Preliminary attempt to evaluate the effect of a technical measure inducing a change of selectivity using combined data from a scientific survey and from the French observer at sea program.

Joel Dimeet, Lionel Pawlowski, Marianne Robert, Alain Biseau, Benoît Dubet

Commission implementing regulation (EU) No 737/2012 of 14 august 2012 on the protection of certain stocks in the Celtic Sea

(6) In October 2011 the North Western Waters Regional Advisory Council (NWWRAC) issued advice that the current technical measures in the Celtic Sea should be improved to reduce discards, especially of haddock and whiting, by requiring the use of an appropriately positioned square-meshed panel of a specified size depending on the gear type and engine power of the vessel.

Bottom trawler or seines with…

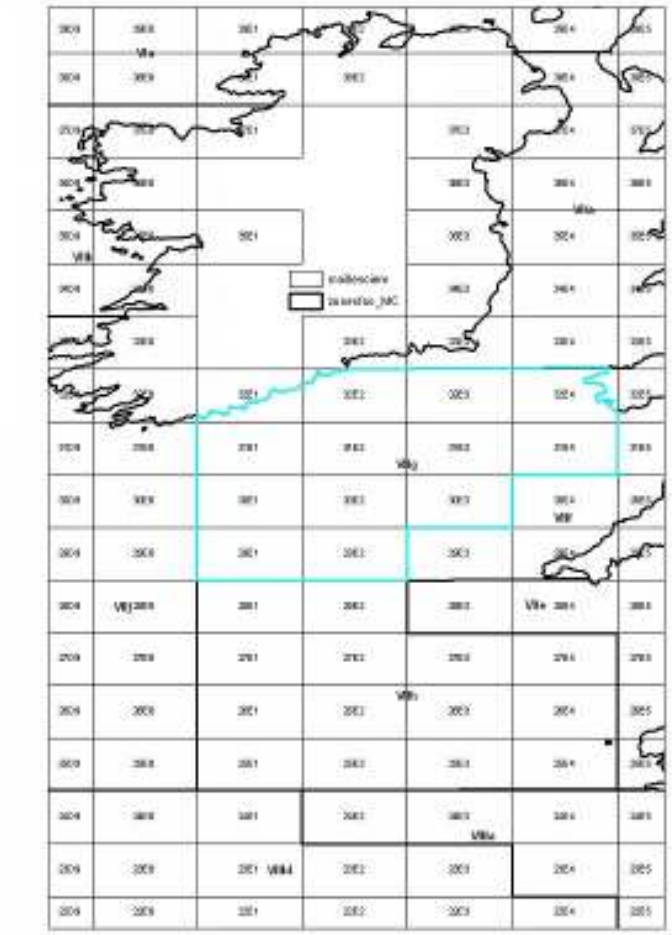
(a)mesh size >=100mm or low powered vessels →

➔ Use of square-meshed panel of a mesh size of at least 100 mm.

(b)mesh size between 70-100mm

➔ Use of square-meshed panel of a mesh size of at least 110 mm.

Commission implementing regulation (EU) No 737/2012 of 14 august 2012 on the protection of certain stocks in the Celtic Sea



Case study:

- Whiting (*Merlangius merlangus*)
- Haddock (*Melanogrammus aeglefinus*)

- In ICES VIIg

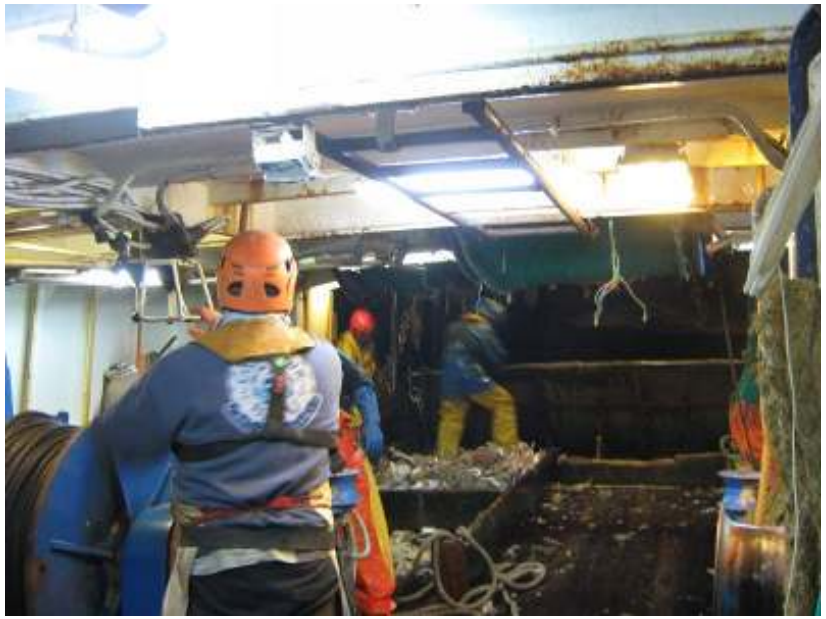
- Length distributions available rom observer at sea and survey programs (second semester)

- 2010, 2011 (without) and 2012 (with new regulation)

French Observer at Sea program
Data Collection Framework (DCF)

An EU framework for collection, management and use of datasets in the fishing industry and for supporting scientific advices within the CFP (fishmarket sampling, economics...)

ObsMer => Estimation of catch, discards and observation of environment and fishing strategies



EVHOE survey

(**EV**aluation des ressources **H**alieutiques de l'**O**uest **E**urope
Evaluation of fishing ressources in the West of Europe)

Part of the International Bottom Trawl Surveys (IBTS)

- Evaluation of ressources :

  Abundances indices on commercial species for use in stock assessments

- Acts as an observatory :

  Long time series for the study of interannual variations of biological parameters of ecosystems.

