



## What are the economic gains from changing fisheries management?



# Danish Pelagic Fleet



**HG 62 Beinur**



**HG 333 Isafold**



**HG 264 Ruth**



**S 364 Rockall**



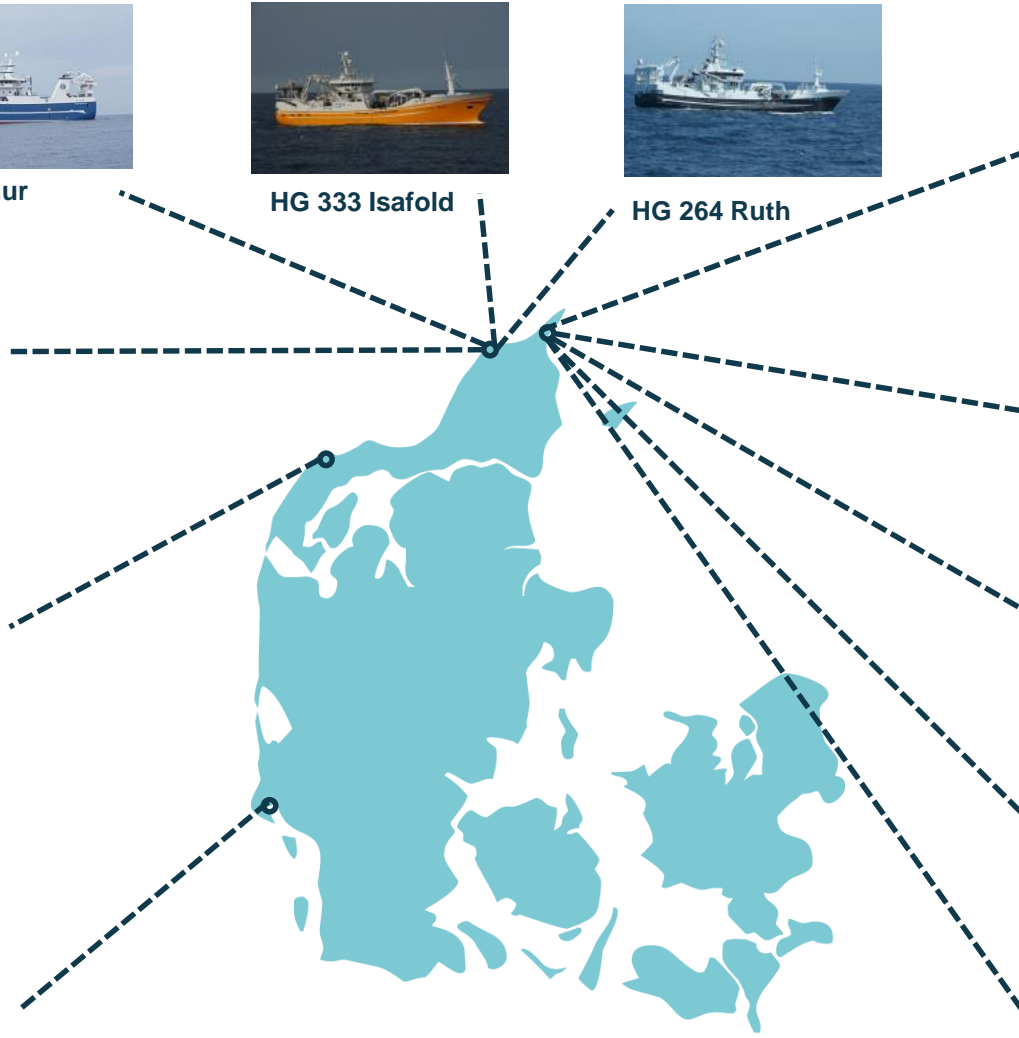
**HG 265 Asbjørn**



**HM 379 Lingbank**



**E 349 Cattleya**



**S 349 Gitte**



**S 205 Ceton**



**S 144 Themis**



**S 264 Astrid**

## *What do fishermen want?*

- They want to go fishing
- They want a bigger boat (develop their business)

