



SUSTAINABLE FISHERIES MANAGEMENT IN SW ATLANTIC:

A SCIENTIFIC APPROACH

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Fishing activity trends of the Spanish fleet in SW Atlantic
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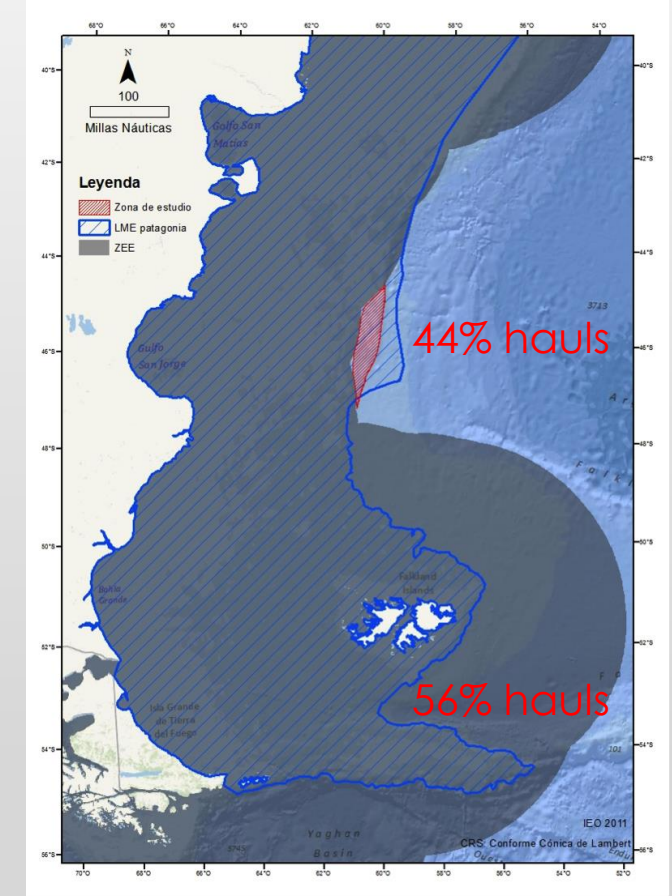


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INTRODUCTION

The spanish fleet in SW Atlantic Waters

- Operates in Malvinas/Falkland Waters and the High Seas of the Patagonian shelf (HSPS)
- Lack of RFO (Regional Fisheries Organization). Makes difficult to share information and regulate the fishery.
- Currently around 25 freezer trawlers (average 1220 GT and 1900 HP)



INTRODUCTION

IEO observer program in southwest atlantic waters

- Performed by qualified fisheries observers
- It has been operating continuously since 1989, and collects information on:
 - Haul information
(i.e. Start and haul positions, quantity of catches and discards by species, speed and course of the vessel, depth, general data on the vessel, fishing gear characteristics)
 - Biological information on catches and discards
(i.e. Maturity stages, length-weight relationship, otolith extraction, size frequency, etc.)
 - Oceanographic information
(i.e. Sea state, cloud cover, moon phase and wind speed and direction)

