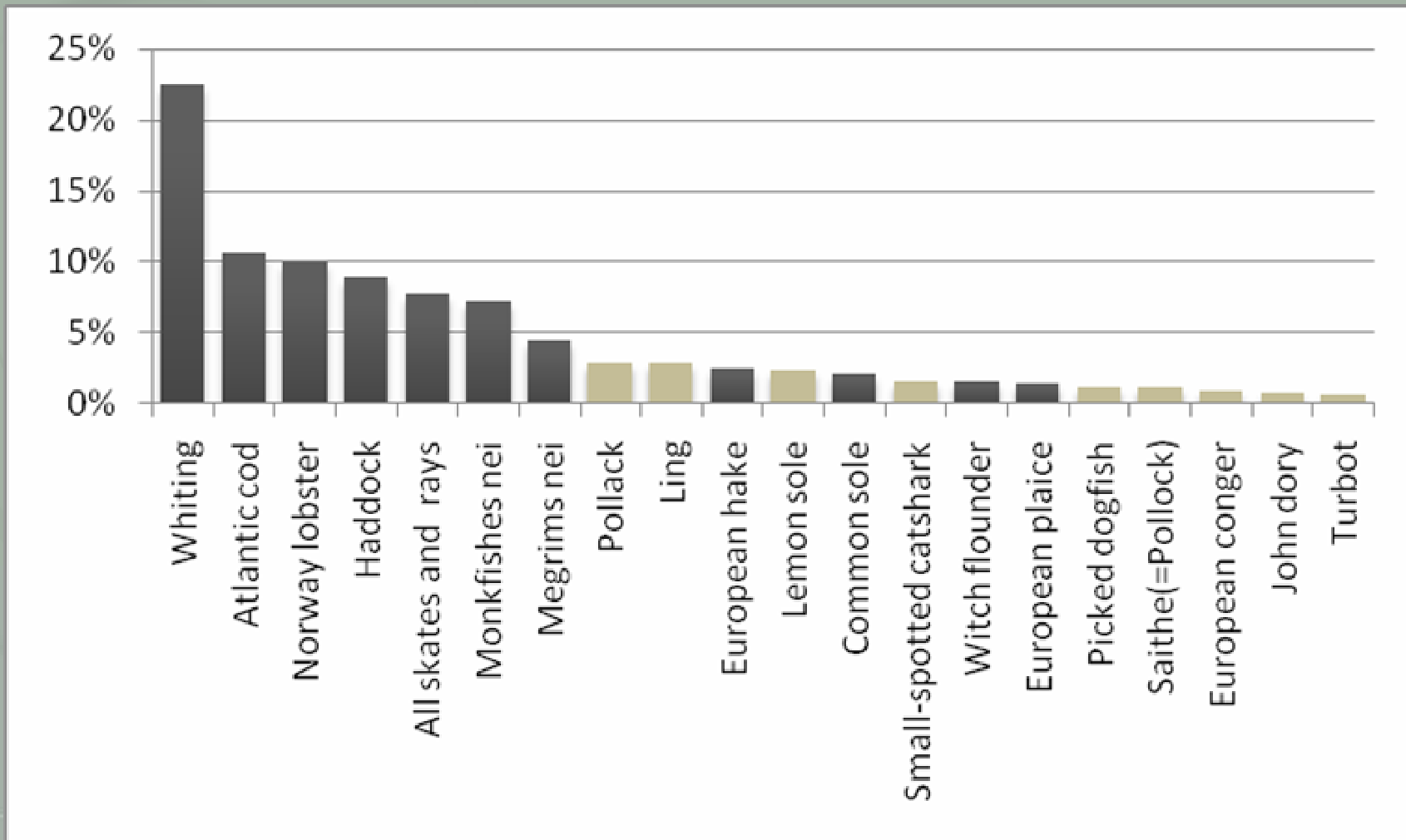


Update/refresh on Celtic Sea demersal stocks

Dr Colm Lordan
Marine Institute Ireland



- >100 species caught in VIIfg
- Top 20 ~ 95% of landings
- ICES advice for 10 ~ 78% of landings