## *What do fishermen need?*

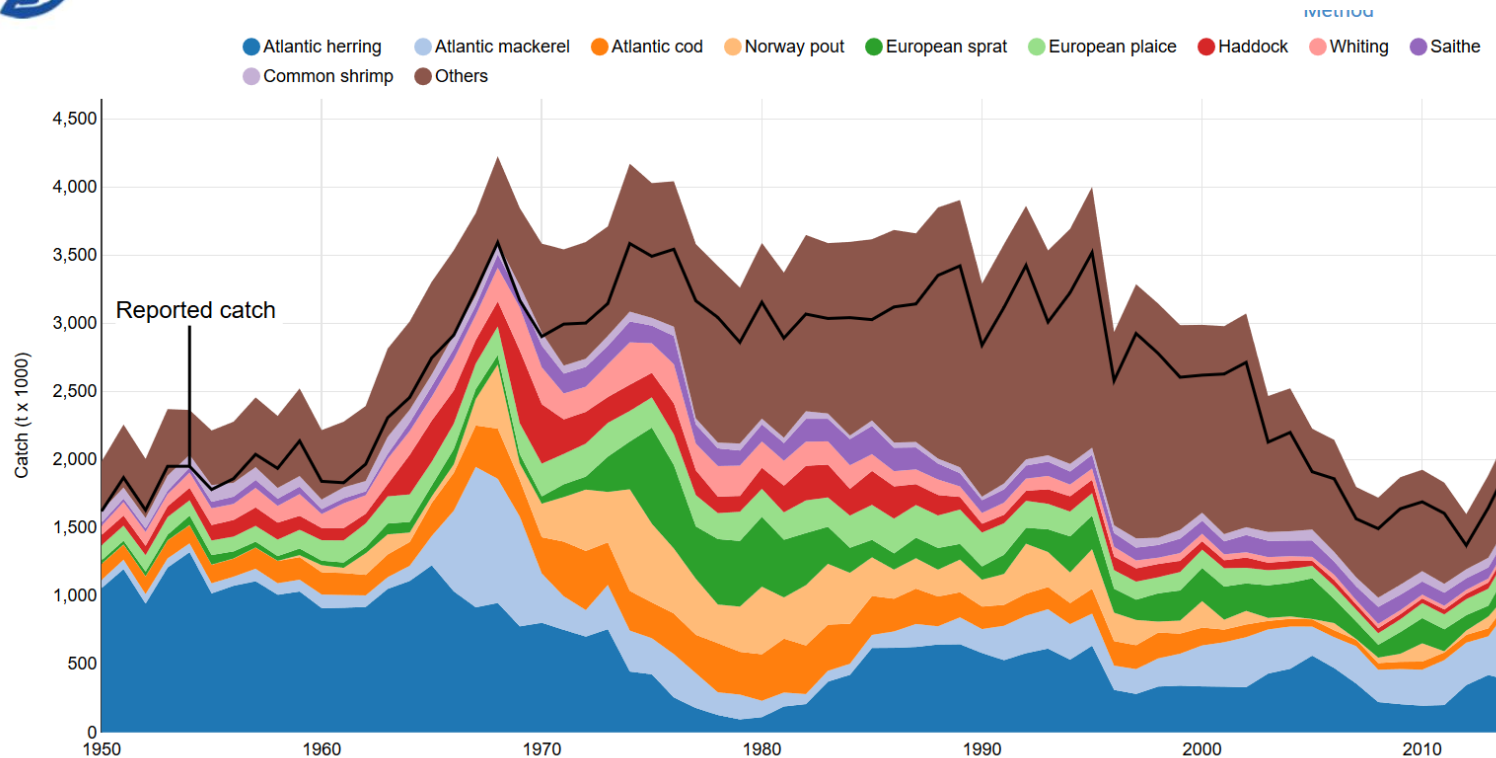
- They need stable framework conditions (legislation, secure rights, political stability)  $\div$
- They need a sustainable and stable resource to harvest from  $\div$   $+$
- They need return of investment (ROI)  $< 5\%$