UNION EUROPÉENNE

Fishing area : VIIg – Second semester each year

Evhoe :

Whiting

2010 : 13 stations
2011 : 18 stations
2012 : 14 stations

Haddock

2010 : 14 stations
2011 : 16 stations
2012 : 14 stations

Obsmer

Withing

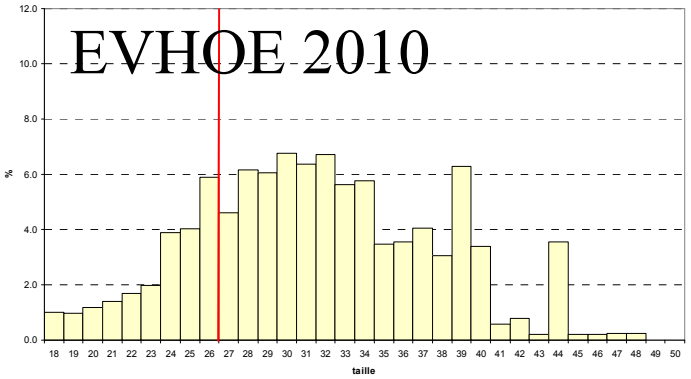
2010 : 34 fishing ops
2011 : 12 fishing ops
2012 : 54 fishing ops

Haddock

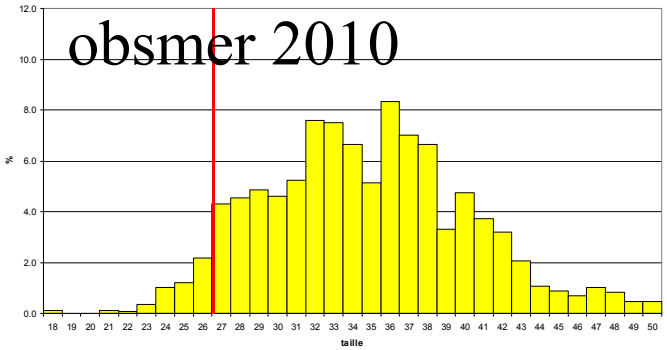
2010 : 37 fishing ops
2011 : 30 fishing ops
2012 : 61 fishing ops

Whiting

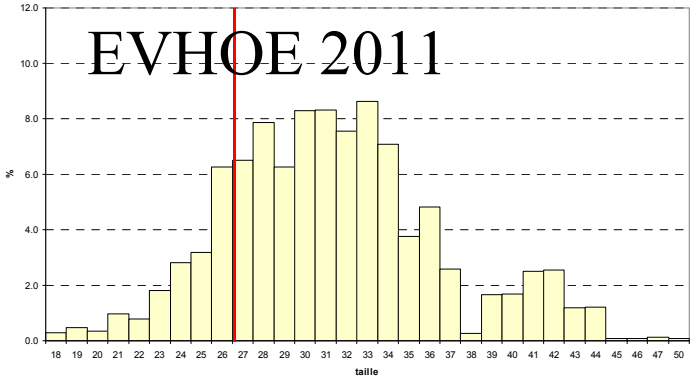
EVHOE 2010 - merlan - 7g - pourcentage par classe de taille



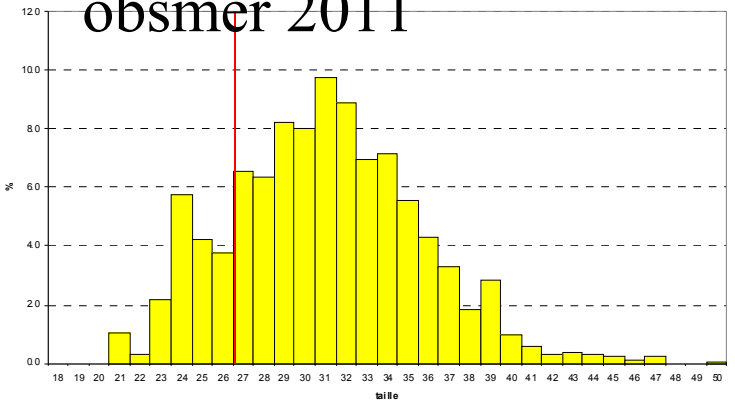
Obsmer 2010 - semestre 2 - 7g - merlan
pourcentage par classe de taille (sans dispositif sélectif)



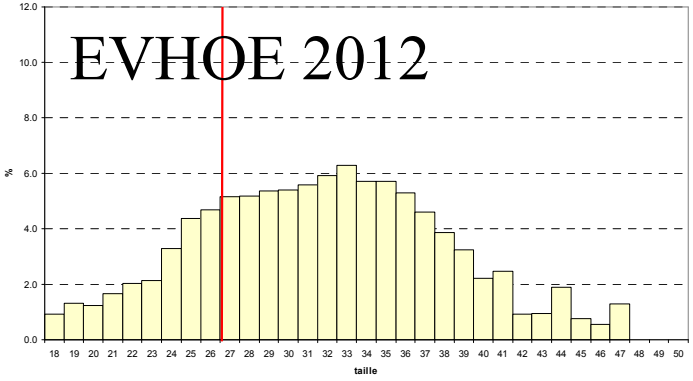
EVHOE 2011 - merlan - 7g - pourcentage par classe de taille



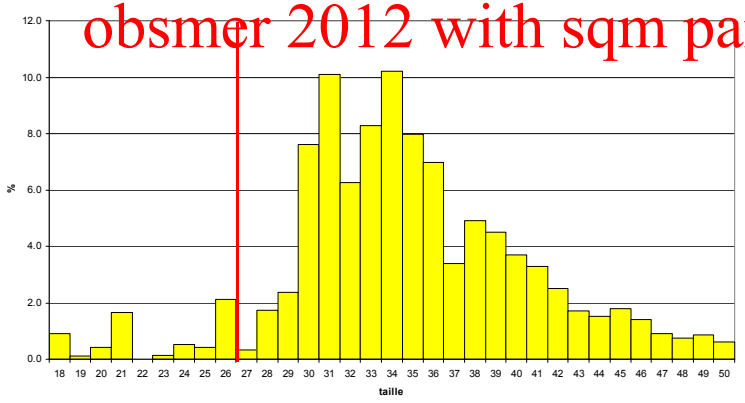
EVHOE 2011 - merlan - 7g - pourcentage par classe de taille (moins 1 marée dans 32E4)