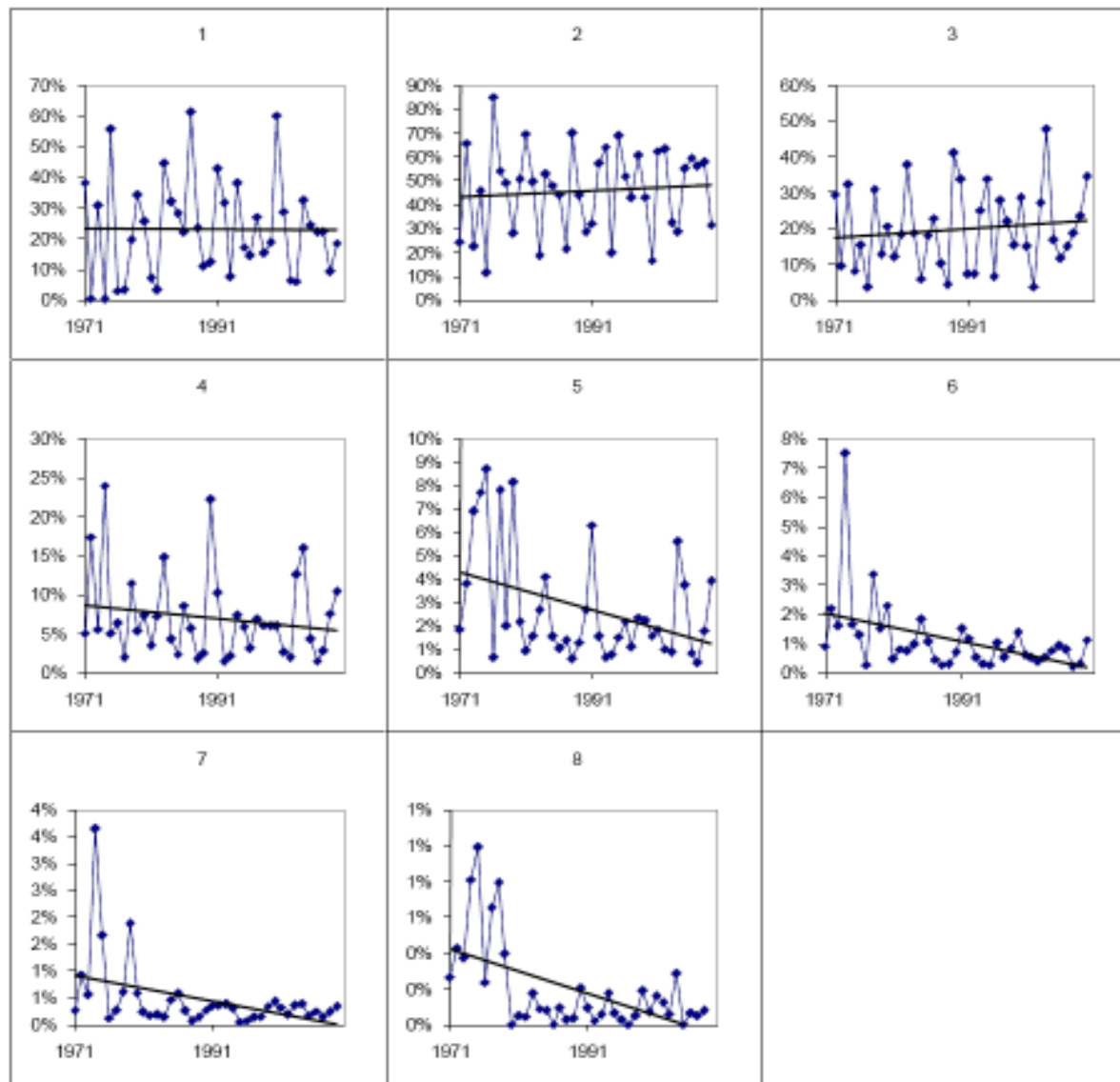


Figure 7.2.3. Cod in Divisions VIIe-k. Percentage of landings accounted for by each age class in Celtic Sea cod over the time-series (Data Source: WGCSE 2009).