# Total catches from the North Sea

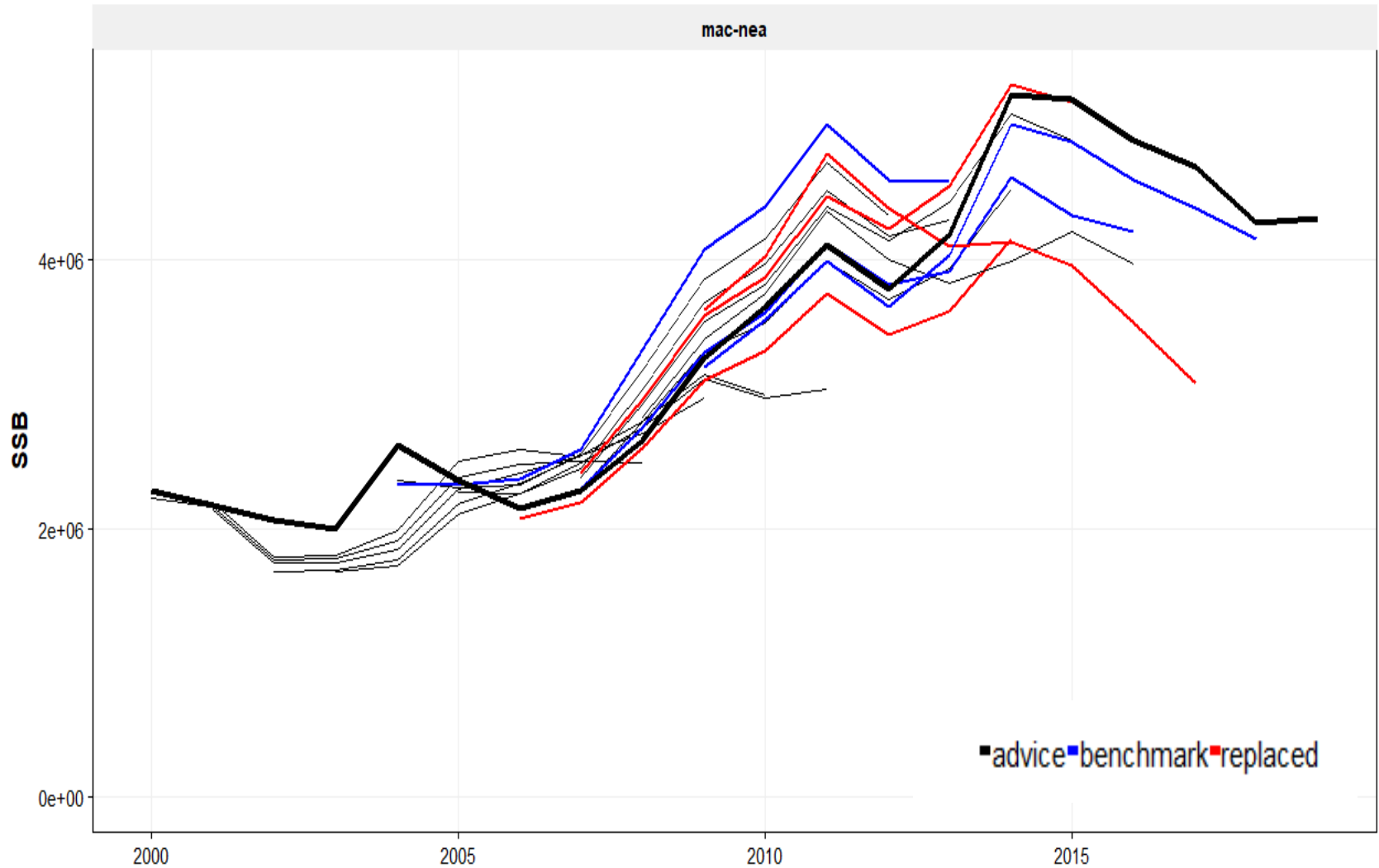


SEA AROUND US  
FISHERIES, ECOSYSTEMS & BIODIVERSITY

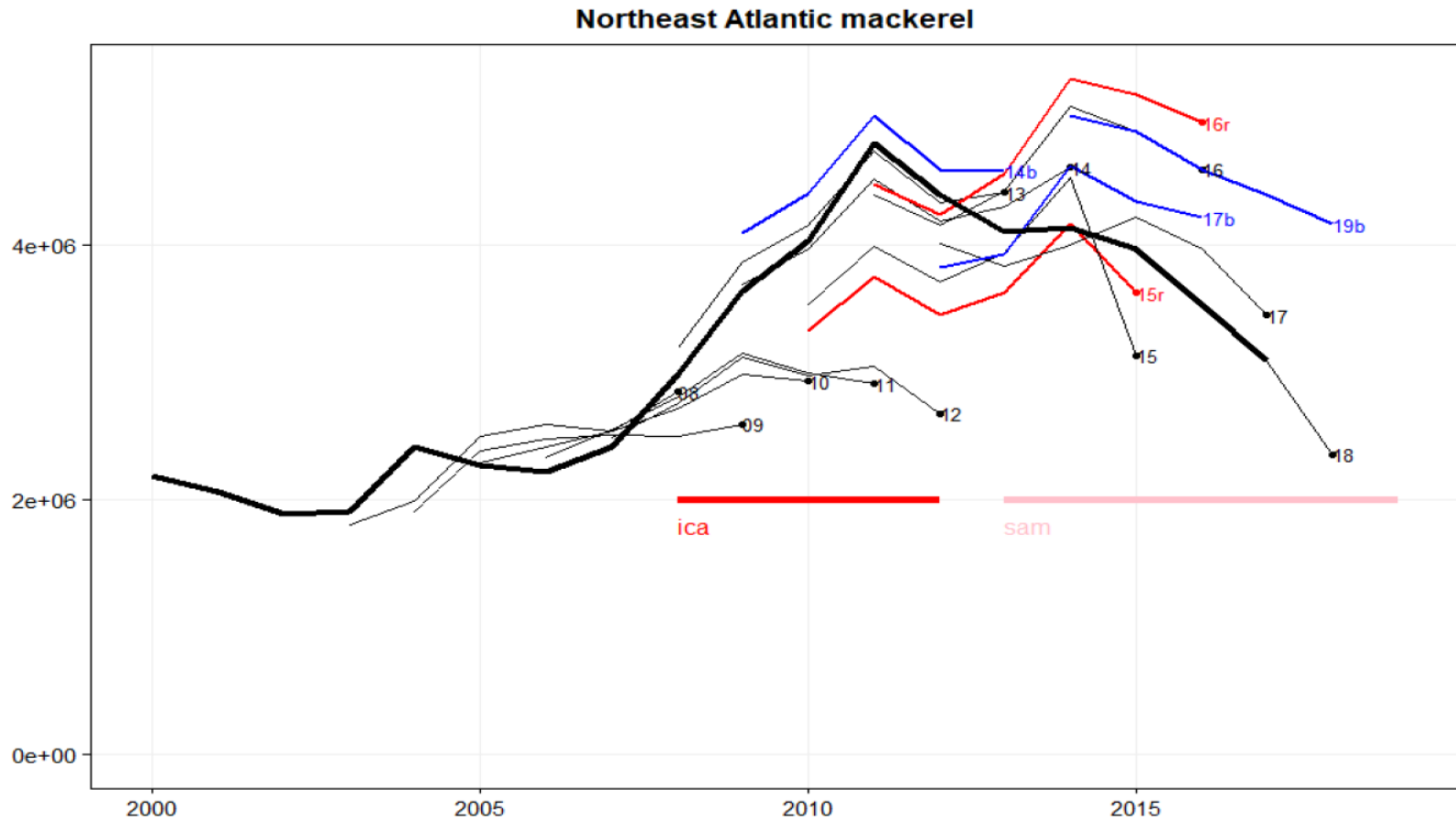


**Note:** The data we present ('reconstructed data') combine official reported data and reconstructed estimates of unreported data (including major discards), with reference to individual EEZs. Official reported data are [mainly](#) extracted from the Food and Agriculture Organization of the United Nations (FAO) [FishStat database](#). The "Reported catch" line overlaid on the catch graph represent all catches deemed reported (including foreign) and allocated to this spatial entity. **For background information on the reconstruction data, download the .pdf file for the specific EEZ(s) and also examine our [methods](#) for data and spatial allocation.**