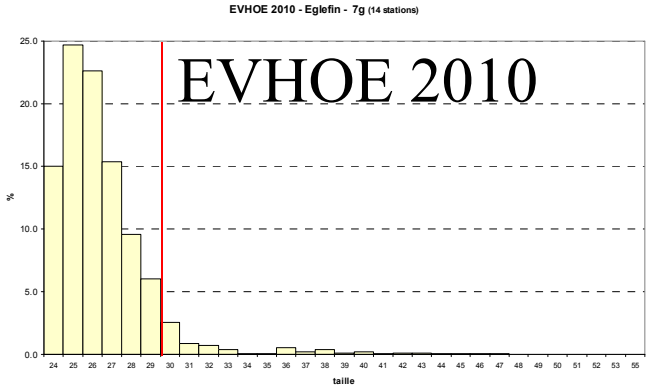
EVHOE 2012 - merlan - 7g - pourcentage par classe de taille

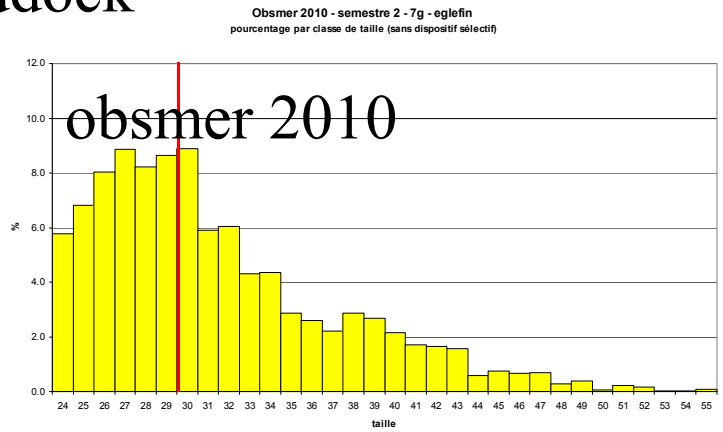


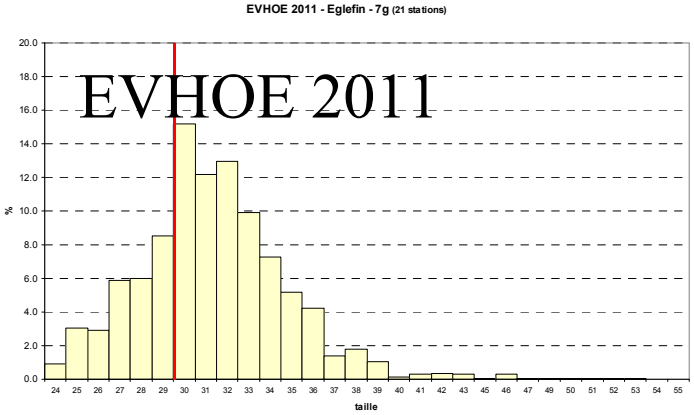
Obsmer 2012 - semestre 2 - 7g - merlan
pourcentage par classe de taille (avec dispositif sélectif)

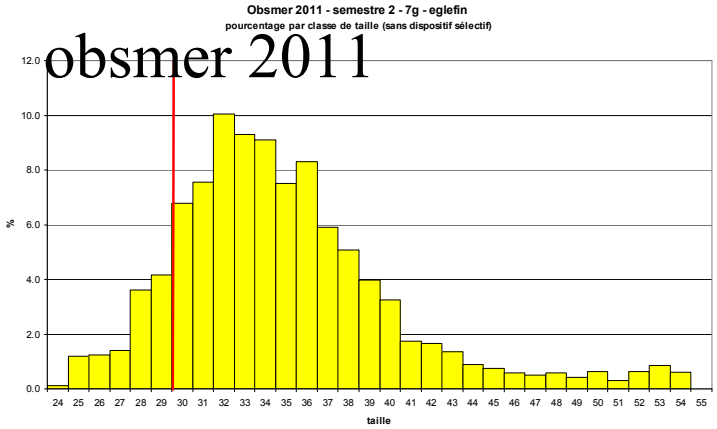


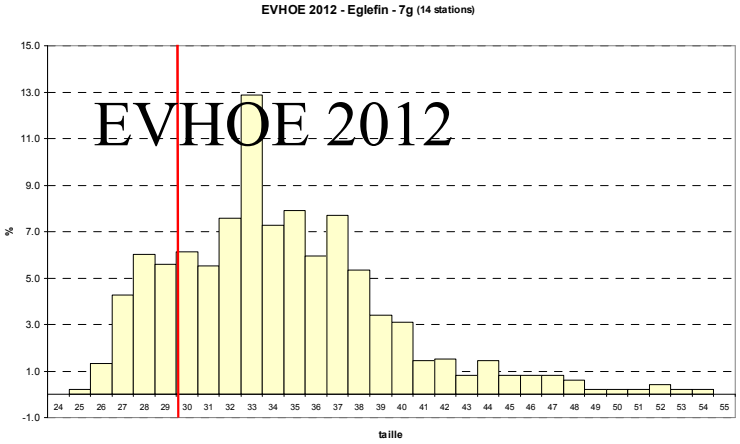
Haddock

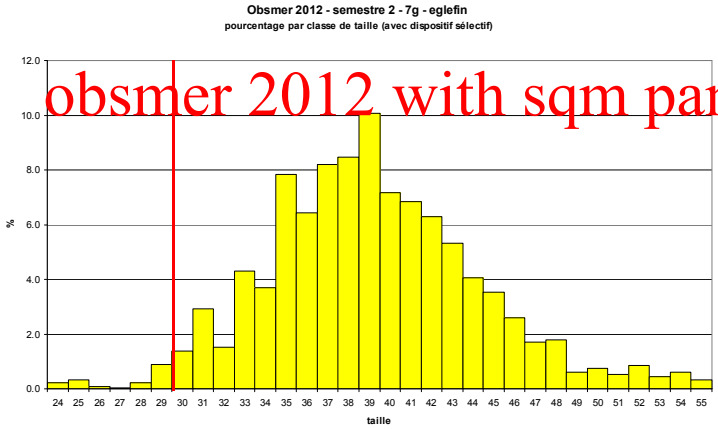

EVHOE 2010 - Eglefin - 7g (14 stations)
EVHOE 2010
%
taille


Obsmer 2010 - semestre 2 - 7g - eglefin
pourcentage par classe de taille (sans dispositif sélectif)
obsmer 2010
%
taille