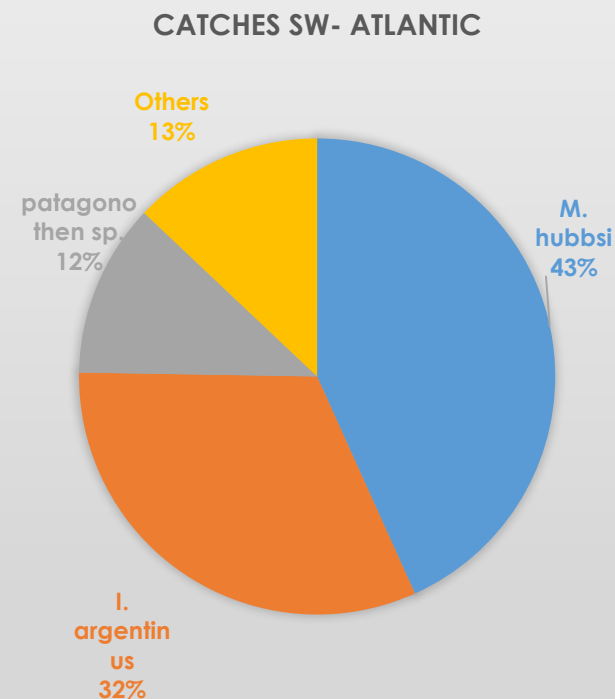
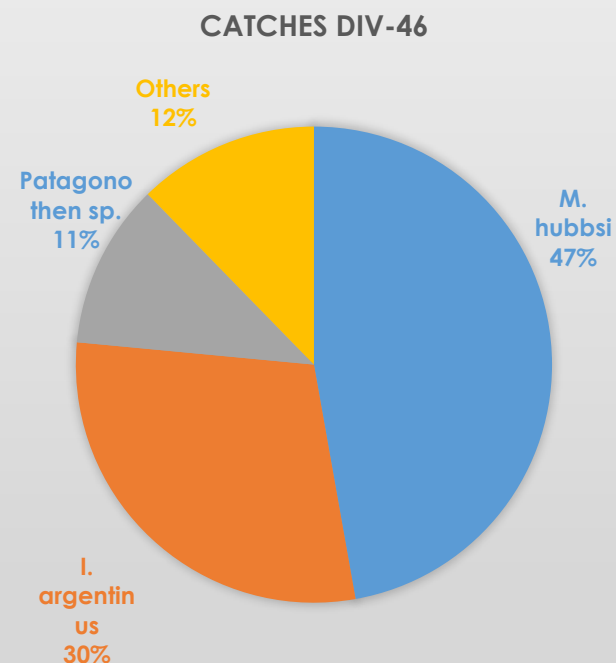
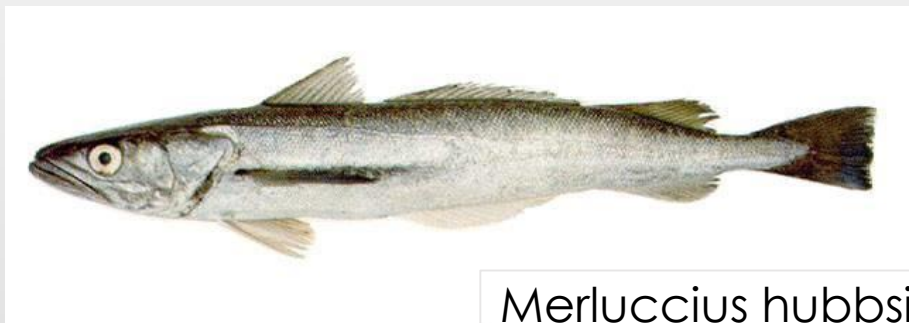


In average, 193 days observed and 13% fleet coverage by year



INTRODUCTION

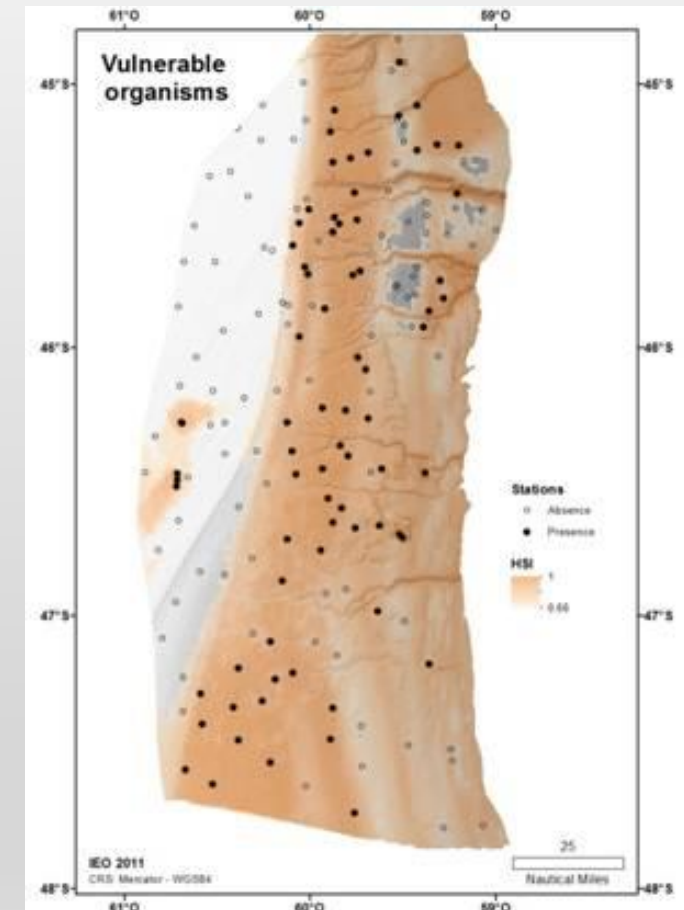
The Fishing resources in the International Waters of the SW Atlantic