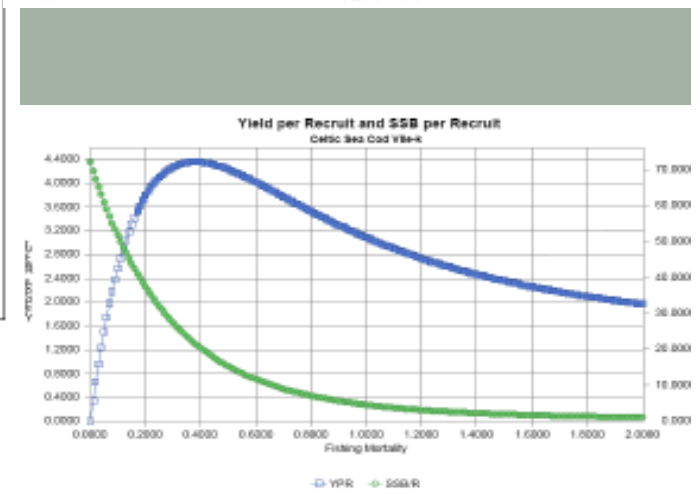
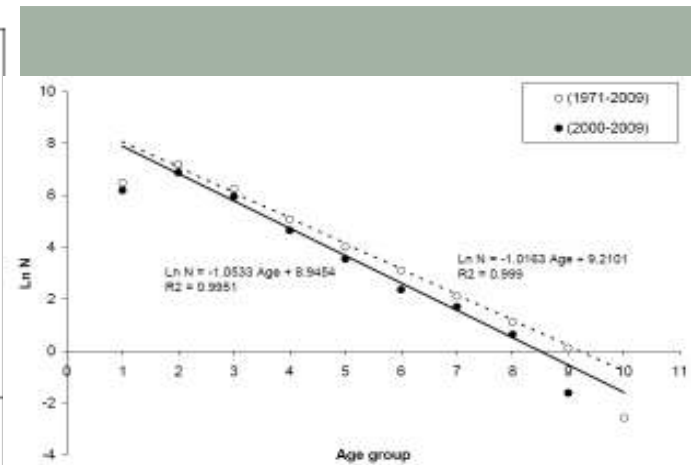


Figure 7.2.10. Cod in VIIe-k. Exploratory yield and SSB per recruit.

Celtic Sea Cod

Celtic Sea Cod

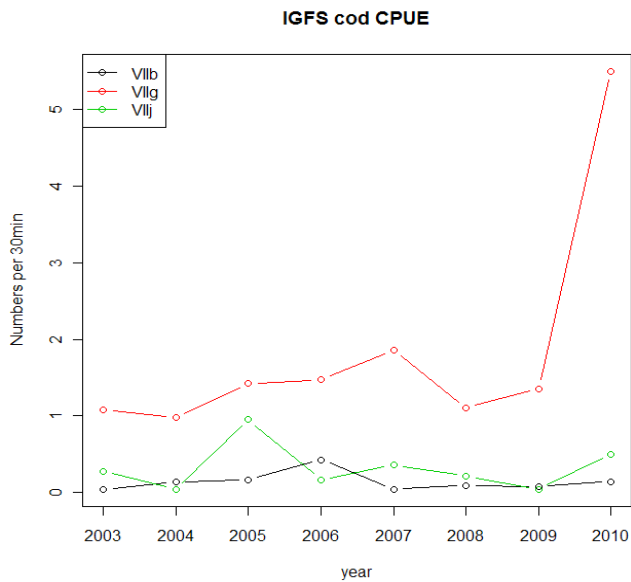


Figure 1. Standardised catch numbers at age 1 Celtic Sea cod from the Irish 2010 IBTS survey (2003-2010)