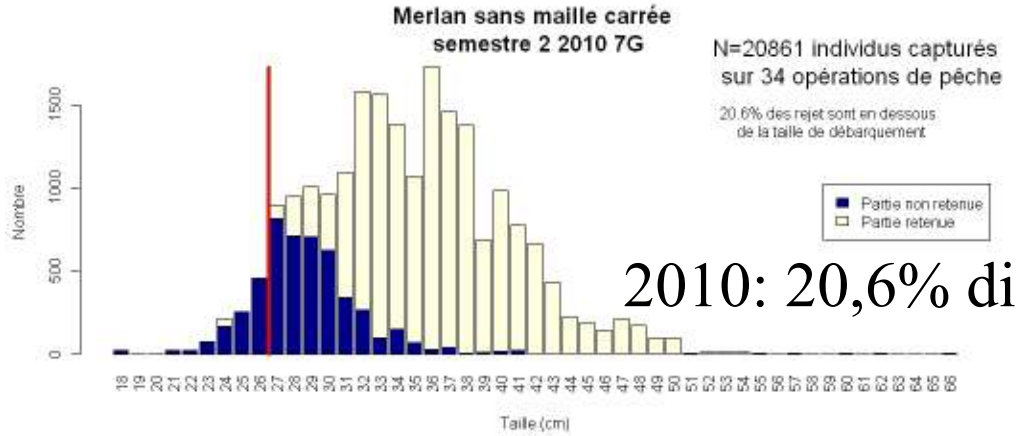

EVHOE 2011 - Eglefin - 7g (21 stations)
EVHOE 2011
%
taille


Obsmer 2011 - semestre 2 - 7g - eglefin
pourcentage par classe de taille (sans dispositif sélectif)
obsmer 2011
%
taille

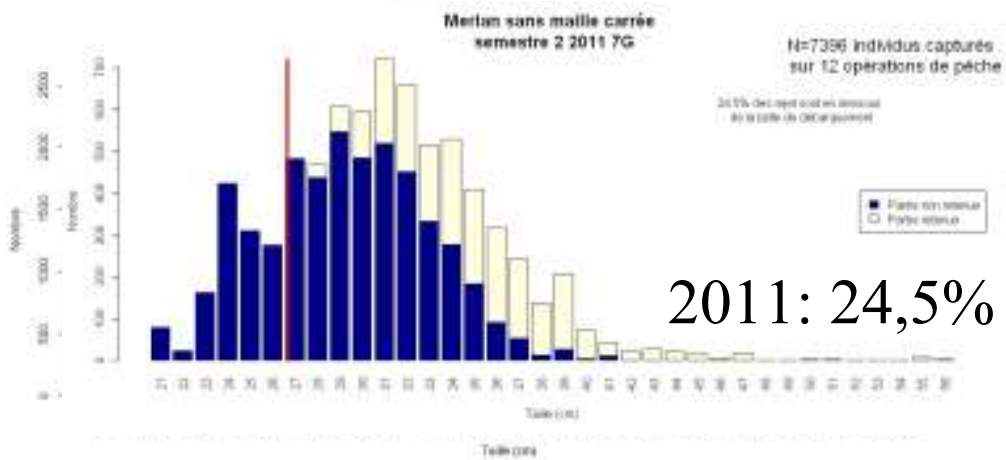

EVHOE 2012 - Eglefin - 7g (14 stations)
EVHOE 2012
%
taille


Obsmer 2012 - semestre 2 - 7g - eglefin
pourcentage par classe de taille (avec dispositif sélectif)
obsmer 2012 with sqm panel
%
taille

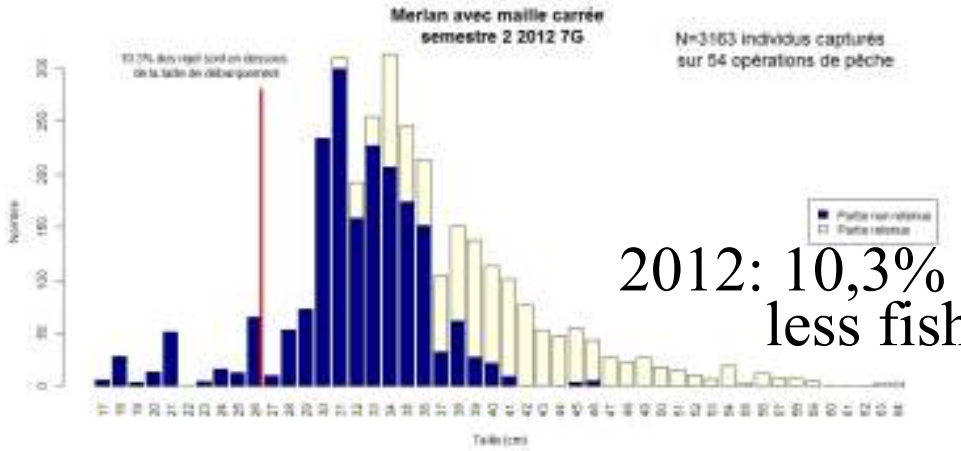
Whiting - Obsmer



2010: 20,6% discards < MLS (27cm)

