Seamount fisheries: can they be managed sustainably?

Tom Blasdale
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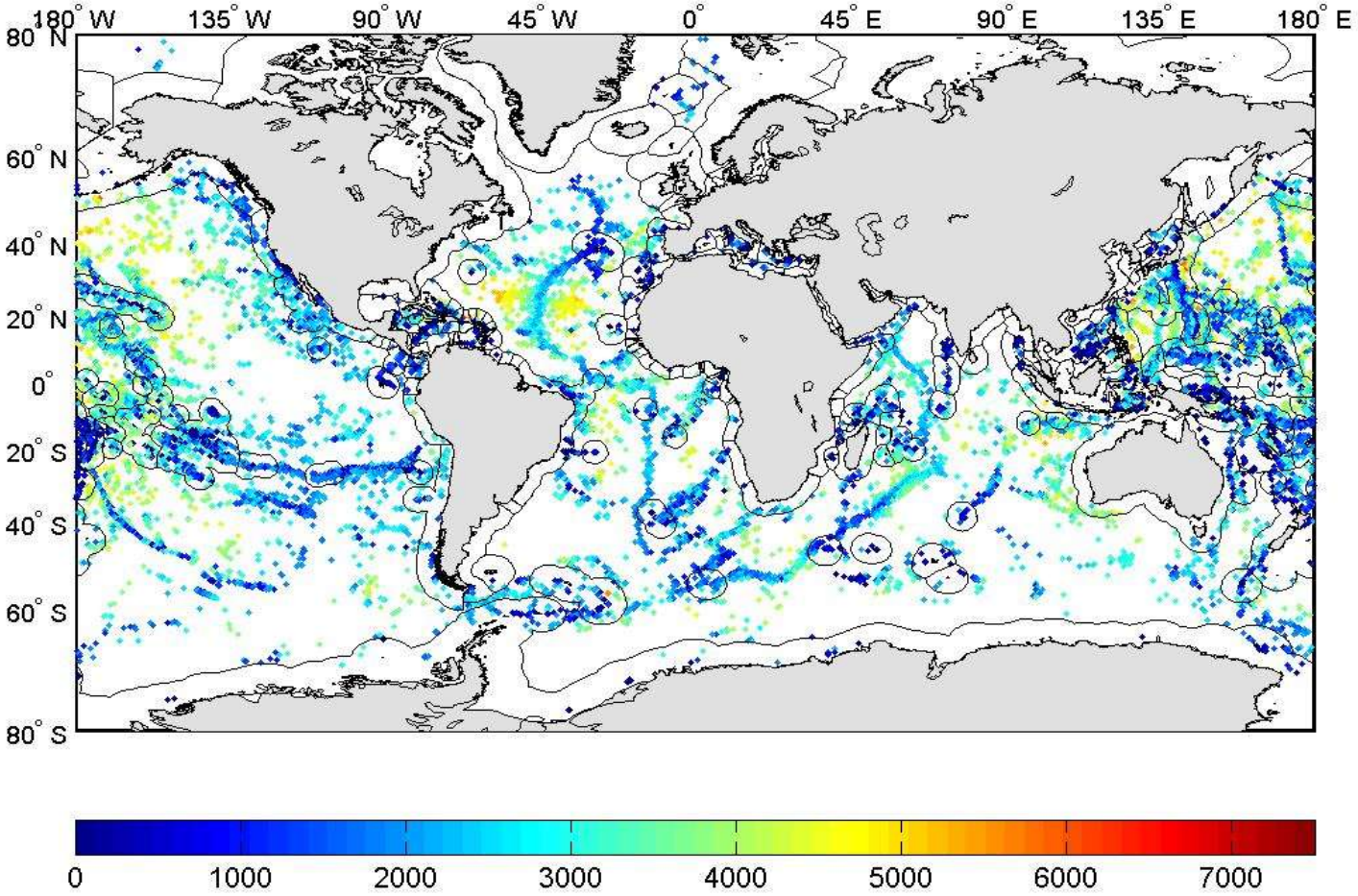

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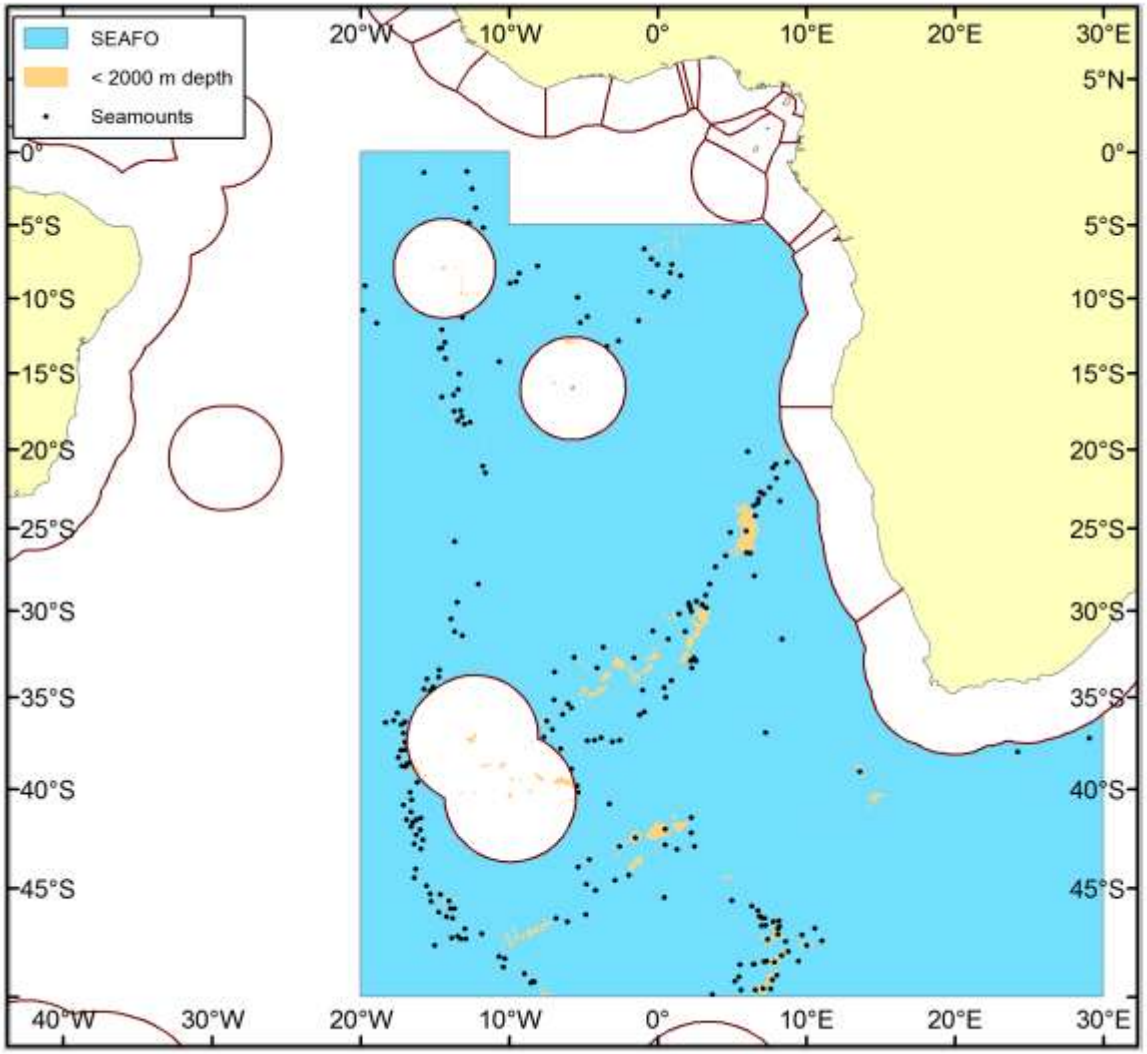