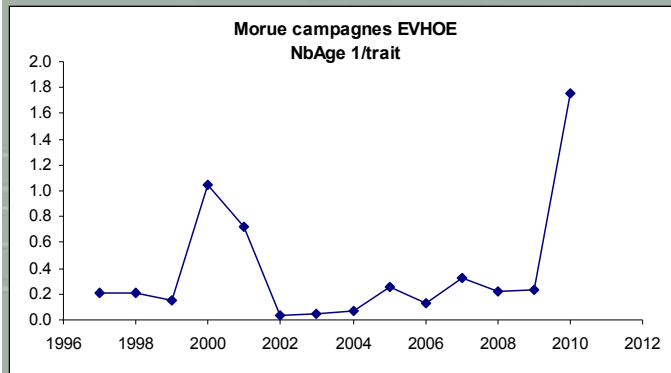
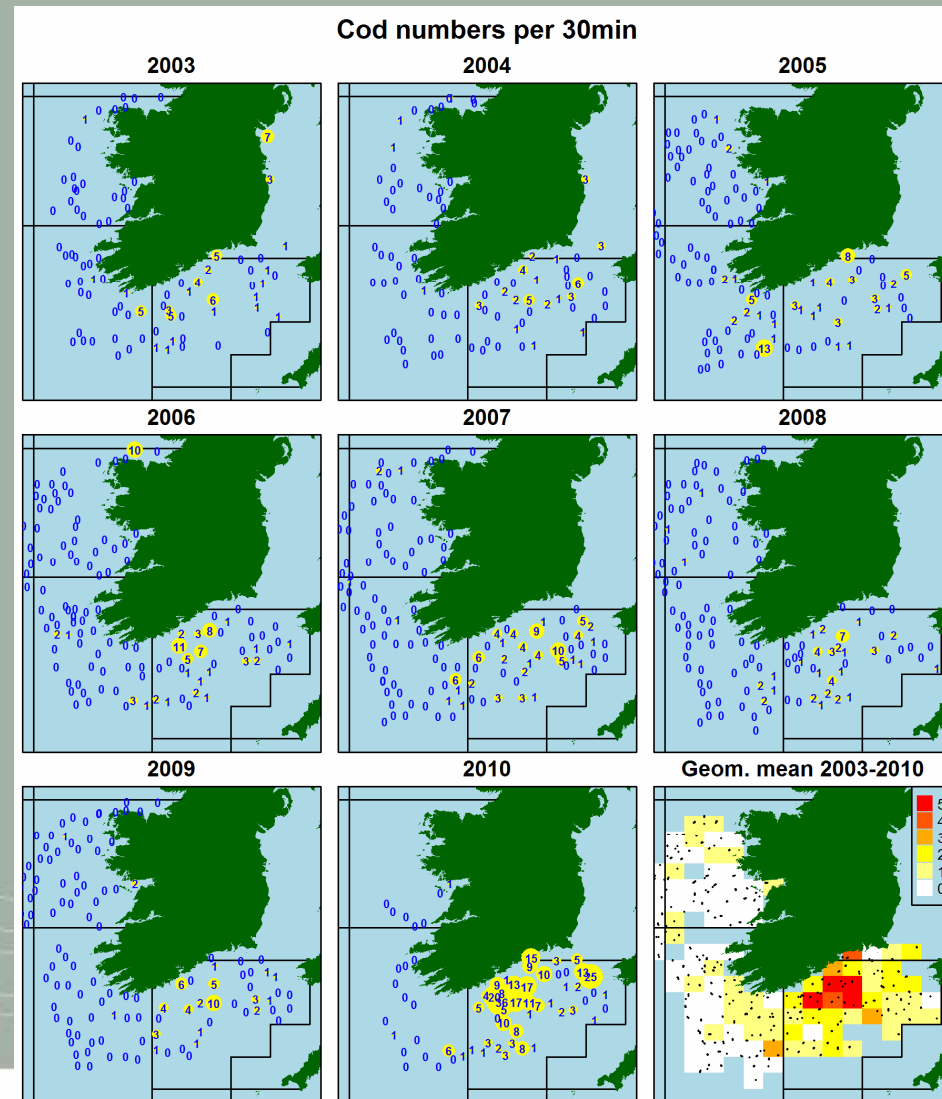


Figure 2. Standardised catch numbers of age 1 Celtic Sea cod from the French EVHOE survey in VIIgh (1997-2010).