INTRODUCTION

High Seas of the patagonian shelf

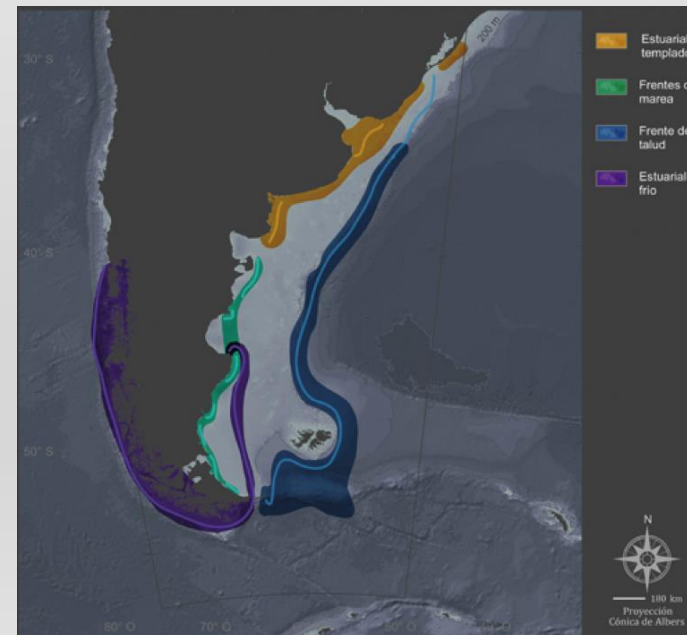
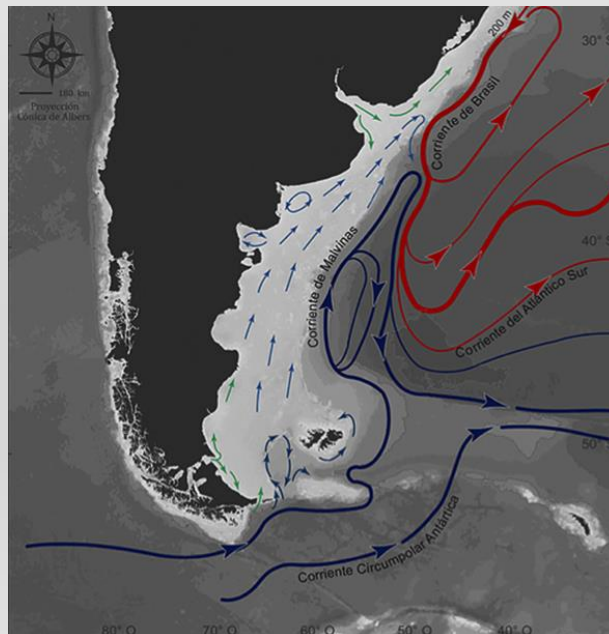
- Strip of International Waters beyond national jurisdiction of neighboring countries on the patagonian shelf
- Extensively surveyed between 2007 and 2010 by the SGP and IEO.
- Presence of Vulnerable Marine Ecosystems
- Spain's unilateral fishing ban on VMEs



