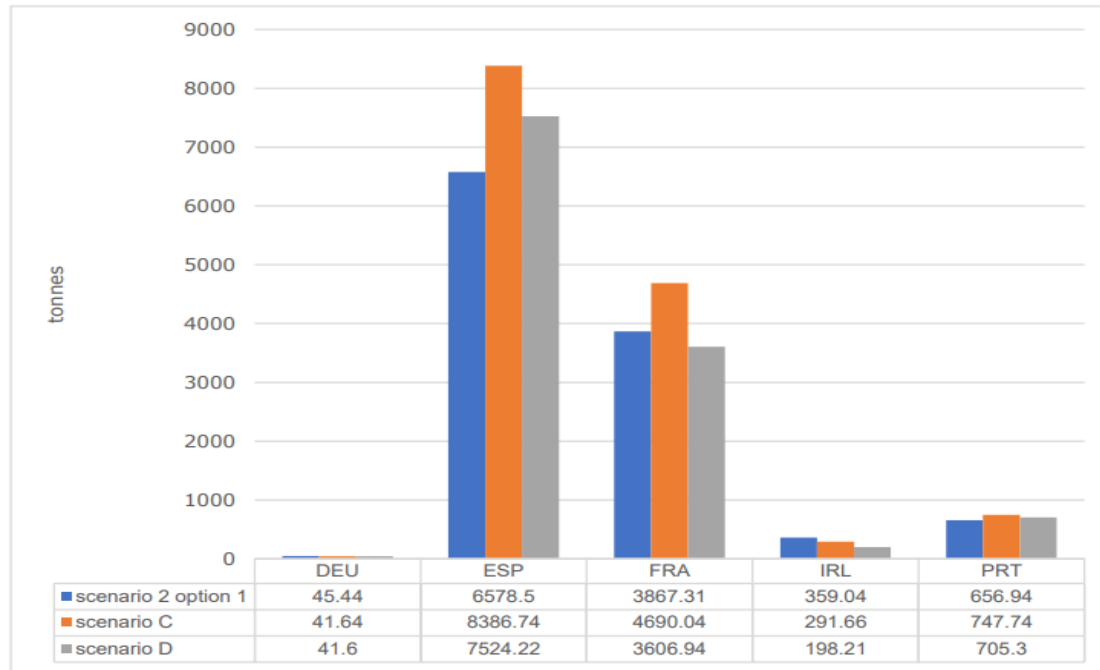
Report 1

- 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

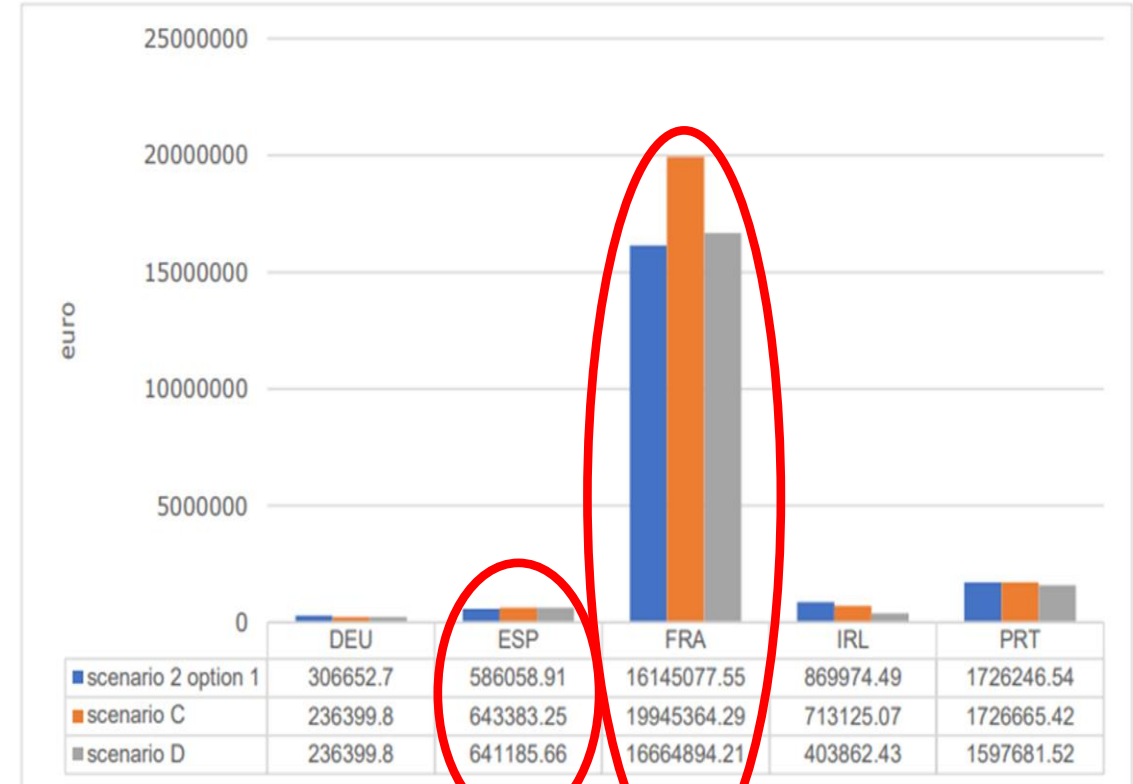
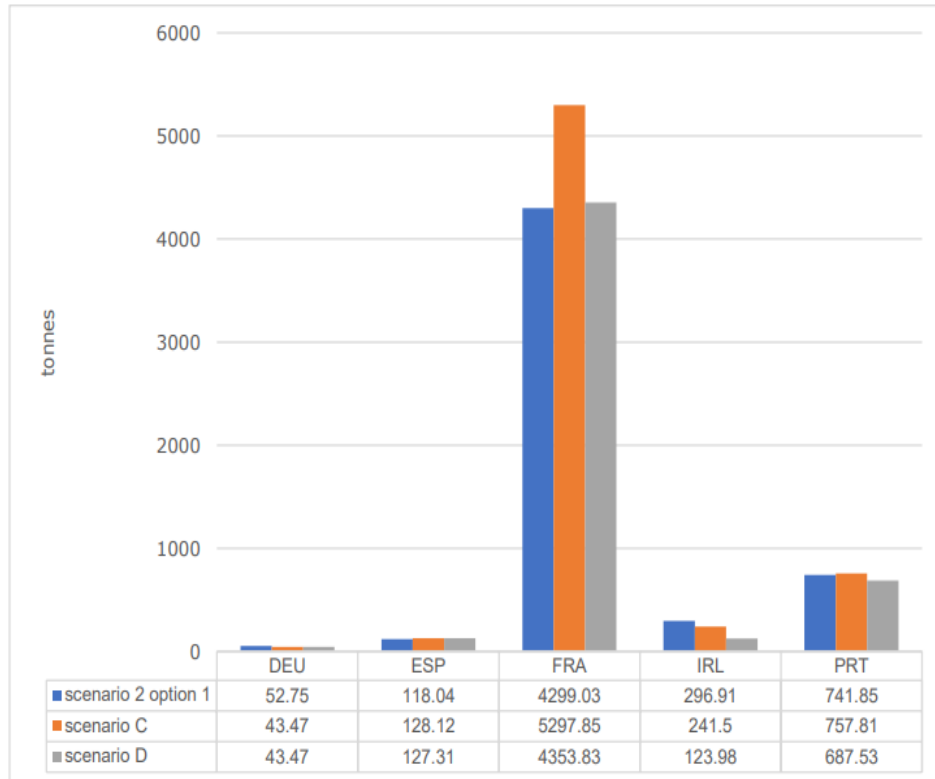
Fishing Activity in VMEs by MS