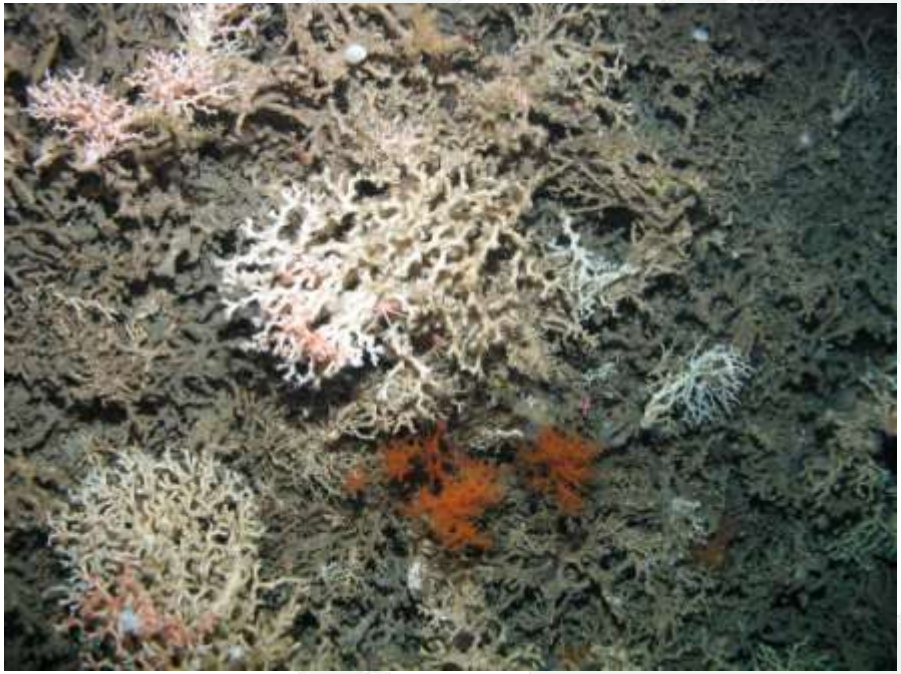
Seamount characteristics?

- “Diversity hotspots”
- High degree of endemism
- Enhanced production/biomass

- Vulnerable ecosystems
- Easily overfished

Venerable Marine Ecosystems (VMEs)

- Benthic organisms forming 3D structures
- Sensitive to damage
- Long recovery times



UNGA Resolution 59/25 (2004)

- Calls on States to: “protect vulnerable marine ecosystems (VMEs) from destructive fishing practices”

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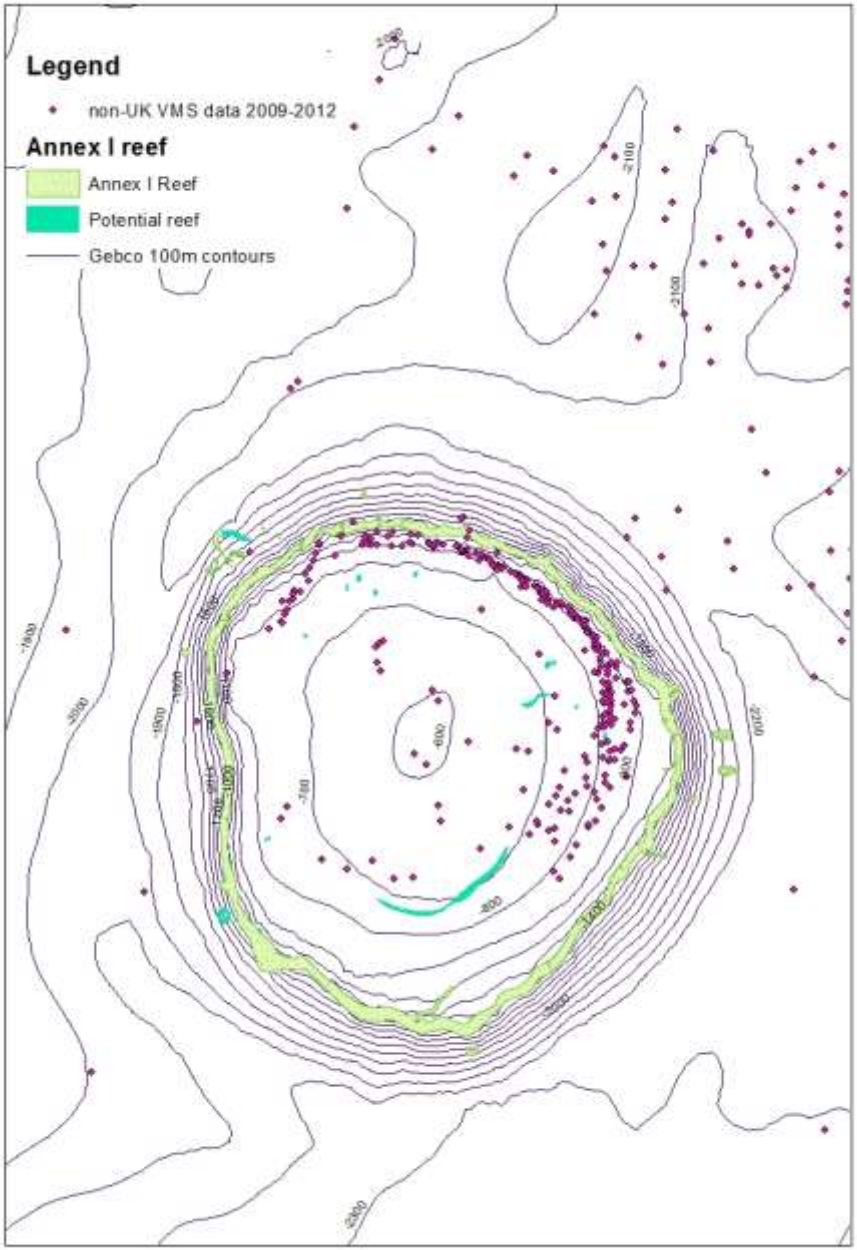