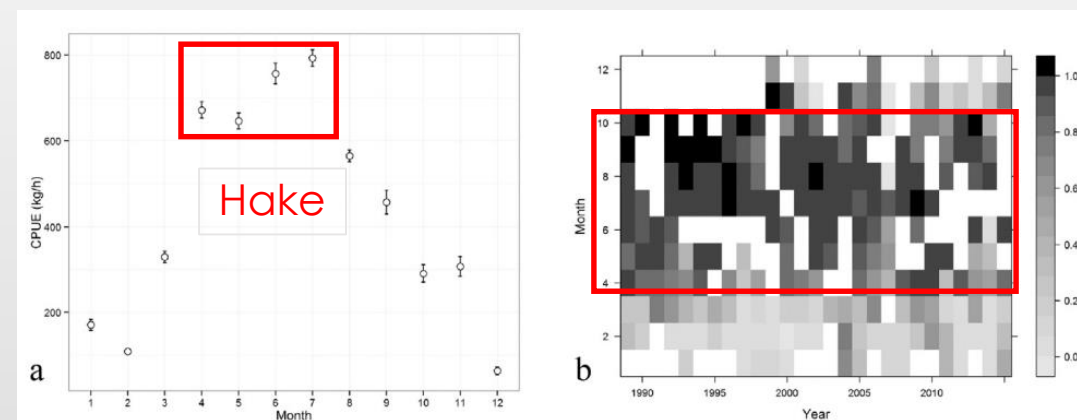
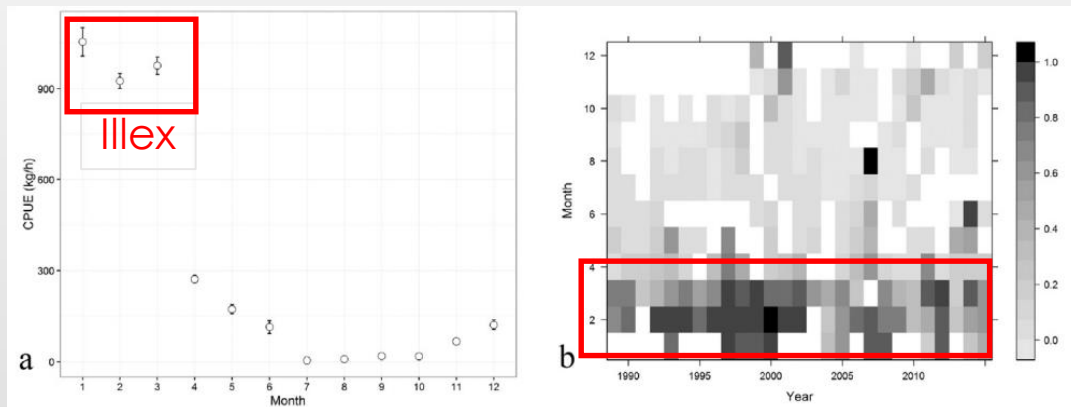
INTRODUCTION

High Seas of the patagonian shelf

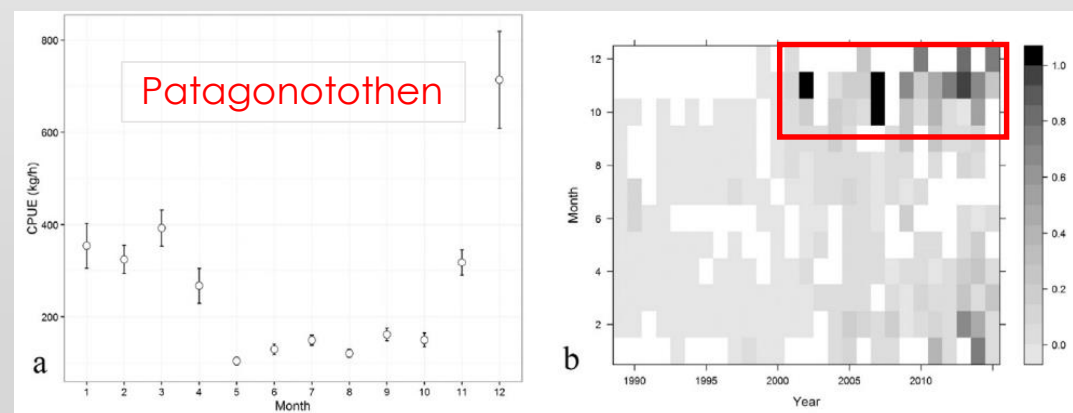
- Under the influence of the Malvinas- Falkland current and Slope front.
- Feeding area for main fish species