# Frequent changes in perception on stock size

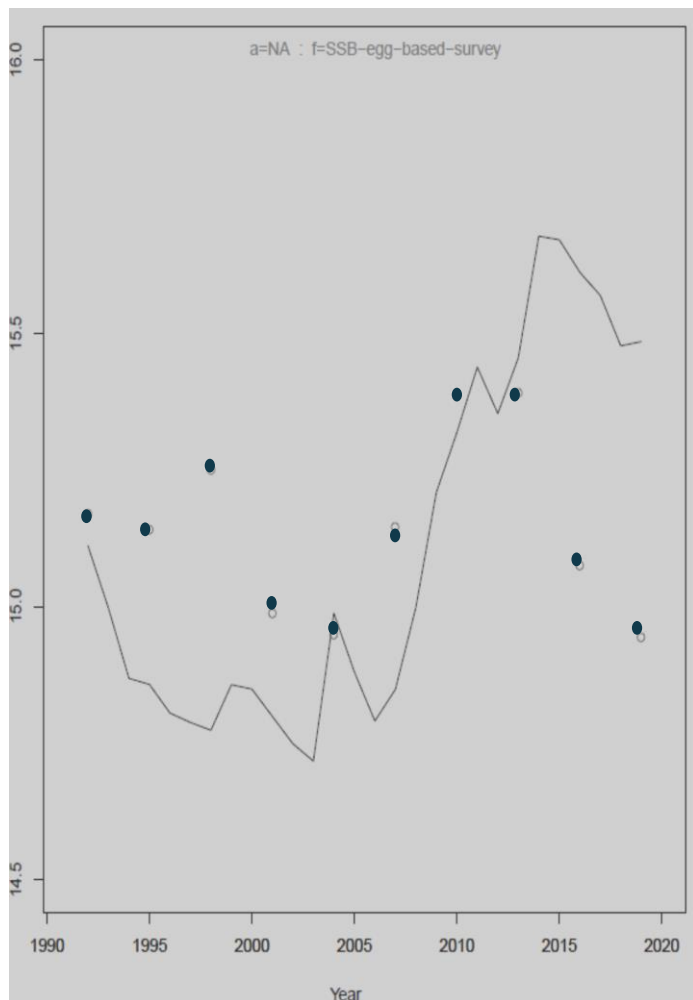


# Knowledge transfer and uptake

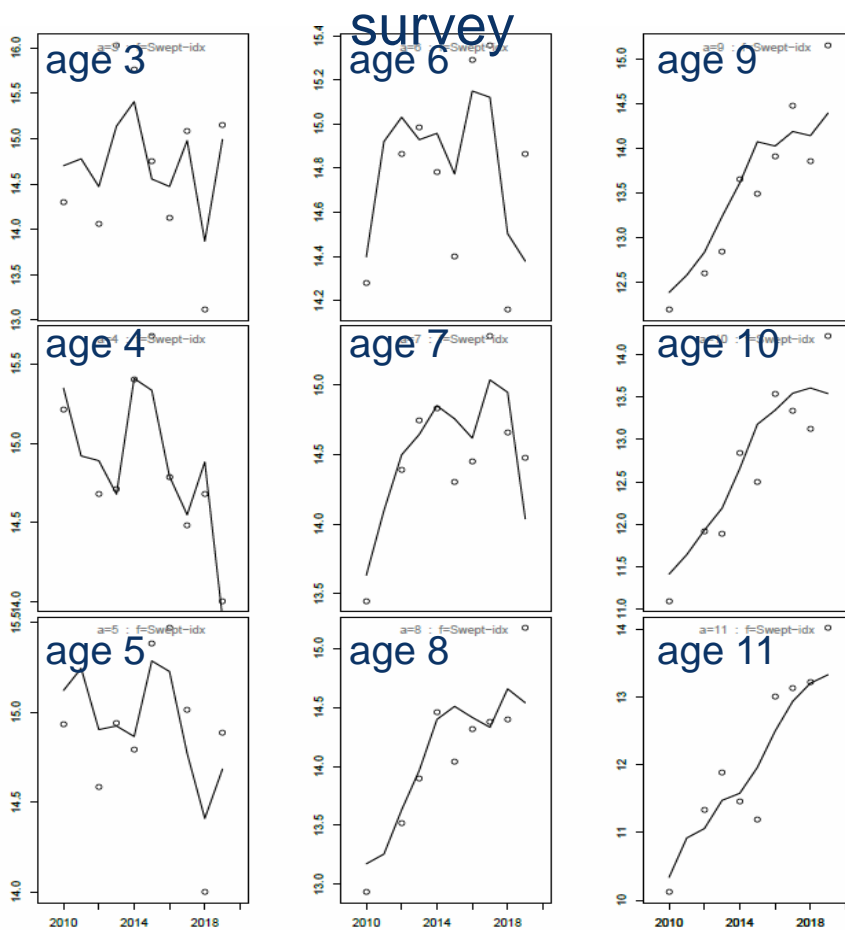


# Conflicting signals within the data sources

## Egg survey



## Swept area



## *What are the fundamental challenges?*

- Fishing opportunities and the perception of fisheries in society (solely) relies and depends on imperfect scientific advice.
- **”Conflicts are the result of culture clashes rather than not sharing a common goal”**
- Scientific advice is always wrong – but how wrong is the question + or - ?