country code	scenario 2 option 1	scenario C	scenario D
DEU	13	20	19
ESP	63	83	73
FRA	53	66	60
IRL	20	24	19
PRT	18	25	21

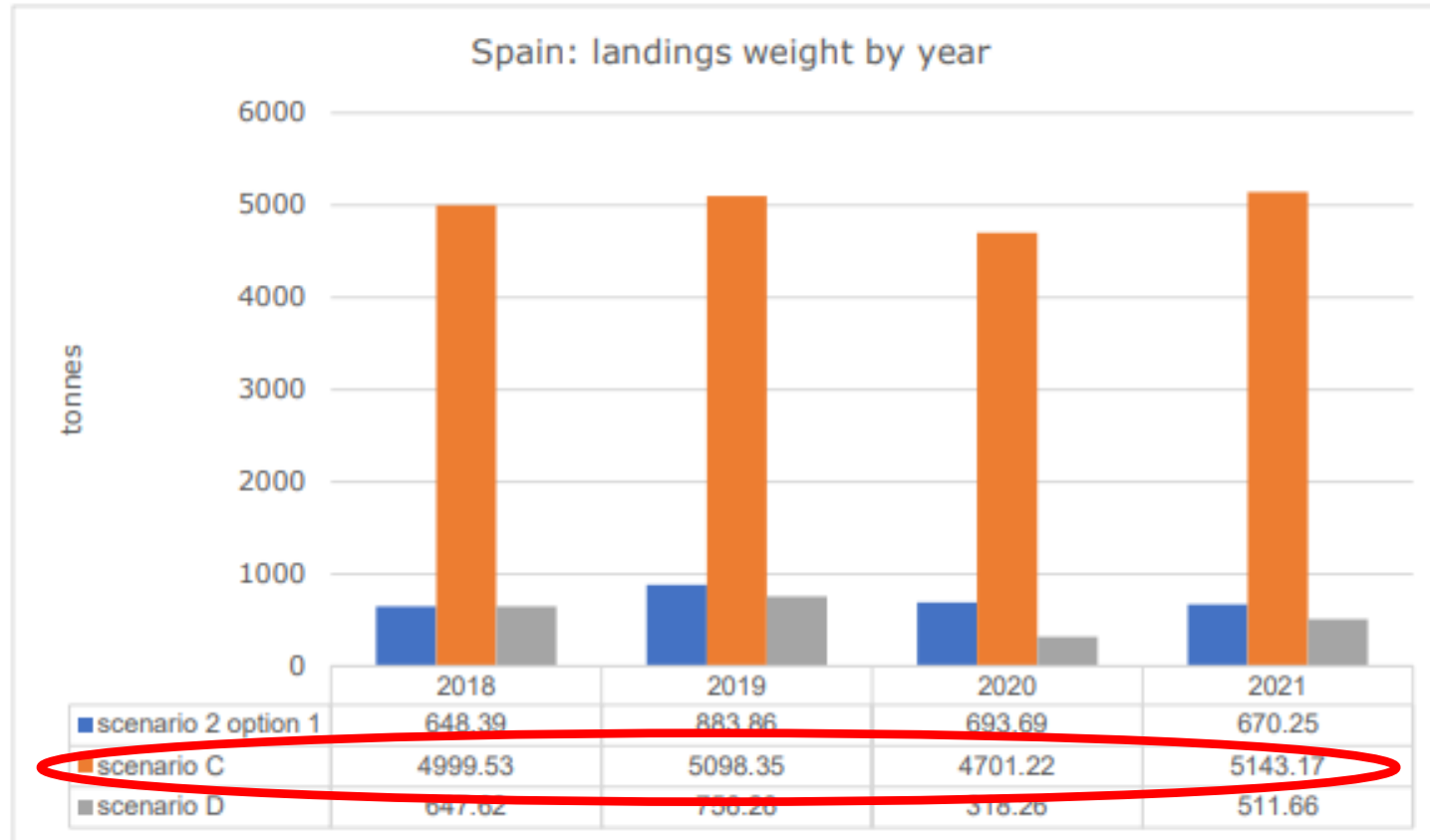
Landings by volume and value for the period 2013-2021