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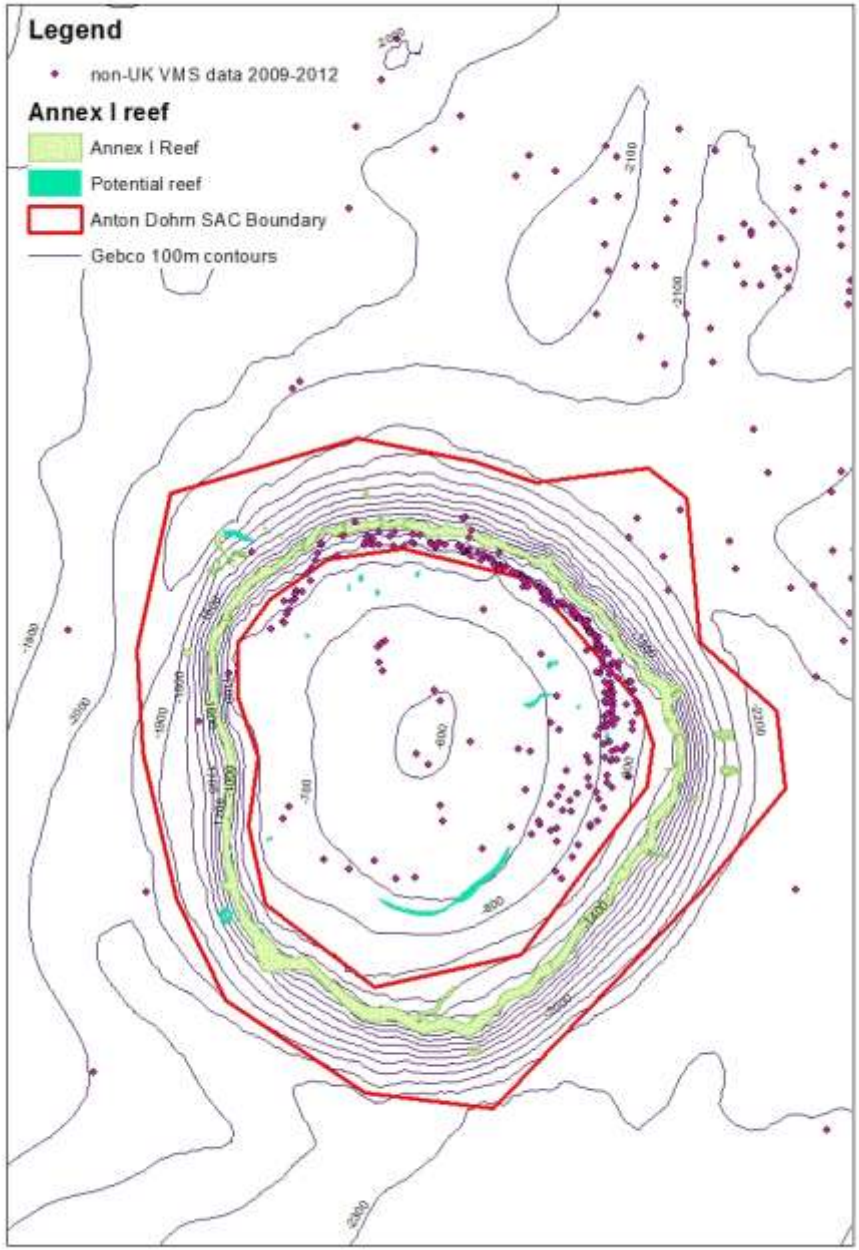

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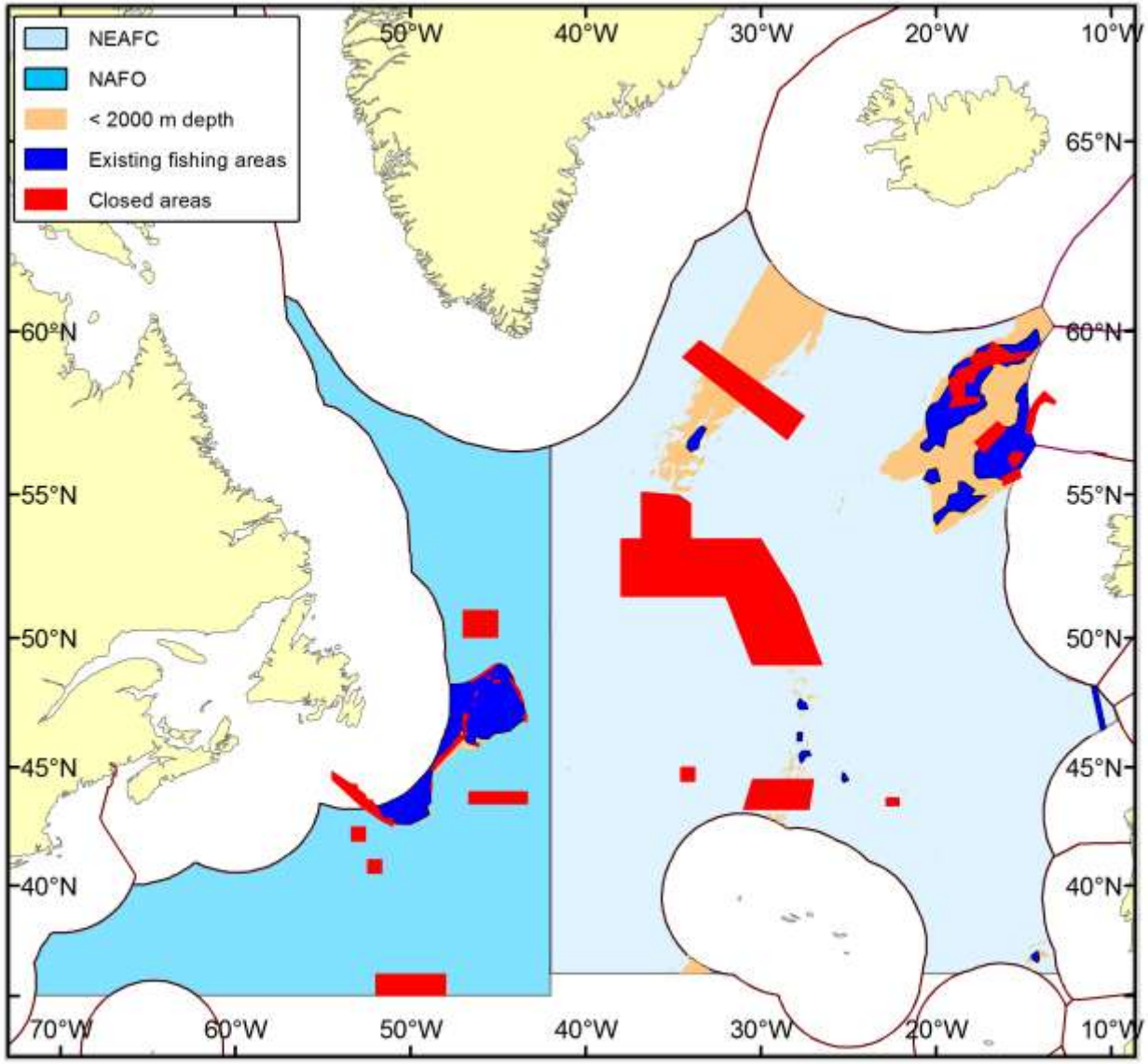