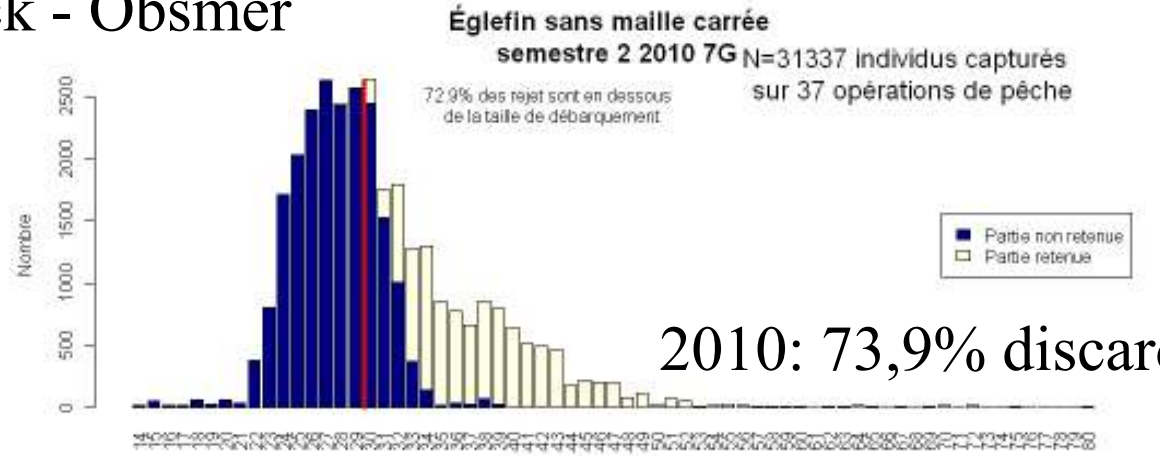


2011: 24,5% discards < MLS

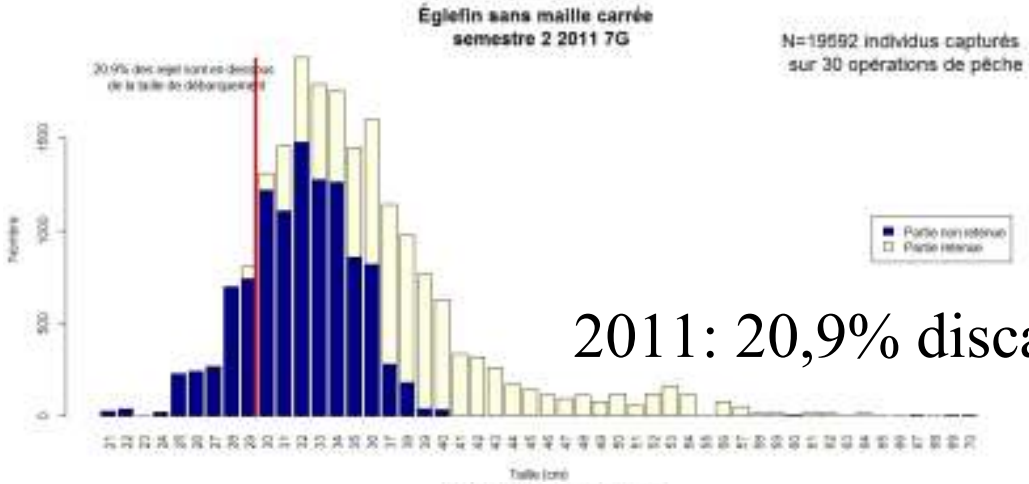


2012: 10,3% discards < MLS
less fish around MLS

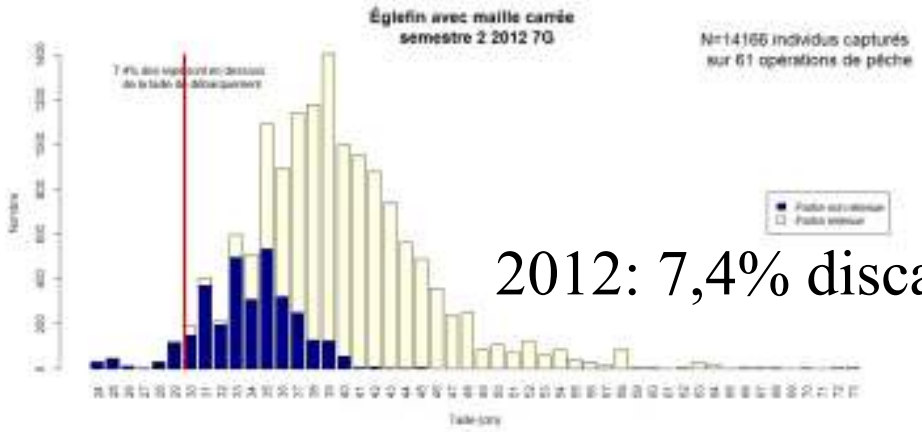
Haddock - Obsmer



2010: 73,9% discards < MLS (30cm)



2011: 20,9% discards < MLS



2012: 7,4% discards < MLS

Conclusions

-Less small fishes in the catches (and discards) since 2012 Q2.

- But data available for only 1 year since new regulation.

- Other factors have to be taken into account (population composition, fishing strategy, areas, gears…)

-This work must be considered as preliminary. More years of data needed.

Size selectivity of the Irish VIIjg OTB fleet.

Hans Gerritsen
Marine Institute, Galway

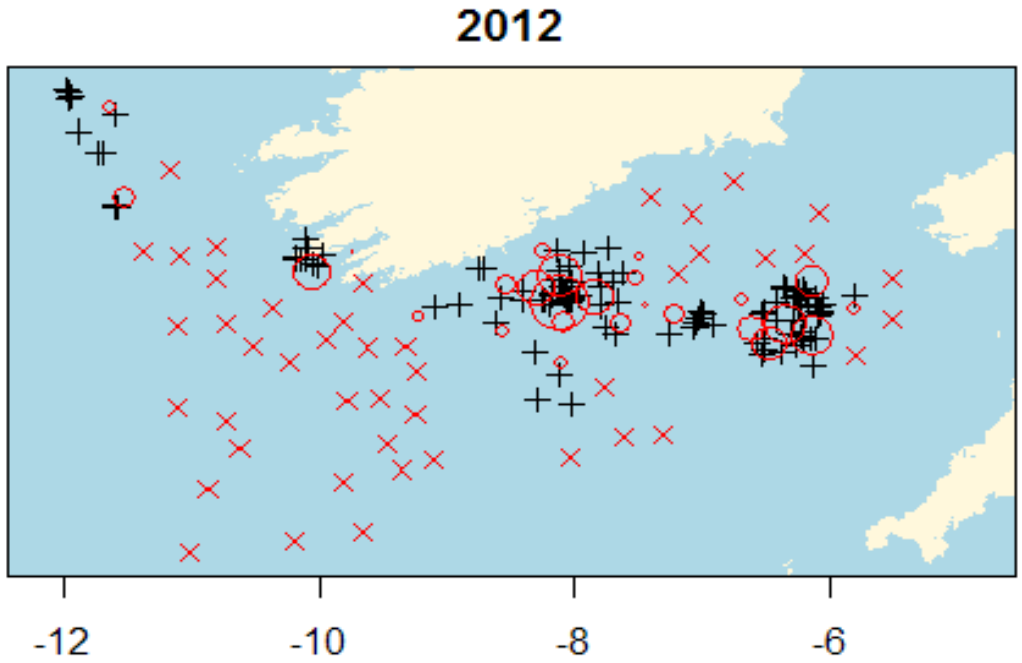
Available datasets (2003-2012)