Landings by volume and value for the period 2018-2021



Spanish estimated landings by scenario and year using VMS/logbook dataset



Report 2

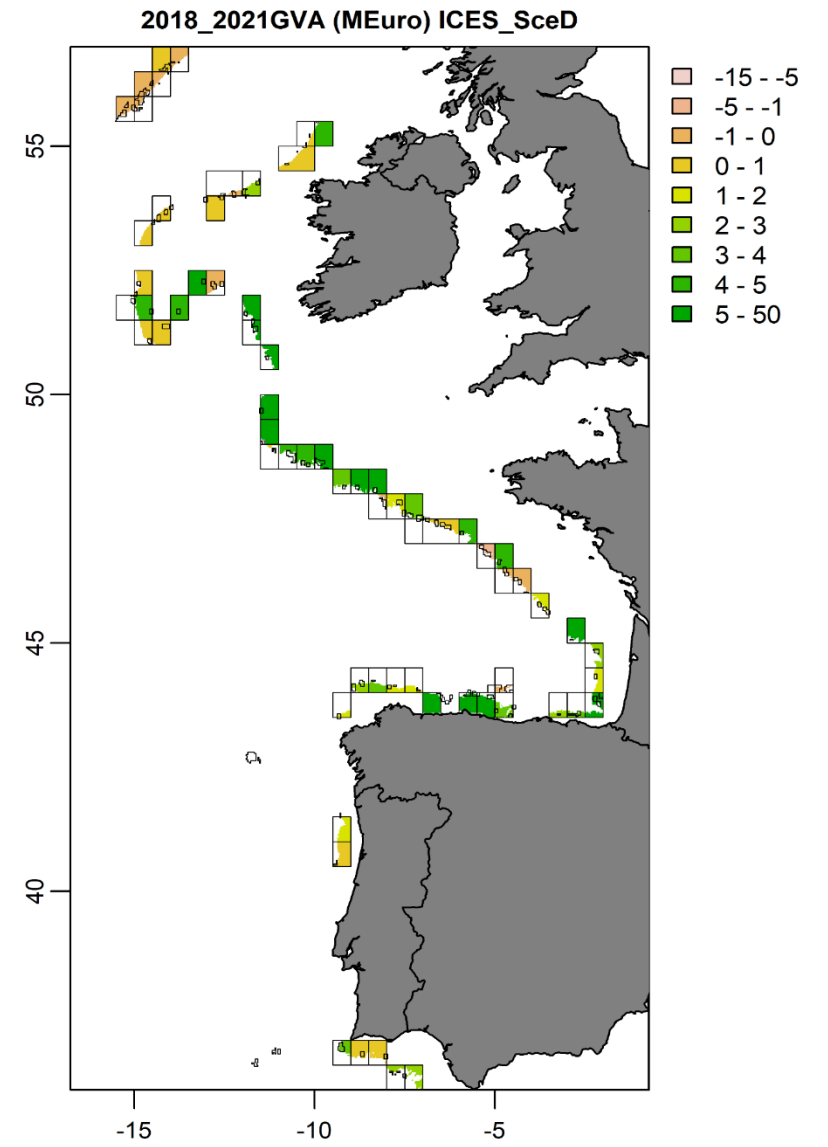
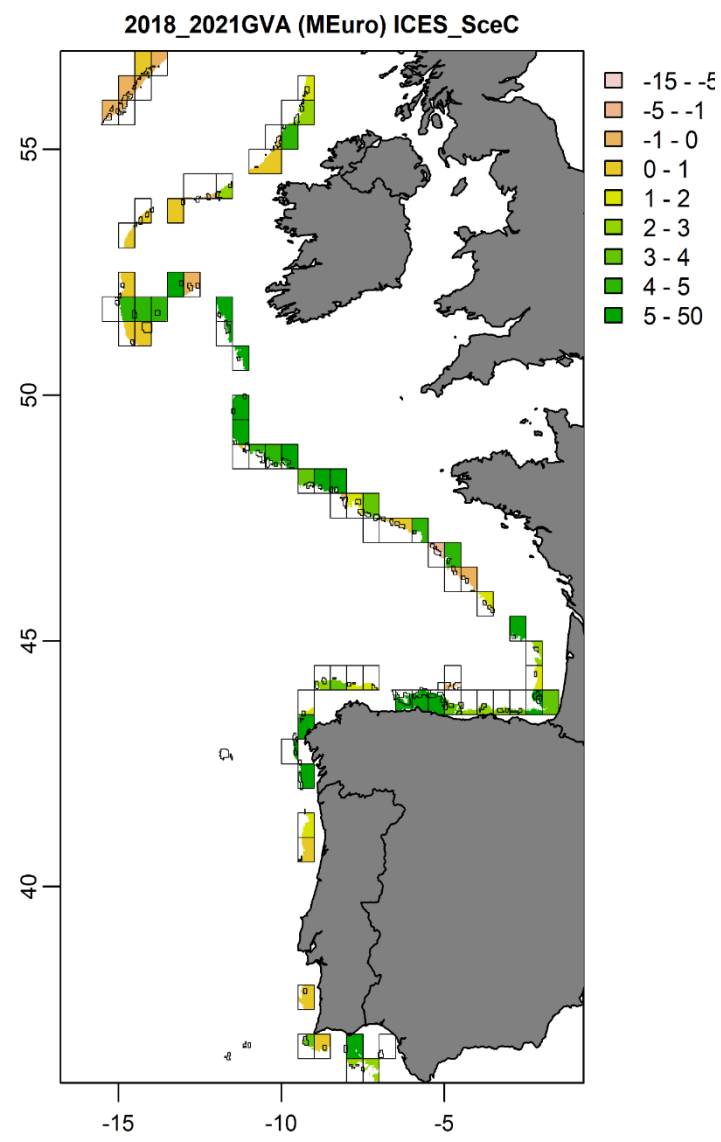
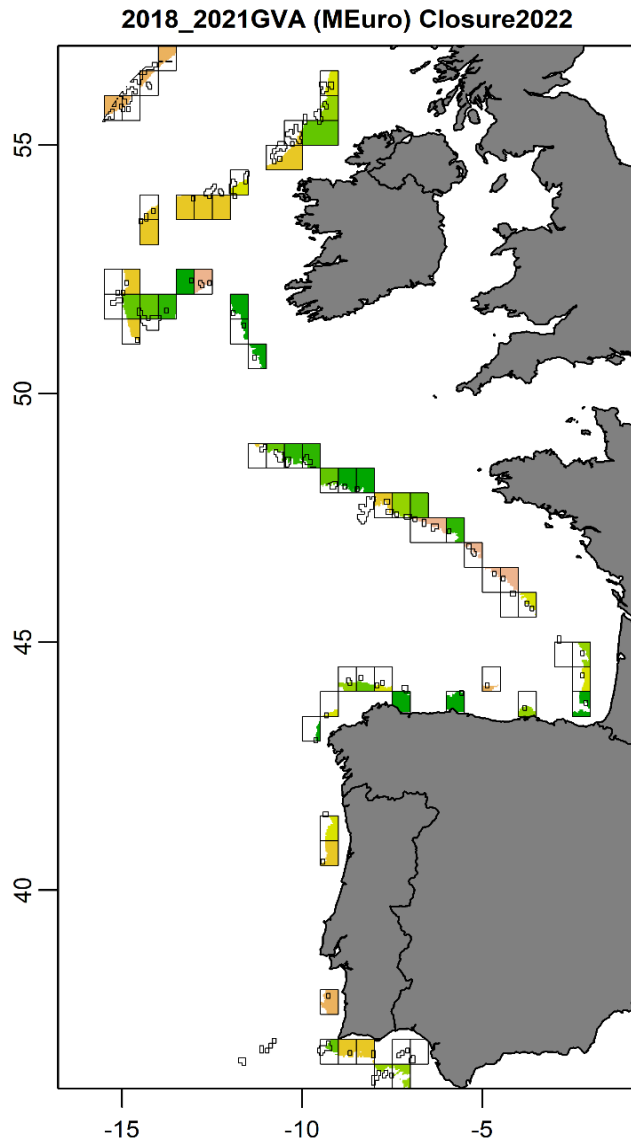
- Assessment of available economic and transversal data for evaluation of economic impacts of the VMEs
- Based on the GIS analysis
- FDI data merged with AER fleet segmentation and VMS/logbook data
- Split into two evaluations:
 - Evaluation of impacted segments (GVA*, Gross**, and Net Profit***, employment)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