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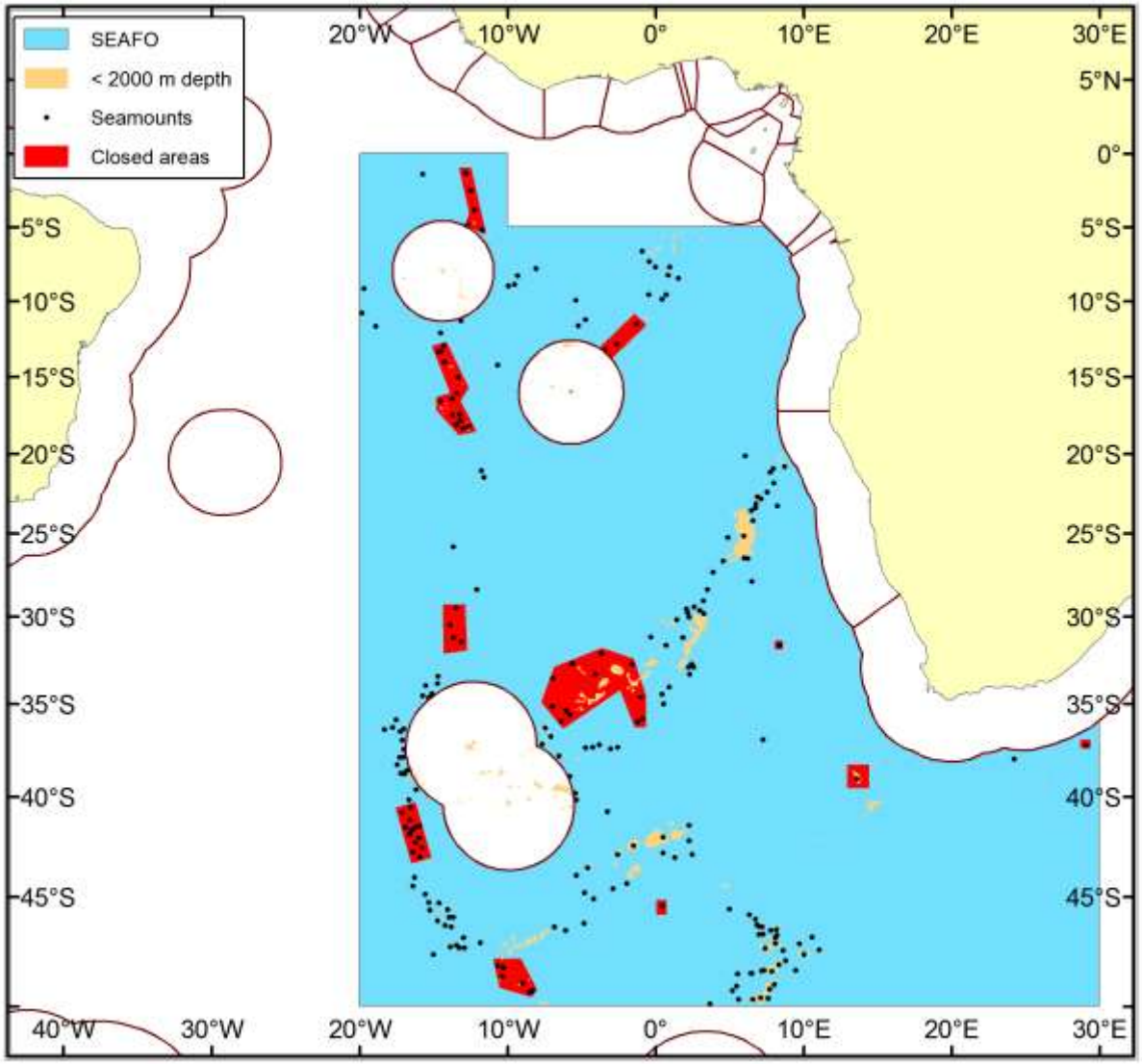
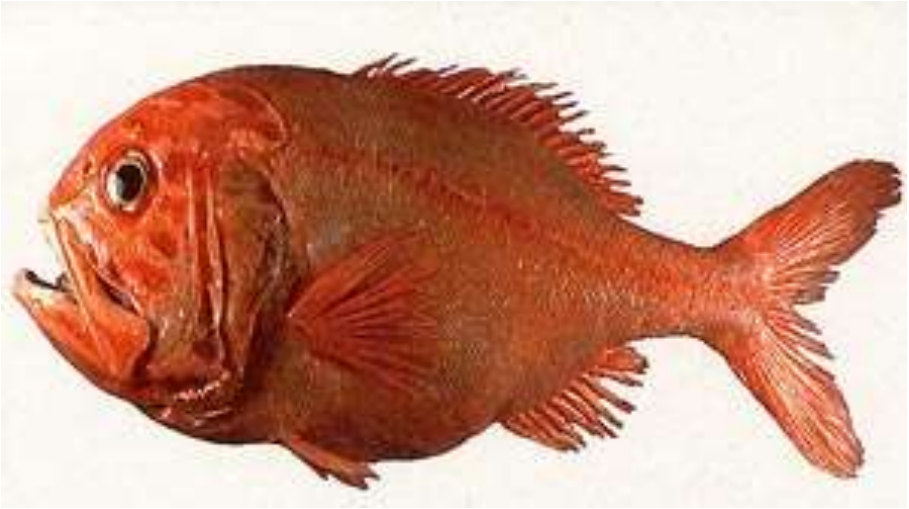