- Greatest threat to sustainable fisheries management and fishing communities in the NE Atlantic is flawed scientific advice

## *How do we improve science?*

Fill out the gaps!

- Fix historical catch data
- Include density dependence, ecosystem effects, improve data sources, genetics = FMSY project
- Clear management objectives



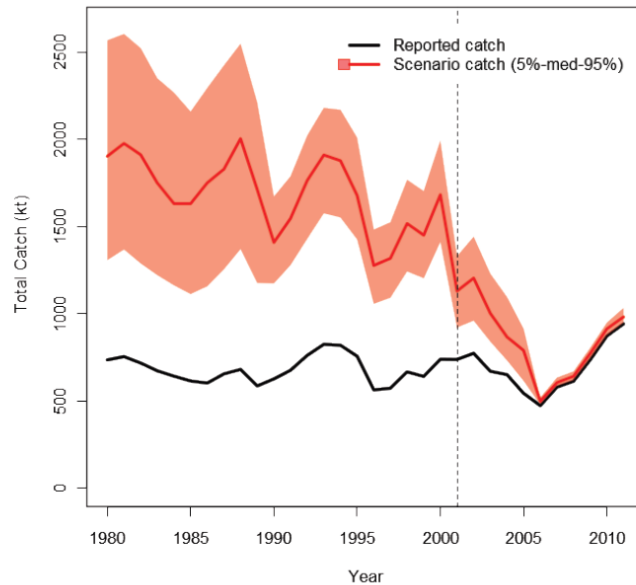


# Fixing historical catch data

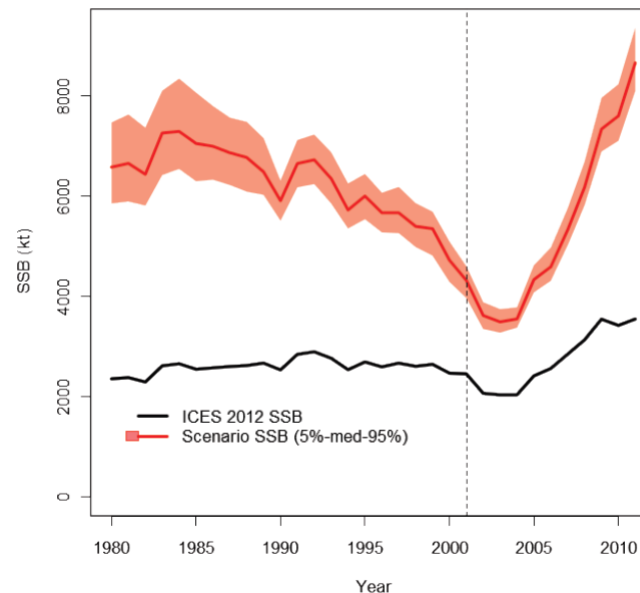
Table 1. Estimated ranges of misreporting during the four time periods considered.