* Gross Value Added is expressed as: $GVA = (\text{Landings Kg} * \text{Price Per Kg}) + \text{Other Incomes} - \text{Unpaid Labour} - \text{Var Costs} - \text{Fixed Costs}$

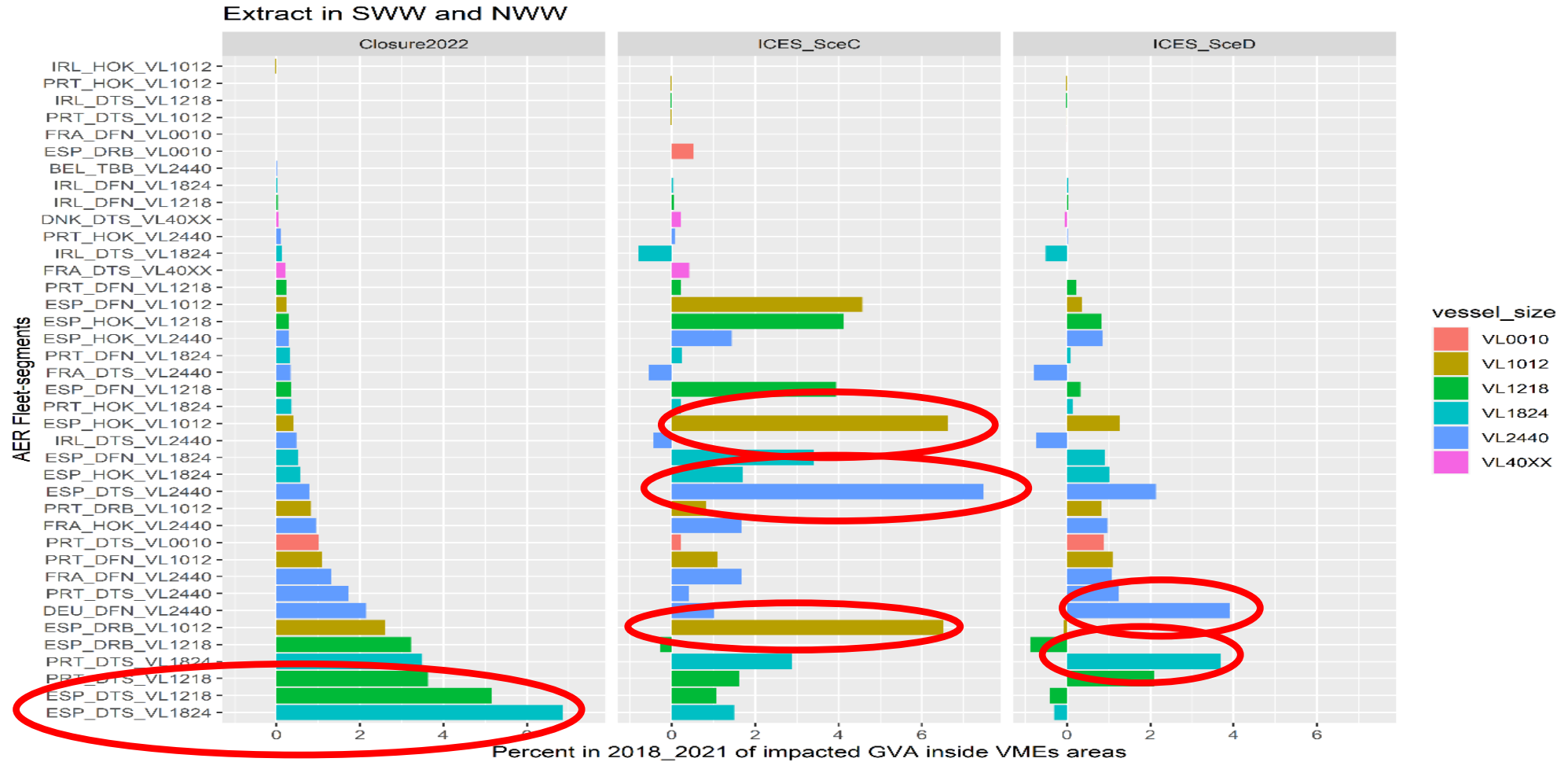
** Gross Profit is expressed as: $\text{Gross Profit} = GVA - \text{Personnel Costs}$