FINDINGS



Catch seasonality in the High Seas



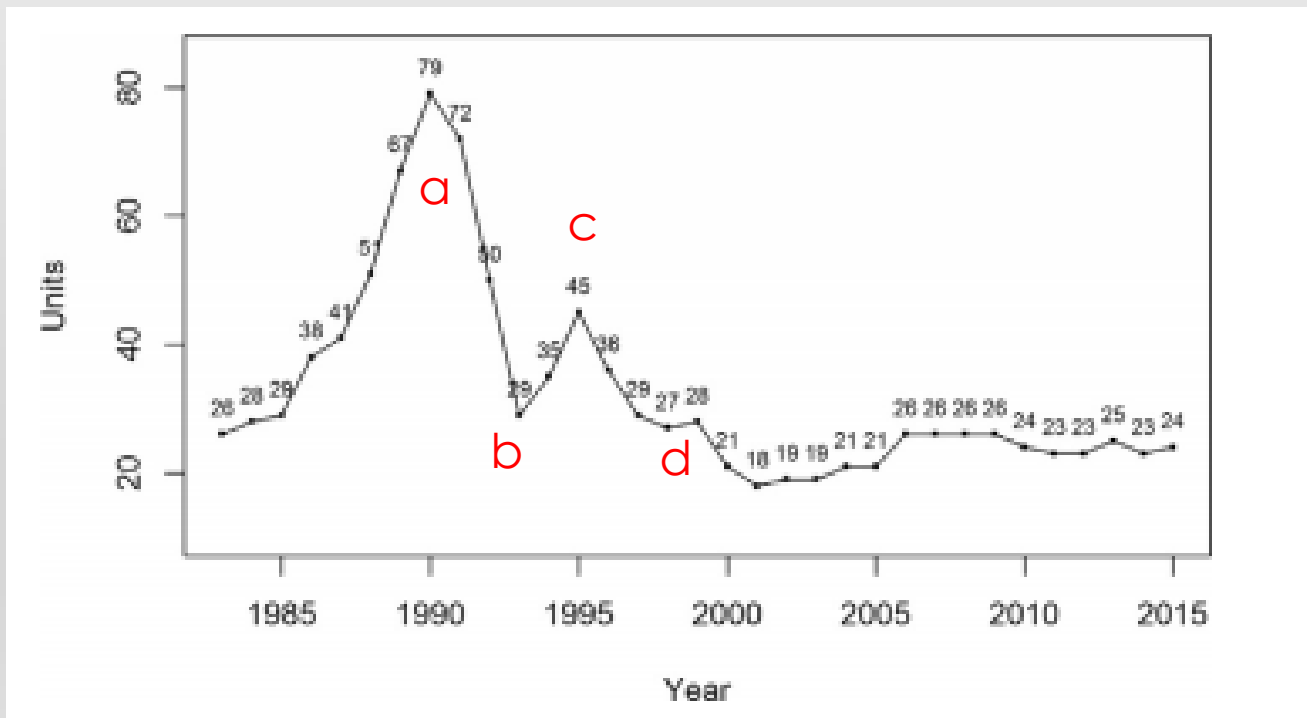
Spp.	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sept	Oct	Nov	Dic
<i>M.hubbsi</i>	Red	Red	Yellow	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Red
<i>I.arginatus</i>	Green	Green	Green	Yellow	Yellow	Orange	Red	Red	Red	Red	Orange	Yellow
<i>Patagonot. sp.</i>	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green



FINDINGS

Fishing strategy of the Spanish fleet.

- Since the 1980s, yields and external events were the main factors determining the number of fishing vessels in the region.