Period	Year Range	Misreporting Factor	
		Lower bound	Upper bound
Klondyking	1972 – 1989	1.7	3.6
Japanese market highgrading	1990 – 2000	1.7	2.5
Uncontrolled IUU	2001 – 2005	1.1	1.7
'Golden age'	2006- 2011	1	1.1

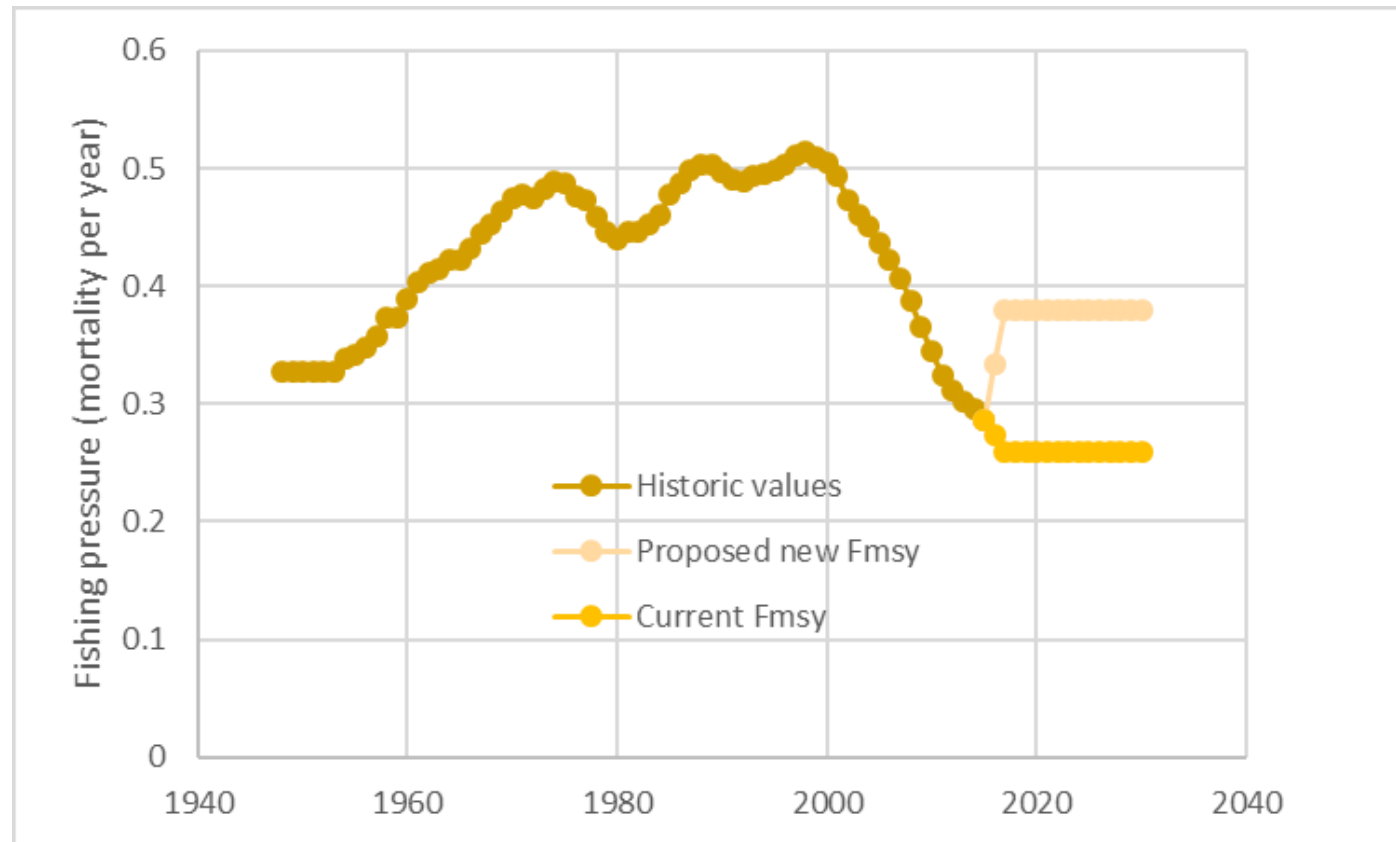
Catch Scenarios



SSB (No age effect)



# At what level do we want to fish?



## What are the economic gains from changing fisheries management?

### Strengthened scientific advice

= a sustainable and stable resource to harvest from

= the basis for stable framework conditions (legislation, secure rights, political stability)

= return of investment (ROI) + 5%

= basis for development of the sector, at sea and on land

= **A bigger boat!**

# Thank you for your attention