*** Net Profit is expressed as: $\text{Net Profit} = \text{Operating Profit} - \text{Capital Opportunity Costs} - (\text{value Of Physical Capital} * (100.0 \text{ Annual Depreciation Rate})/100.0)$

Socio-economic impact assessment outcomes from AER dataset

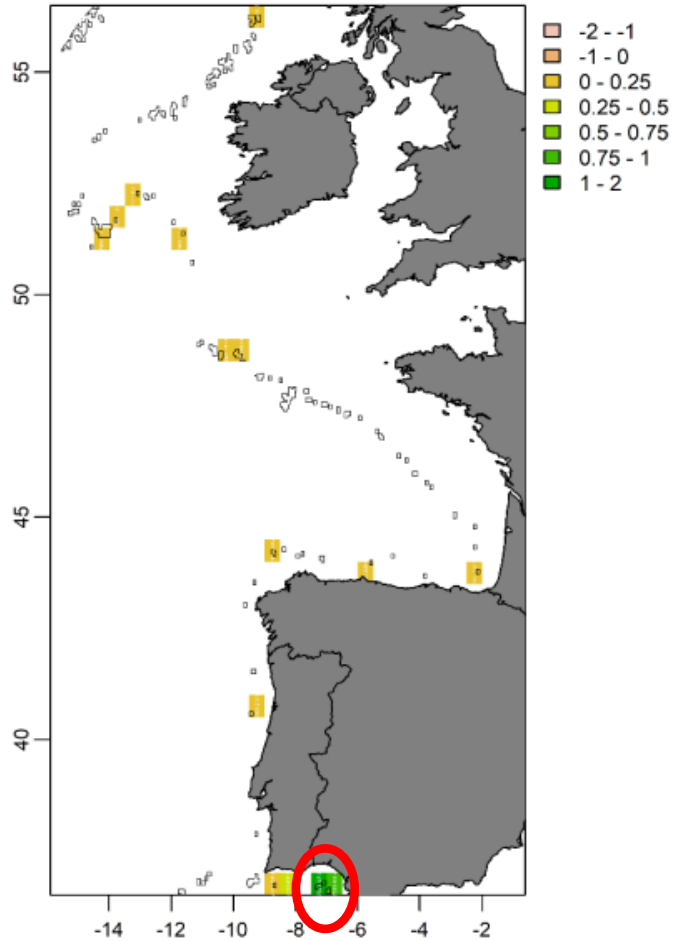