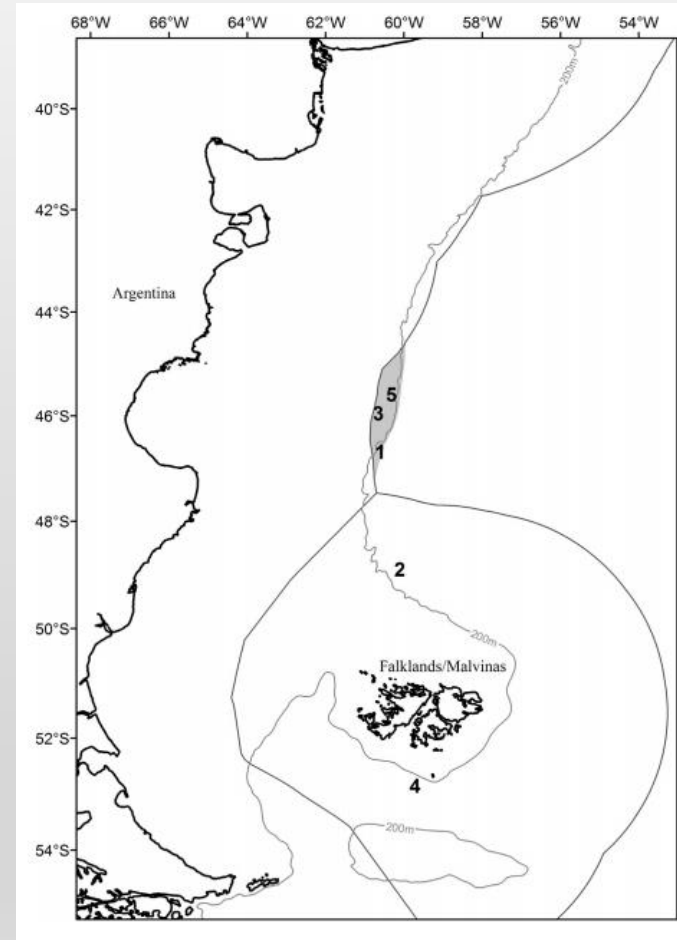
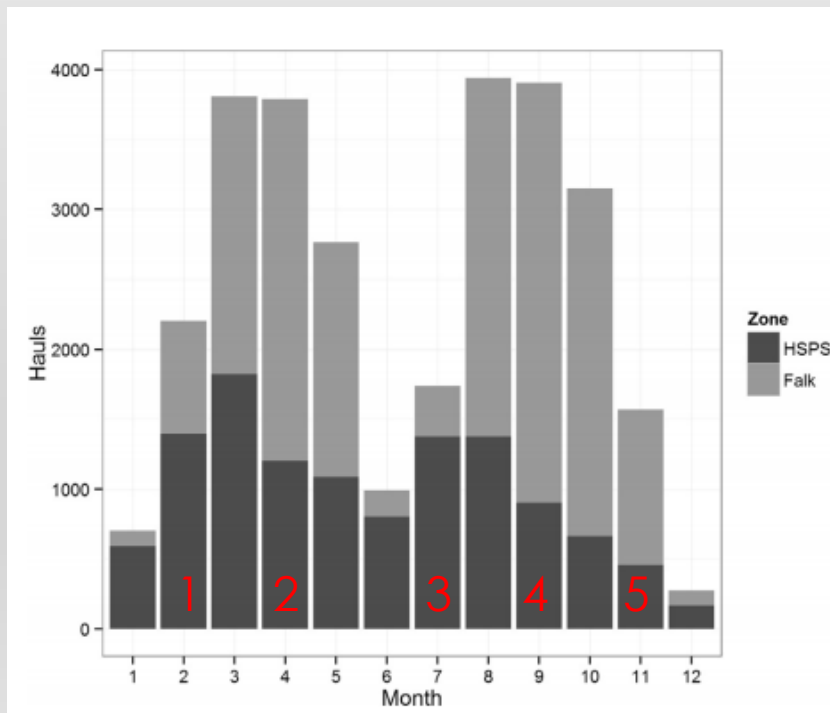


- a) Closure of the Namibian fisheries
- b) Development of the Greenland halibut fishery on Newfoundland
- c) Turbot war
- d) Re-opening of the Namibian fisheries