- Irish Observer at sea program

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Trips	9	15	10	5	12	11	13	16	7	12
Hauls	52	171	114	30	126	120	148	203	101	116

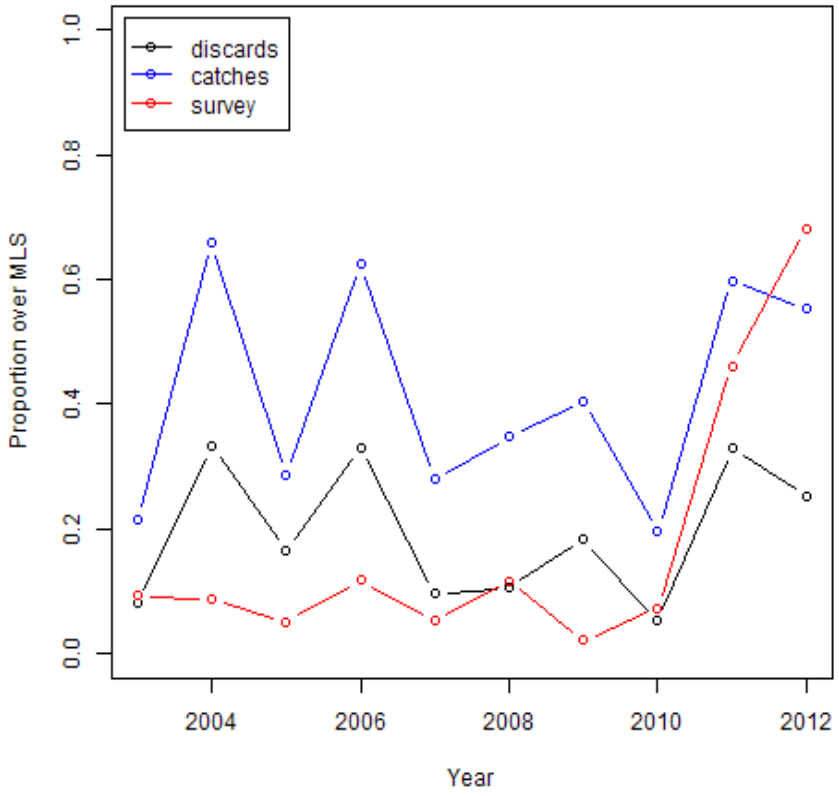
- Survey data from Irish GroundFish Survey

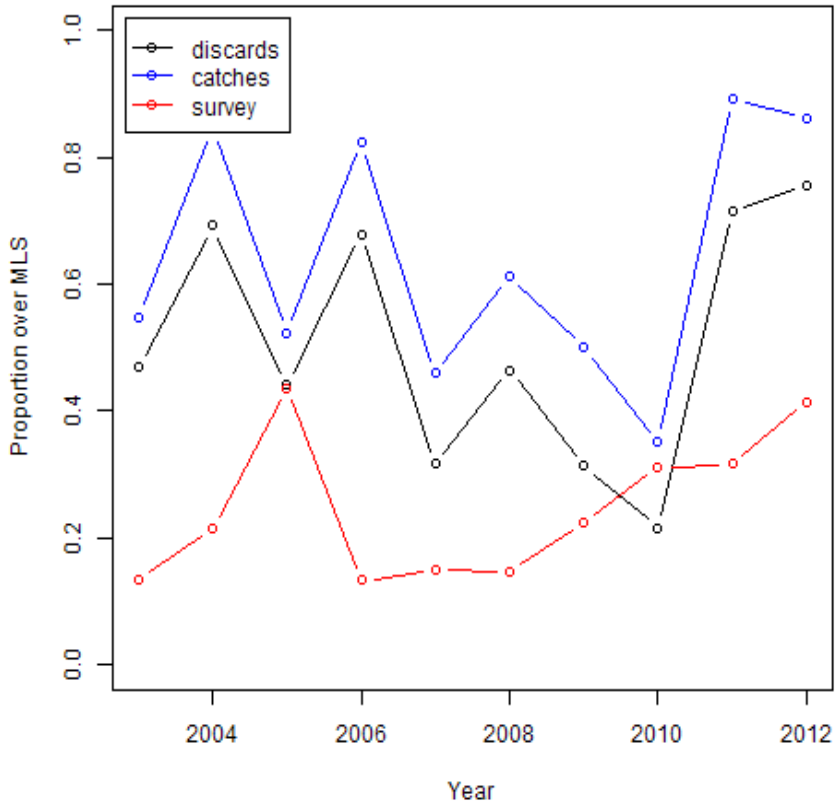
- Haddock and whiting in ICES VIIj and VIIg



The observer trip hauls (+) and the survey hauls (x / o). Only (o) and (+) are compared