Non-destructive methods

- Static Gears (longline/gillnets)?
- Pelagic trawl

Seamount aggregating species



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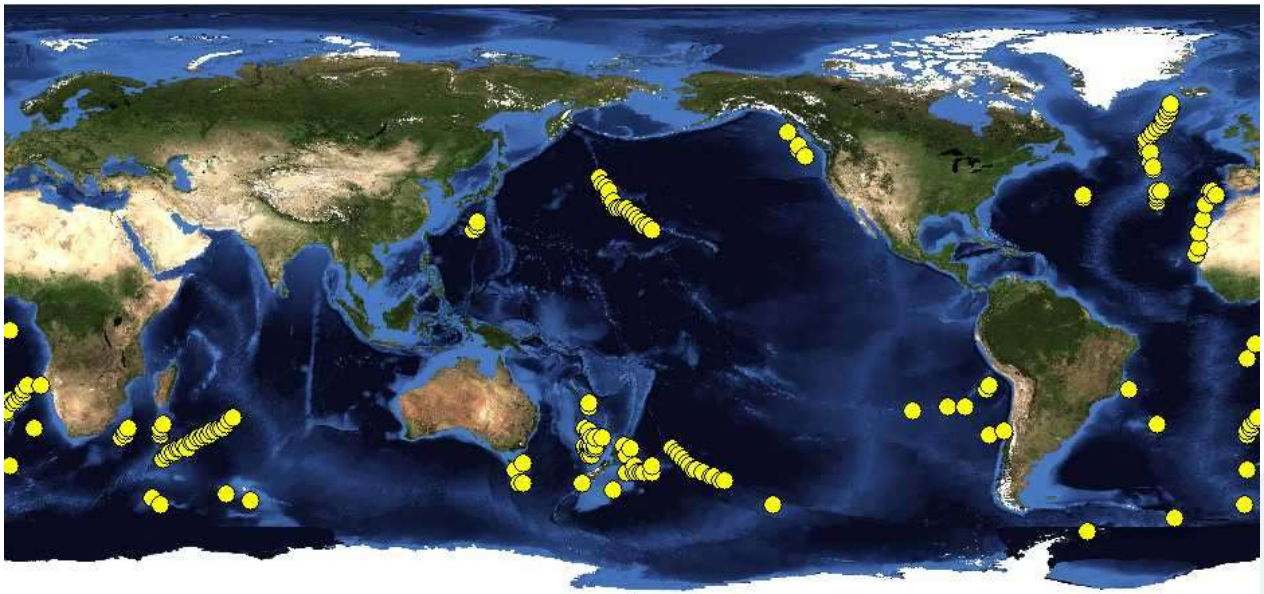
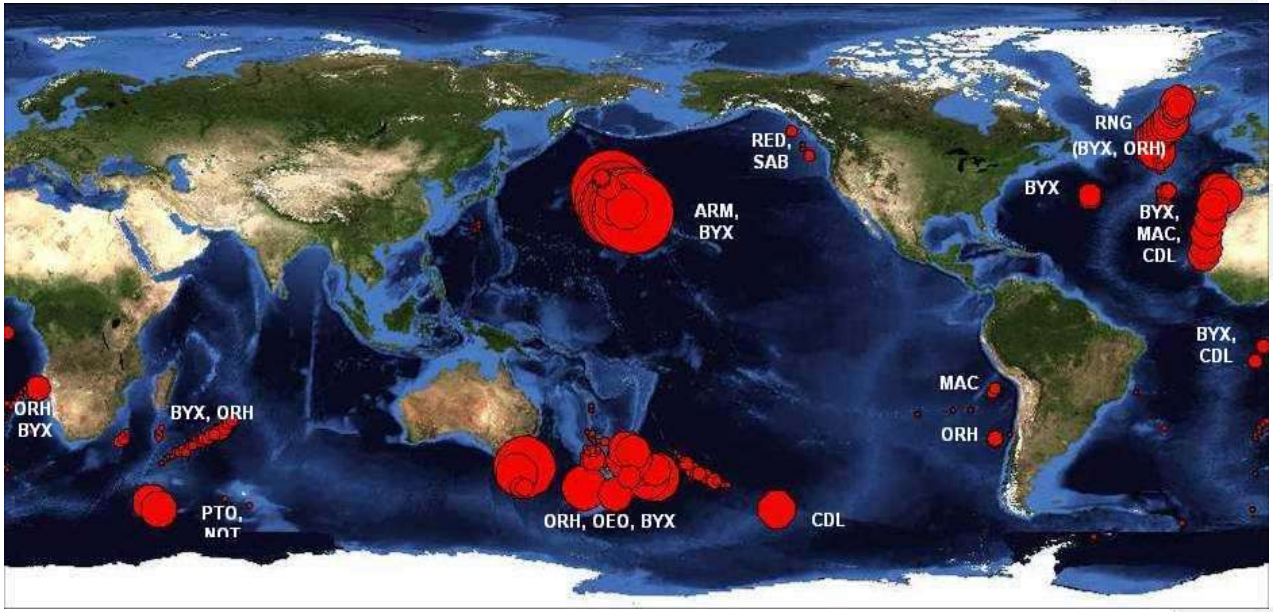