FINDINGS

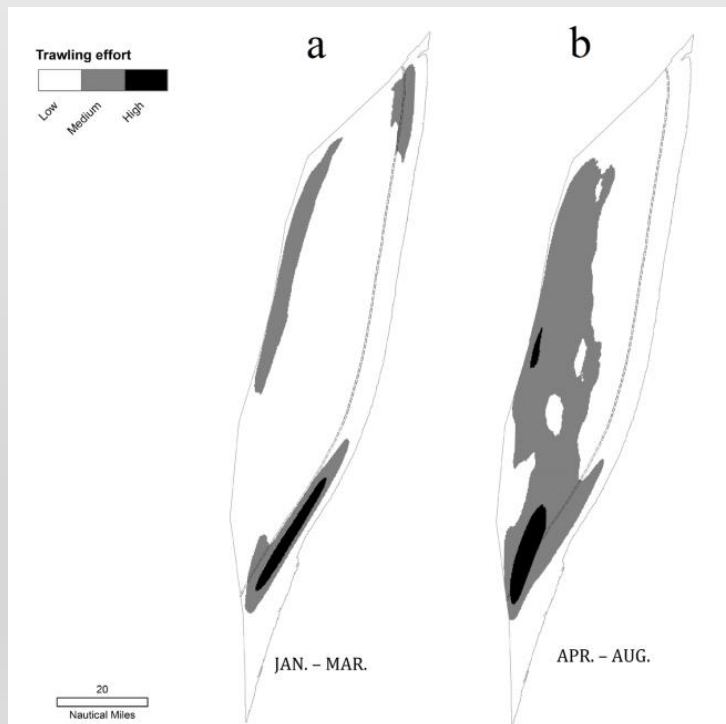
Fishing strategy of the Spanish fleet.

- HSPS can be described as a transit area.
- The fleet follows main target species on their annual migration.

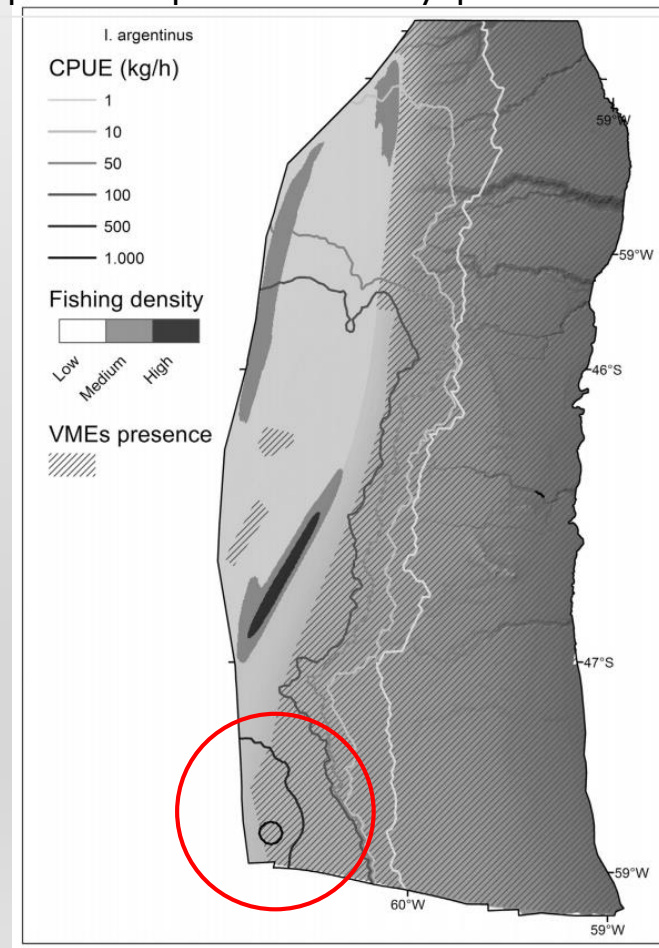


FINDINGS

Seasonal fishing trends of the spanish fleet in the High Seas



Third country fishing vessels, and IUU fishing, targeting squid and other deep-sea species may pose a future threat to VMEs.



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RESEARCH NEEDS AND PRIORITIES



- Need for straddling stock research and management agreements.
- Need for continued monitoring of the fleet by scientific observers
- Need for a legal framework to enable efficient resource management and protection of vulnerable deep sea marine ecosystems.



CONCLUSION



- The SW Atlantic fisheries observer program provides a long time series and valuable insight into the fishing activity and species biology in the region.
- Fishing activity by the spanish fleet in this region follows a seasonal pattern, fishing in both, the waters under Malvinas/Falkland jurisdiction, subject to seasonal licenses, and the High Seas of the Patagonian shelf.
- The activities of the fleet in the high seas are restricted to the sandy and flat area suitable for trawling. Two rocky outcrops are well identified and avoided by the fleet.
- Vulnerable marine ecosystems are found below 400 metres depth. There is no interaction with fishing activities from Spanish flag fishing vessels and the unilateral fishing restriction in this area prevents any future interactions.