Proportion in numbers of discards, catches above MLS

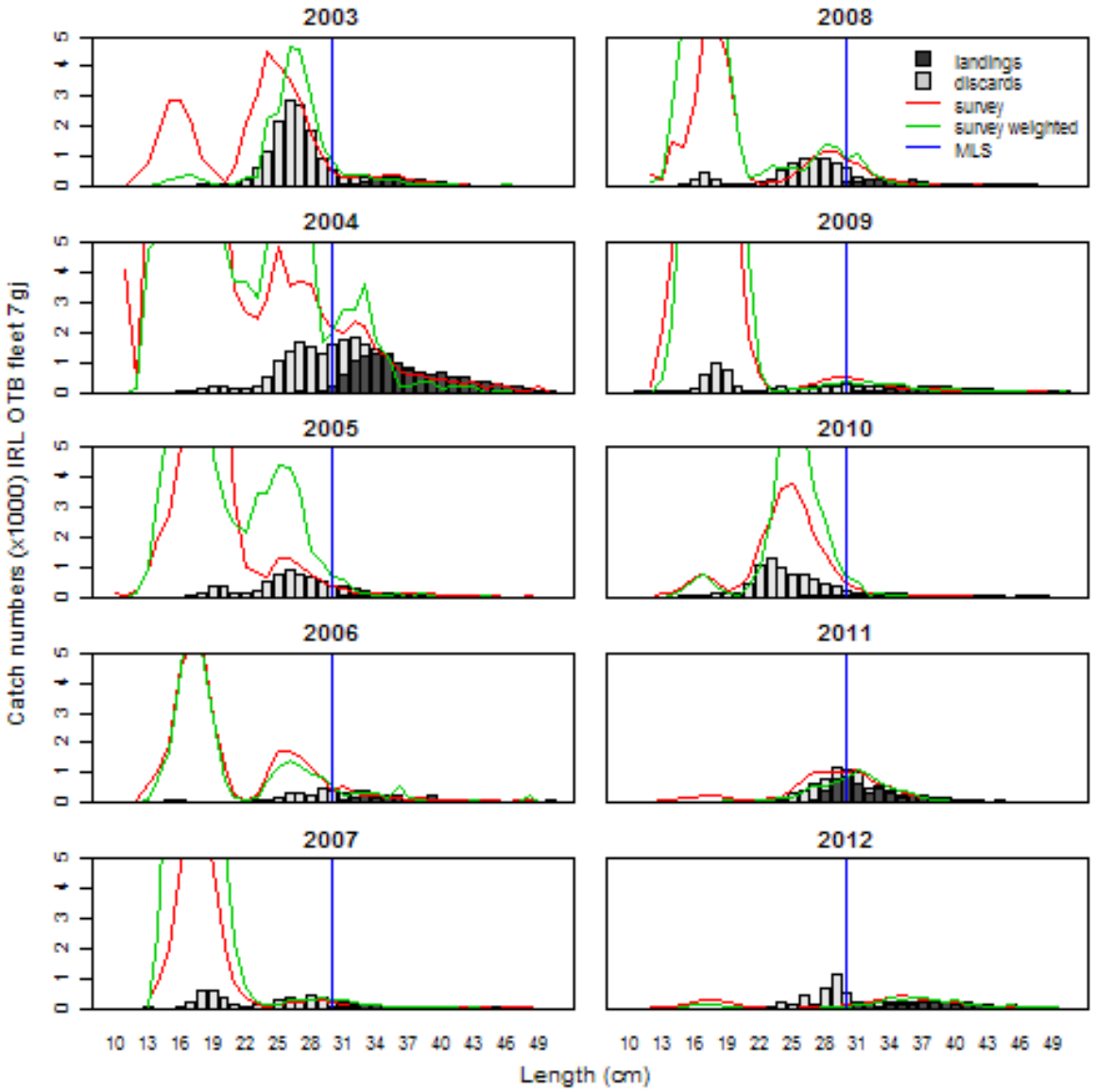




→ Proportion of the catches above MLS has increased in recent years,
→ Proportion of survey catches above MLS has also increased

➔ Possible change in the size composition of the population, rather than a change in size selectivity of the commercial gear.