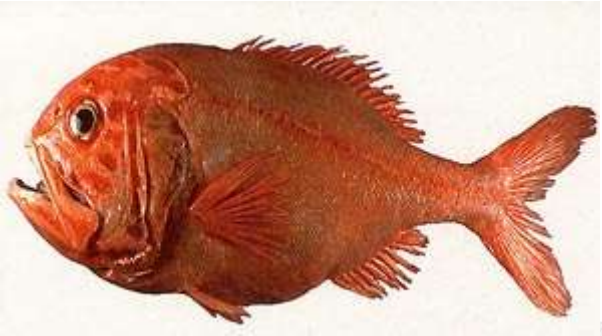


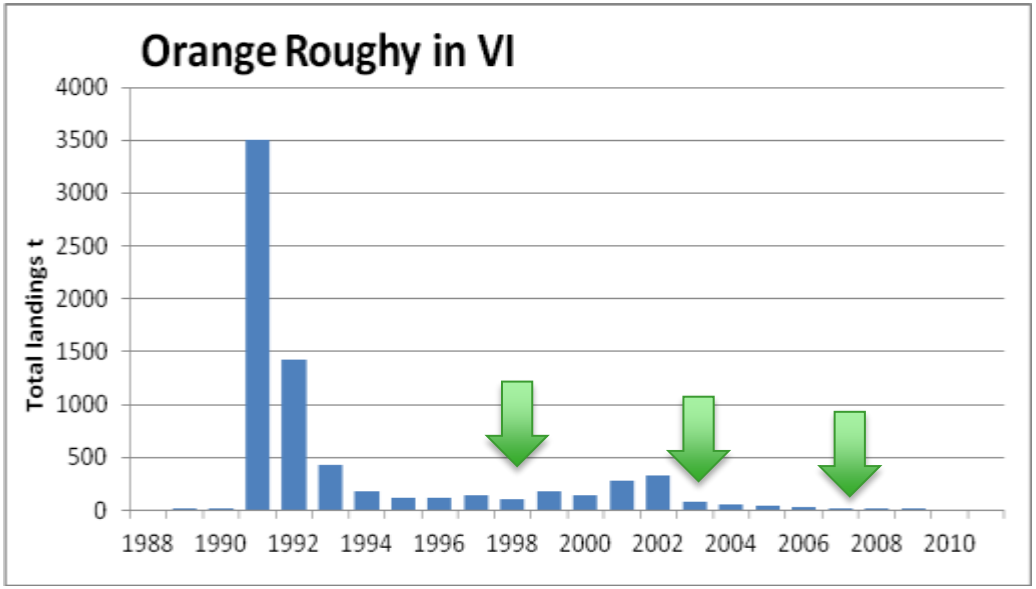
Distribution (top panel) and relative size (bottom panel) of major historical seamount fisheries. Circle size in the bottom panel is proportional to the total catch for that one degree grid square, maximum is 85,000 tonnes.

Characteristics of seamount stocks

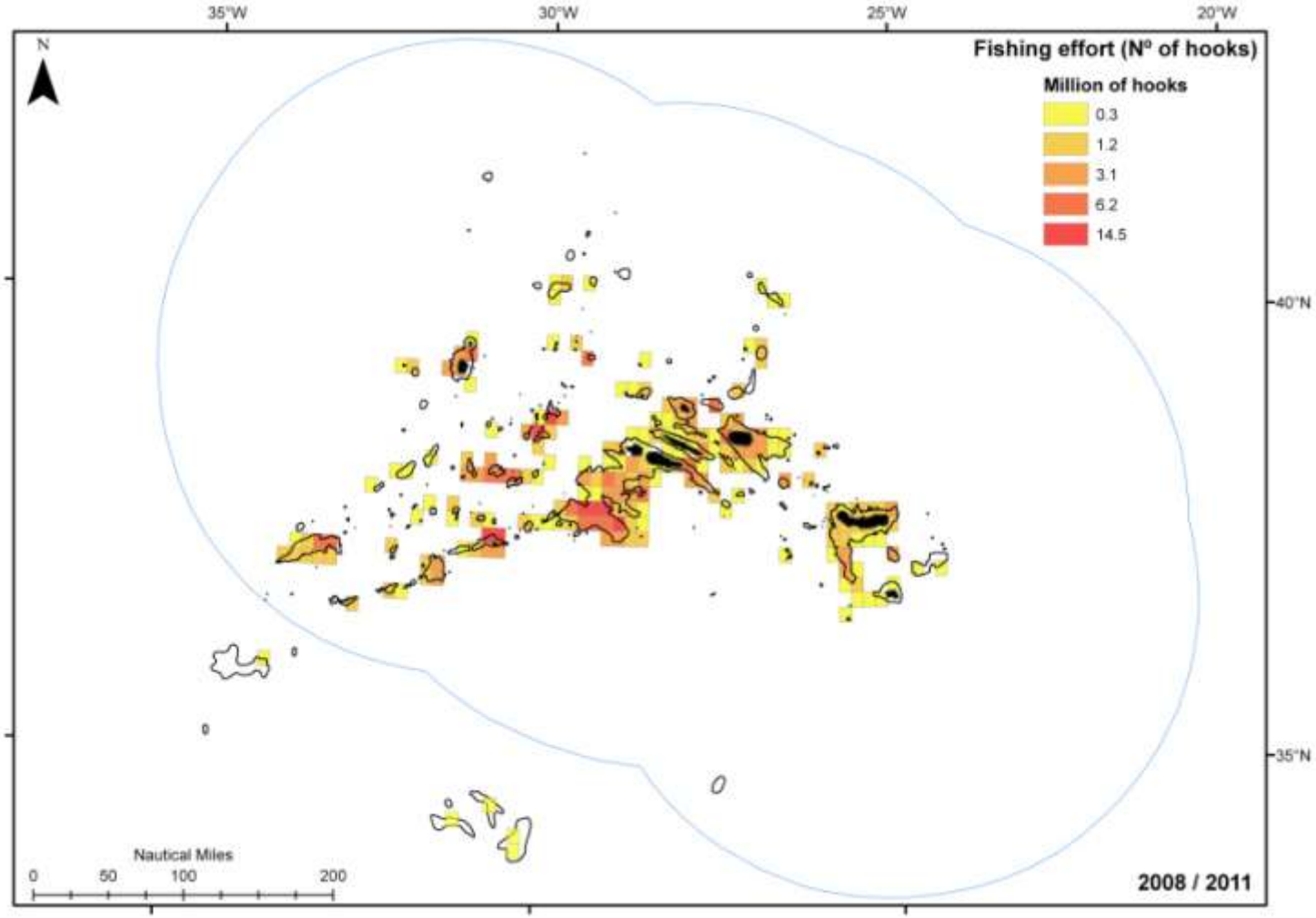
- Deep-water life histories (slow growth, high longevity)
- Highly aggregated
- Small, isolated populations