Socio-economic impact assessment outcomes – Spatial Overlay

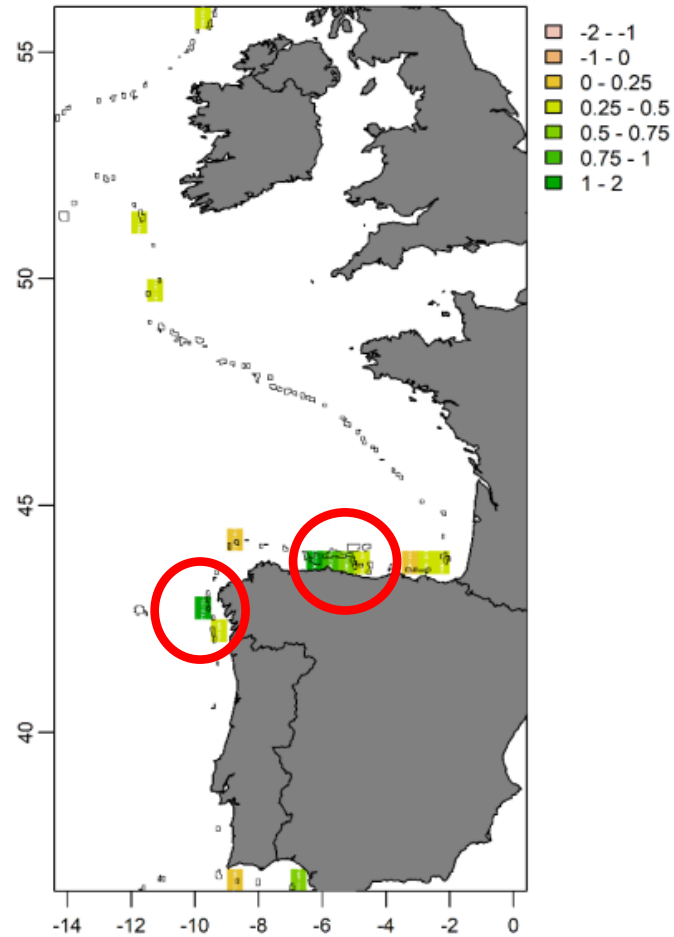


Most impacted c-squares by VMEs for the three scenarios

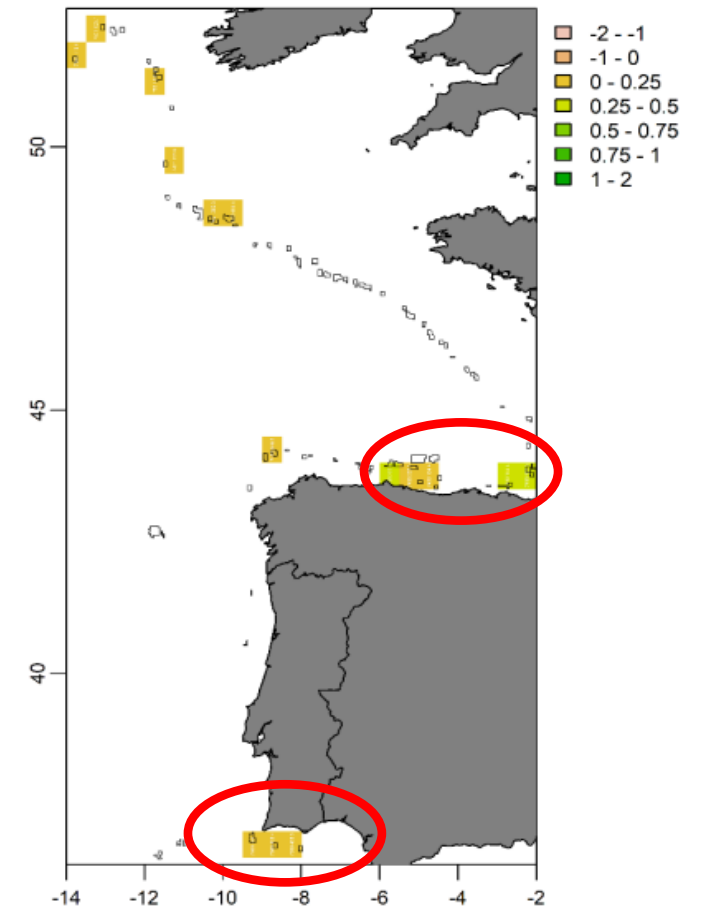
2018_2021- 15 most impacted csquares Closure2022



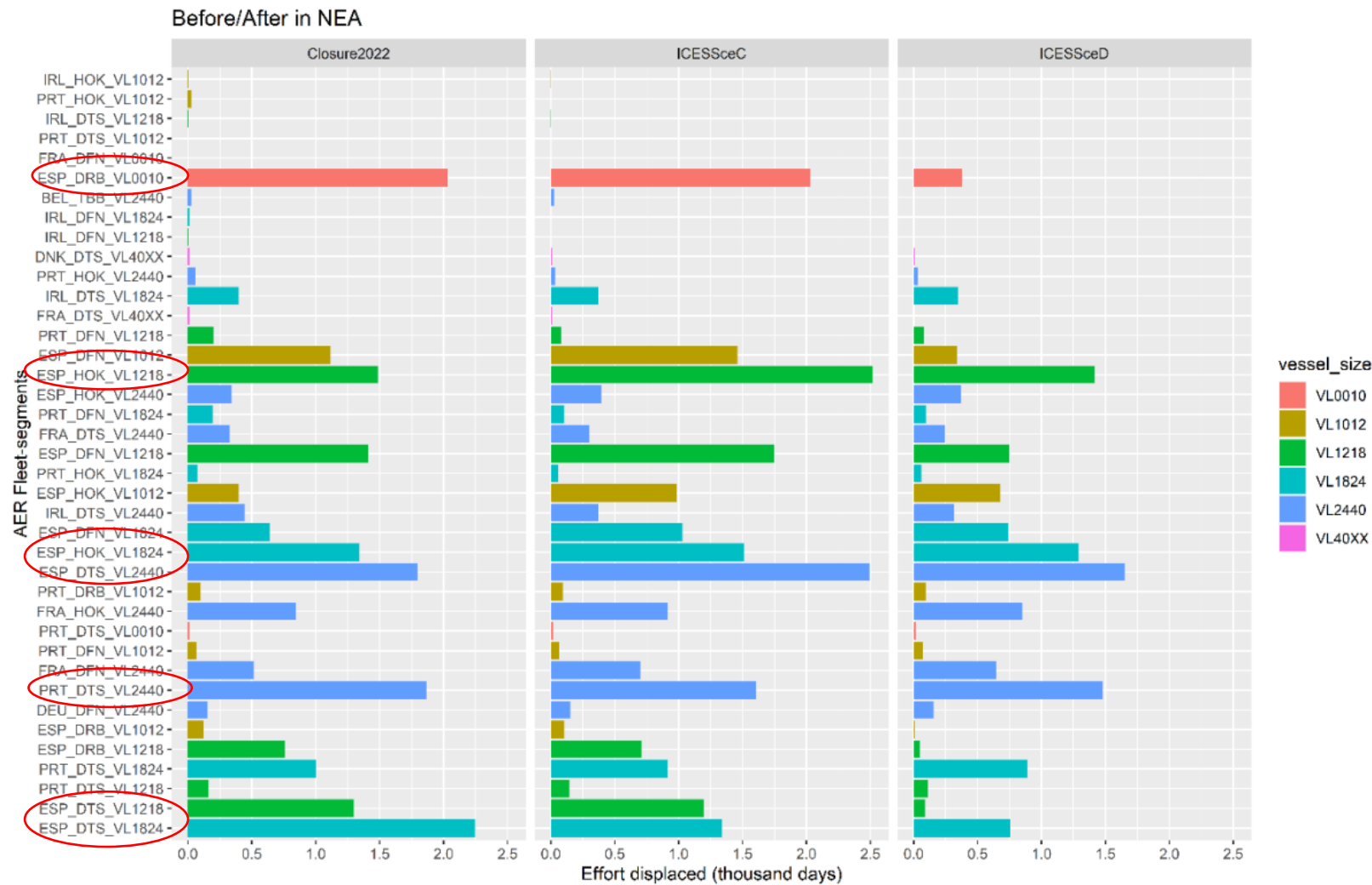
2018_2021- 15 most impacted csquares ICES_SceC