Length distributions - Haddock

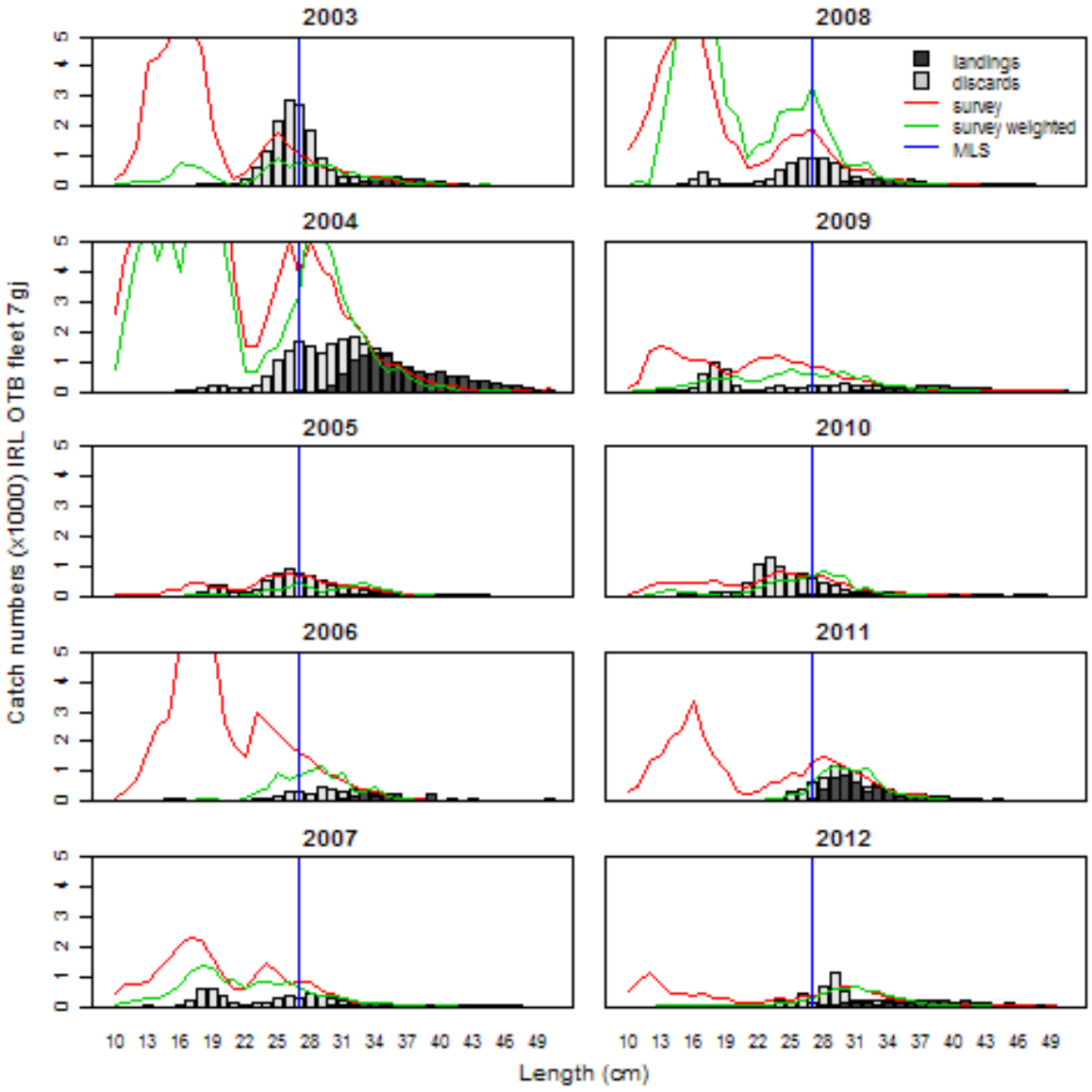


Strong recruitment

Recruitment below average since Then

Mean size of haddock in Survey and catch increasing

Length distributions - Whiting

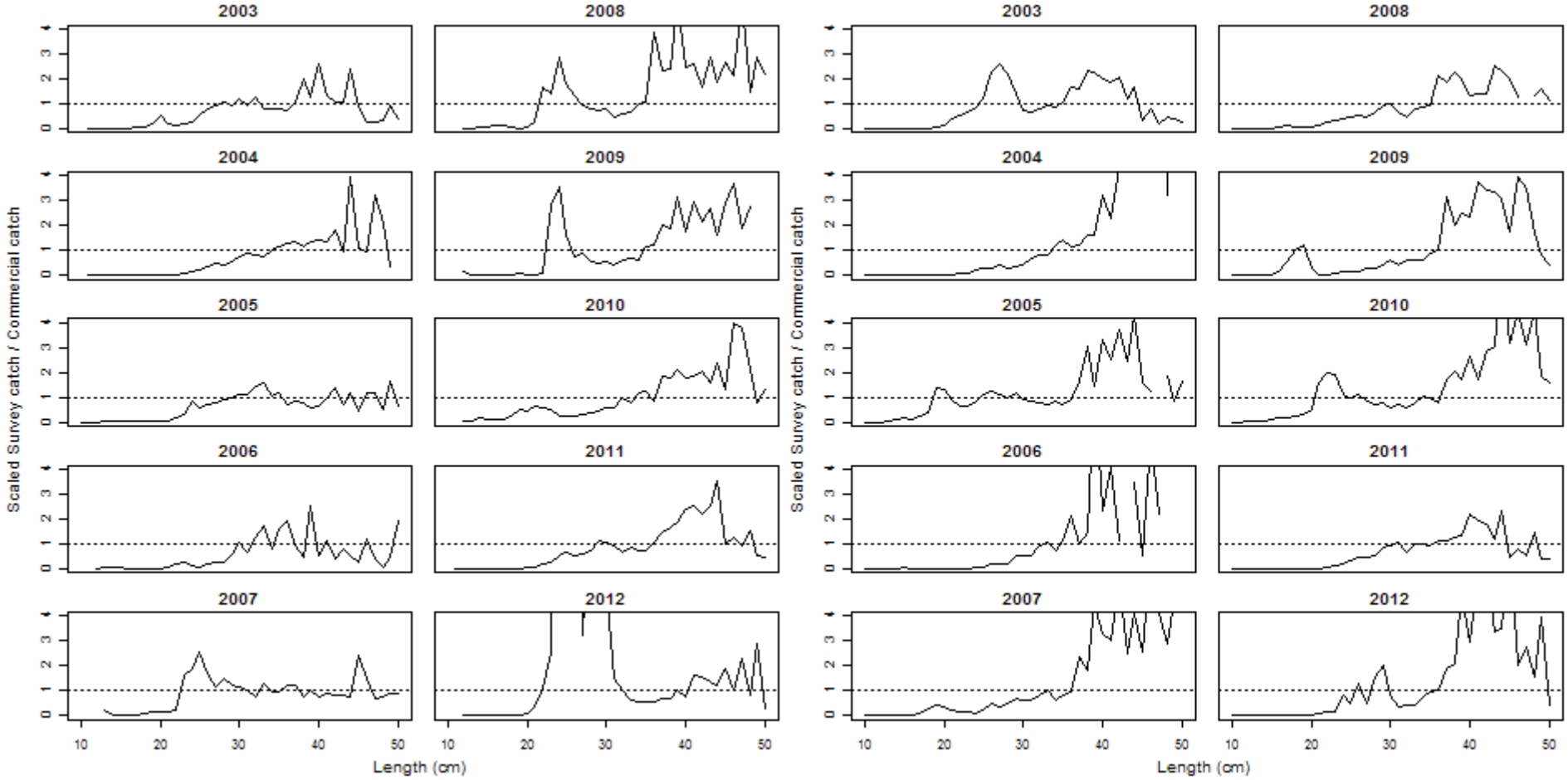


Mean size of whiting in Survey and catch increasing

Selectivity

Haddock

Whiting



No obvious pattern through time, quite variable for both species

Conclusions

- The commercial gear catches fewer small haddock and whiting in recent years,

- The mean size in the populations is increasing due to a number of years of poor recruitment.

- For the time being, the impact of change in size selectivity is unclear

➔For both French and Irish studies, more years of data are needed before drawing firm conclusions on the effect of change in size selectivity.

➔ For both cases, less smaller fishes in the catch: effect of mesh sizes ? fishing strategy ? changes in population composition ?