Orange roughy on the Hebrides Terrace





Seamount fisheries in the Azores



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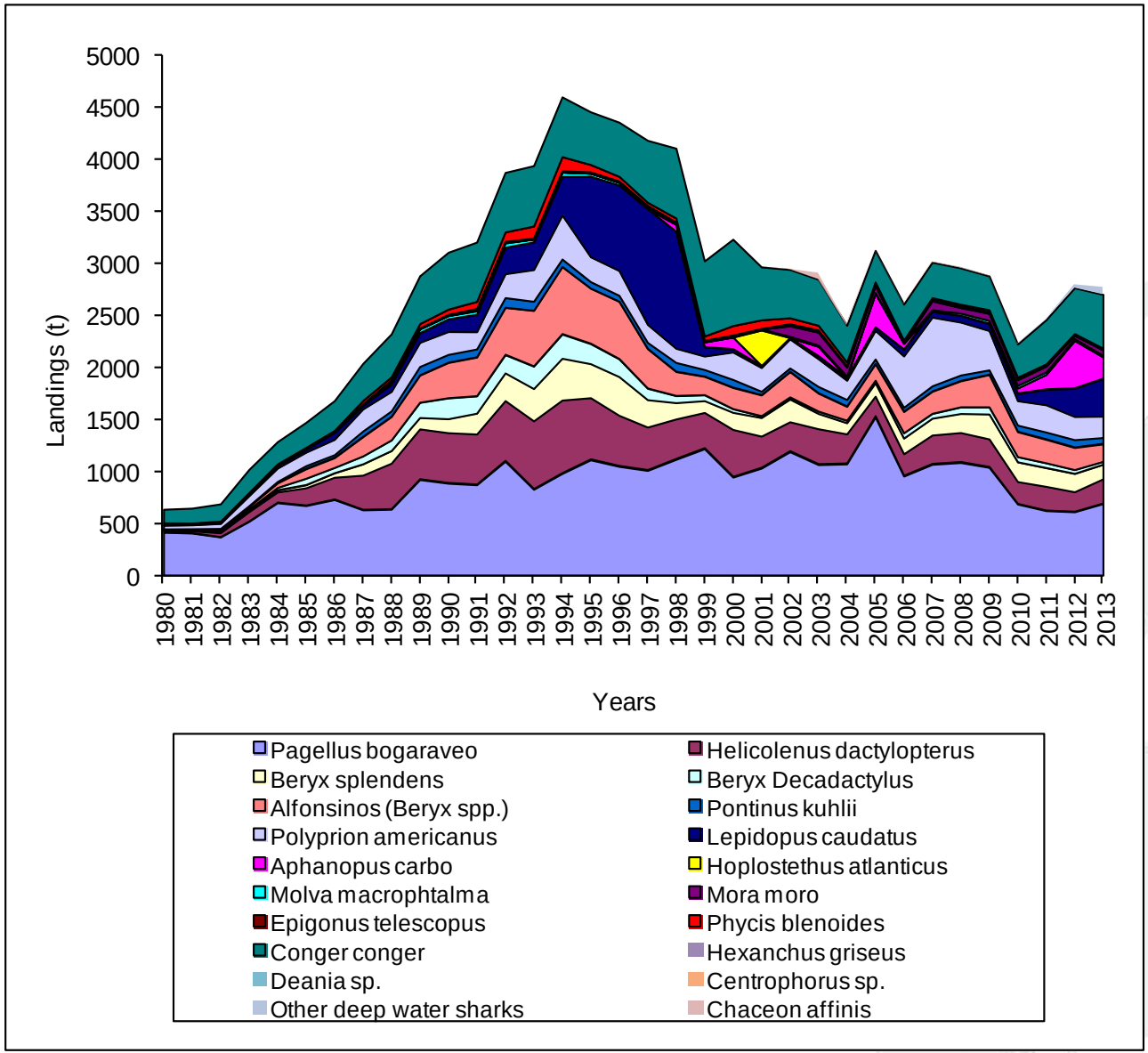
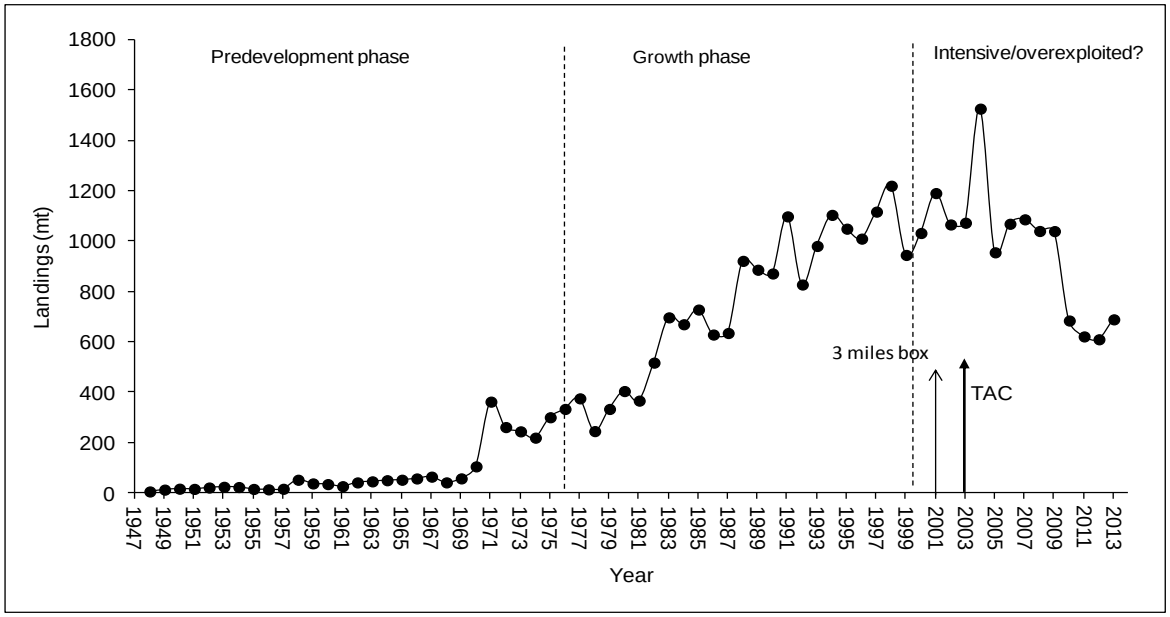
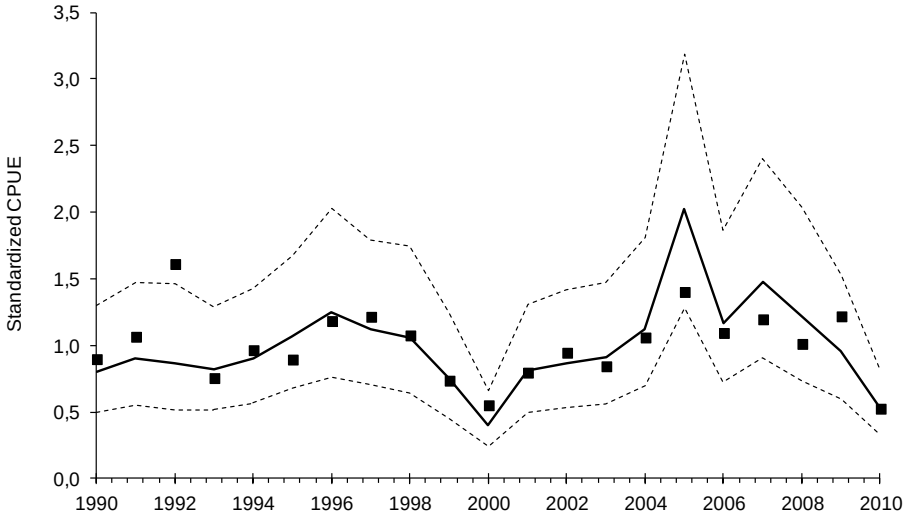
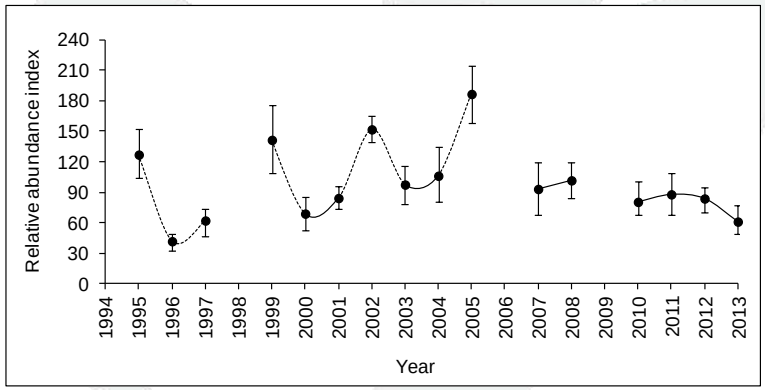
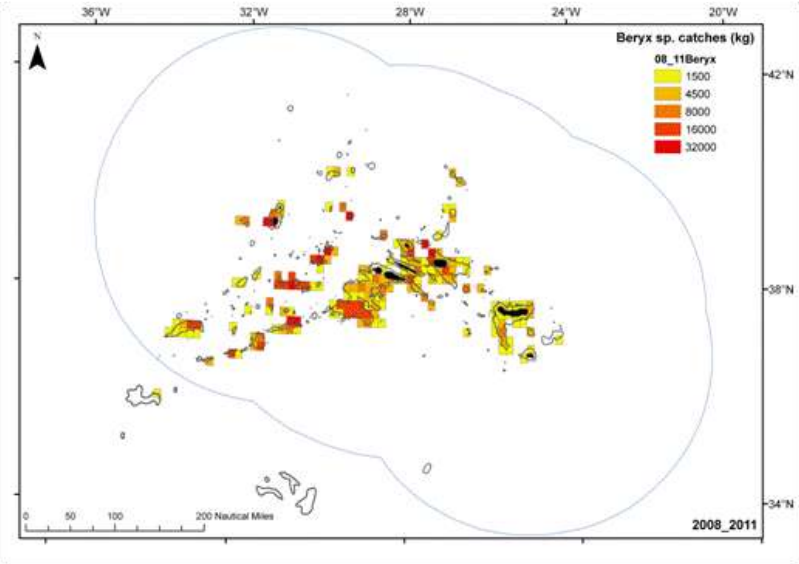