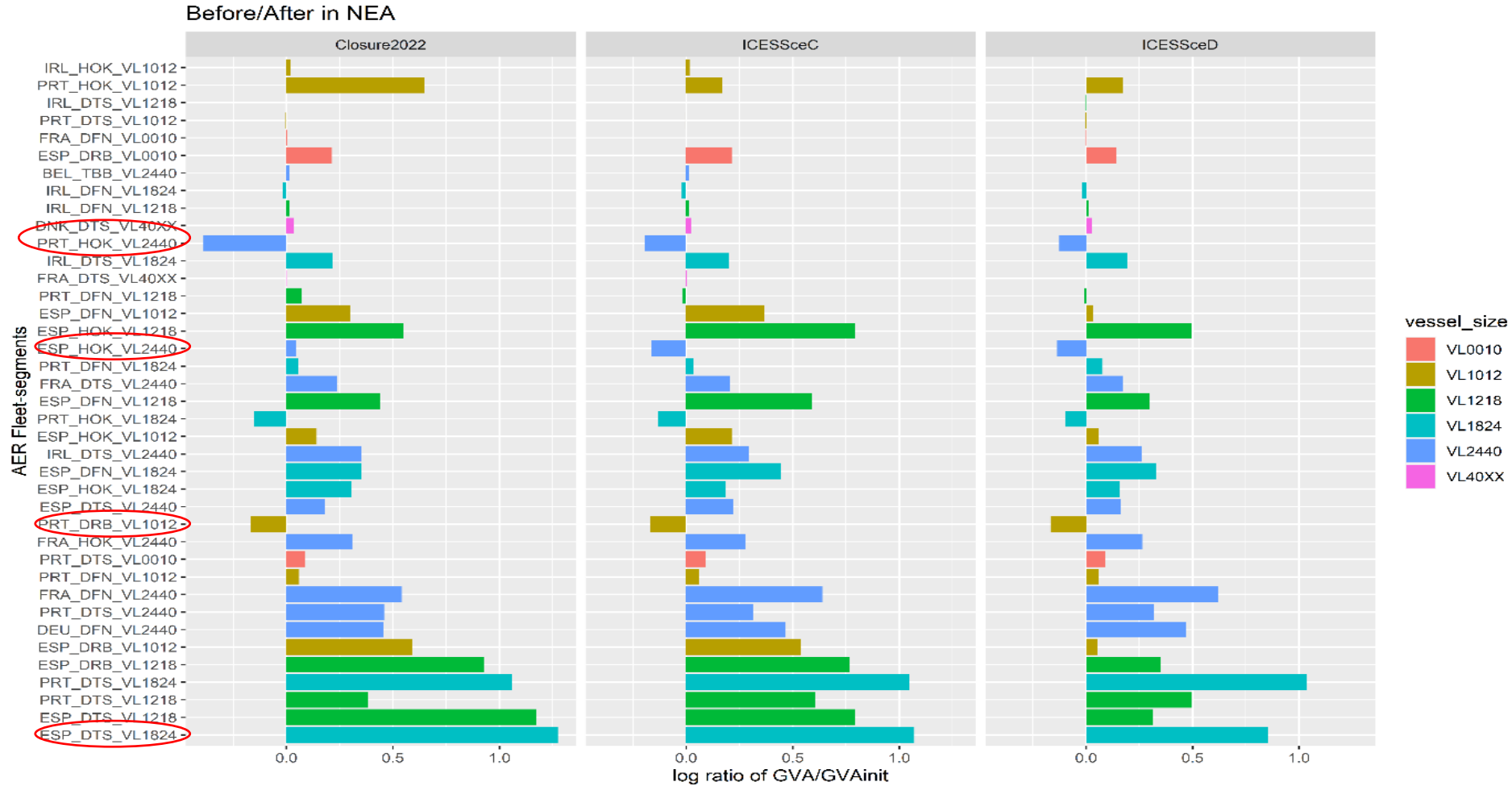
2018_2021- 15 most impacted csquares ICES_SceD



Average effort 2018-2021 impacted by the closures for each scenario



Socio-economic impact assessment outcomes - Spatial Displacement



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

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