5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Landings (t)
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
Years
Pagellus bogaraveo
Helicolenus dactylopterus
Beryx splendens
Beryx Decadactylus
Alfonsinos (Beryx spp.)
Pontinus kuhlii
Polyprion americanus
Lepidopus caudatus
Aphanopus carbo
Hoplostethus atlanticus
Molva macrophtalma
Mora moro
Epigonus telescopus
Phycis blenoides
Conger conger
Hexanchus griseus
Deania sp.
Centrophorus sp.
Other deep water sharks
Chaceon affinis


Predevelopment phase
Growth phase
Intensive/overexploited?
3 miles box
TAC
Landings (mt)
Year

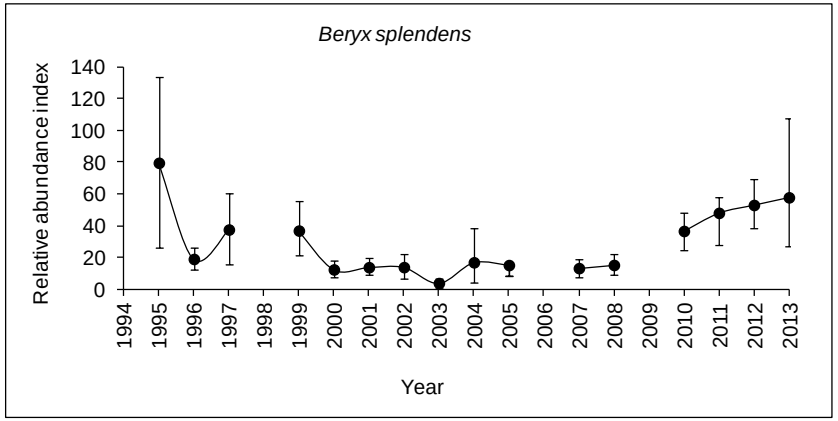

Standardized CPUE

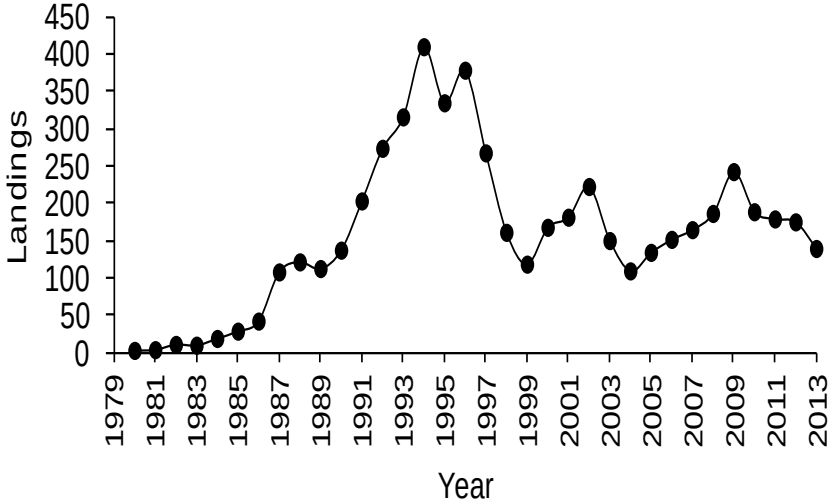

Relative abundance index
Year

Alfonsino in the Azores EEZ



Beryx splendens





Thank you