Celtic Sea Cod

- ICES advice for catch reductions 2011 no longer appropriate.... No TAC change
- Strong 2009 will enter the fishery in Q1 2011
- 2 year old CS cod typically 40-60 cm 2.1kg
- Urgent need for a better assessment/advice basis
- [Plausible scenarios can be investigated](#)

Celtic Sea Haddock

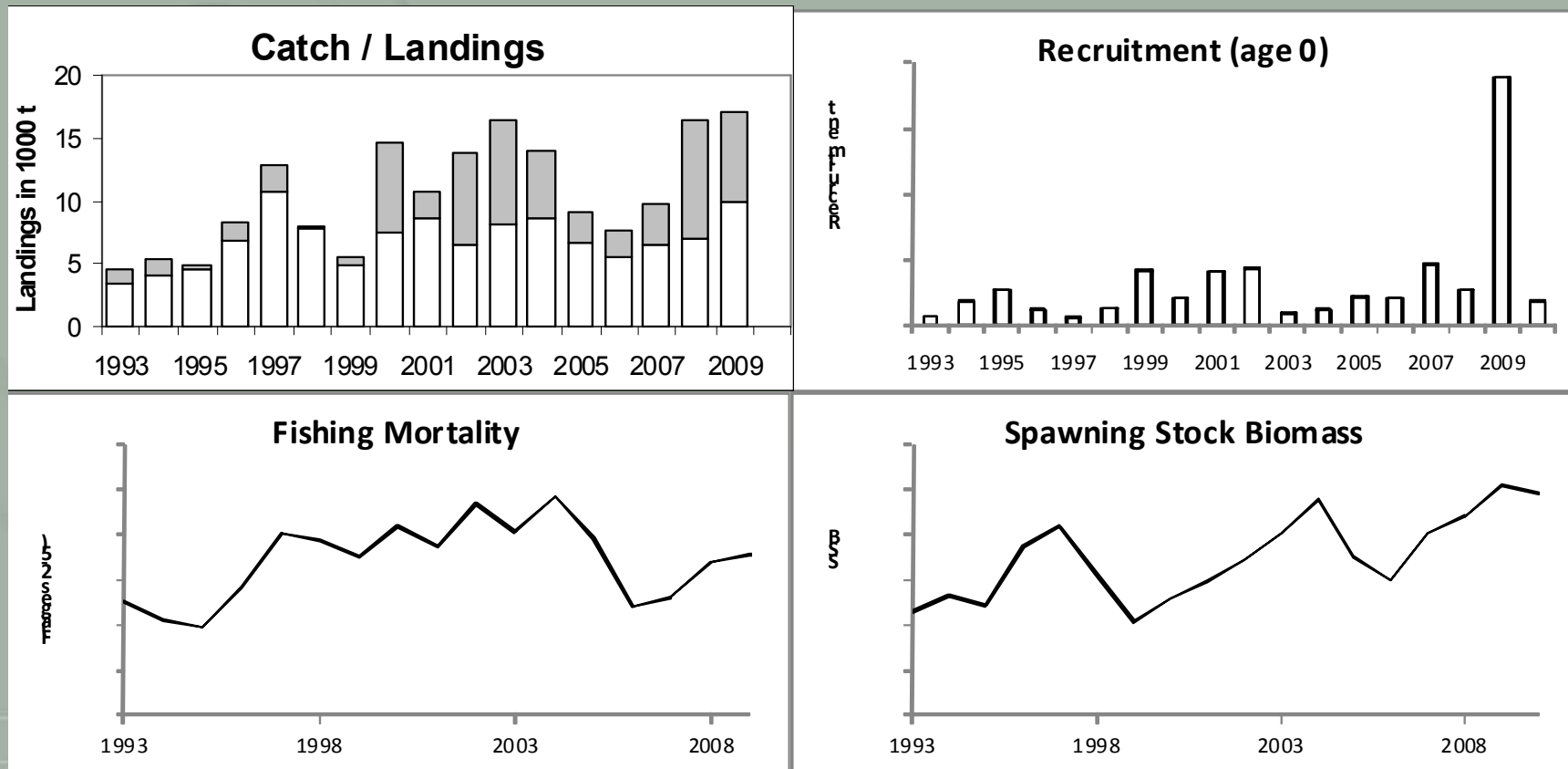


Figure 5.4.4.1 Haddock in Divisions VIIb–k. Summary of stock trends. Top right panel: Catches (landings (white) + discards (grey)). The recruitment value for 2010 is a GM 93–07 estimate. SSB in 2010 is estimated from the short-term forecast.

"The Commission notes that Member States commit to apply improved gear selectivity in conducting fisheries for haddock and whiting in the Celtic Sea."

Celtic Sea Whiting

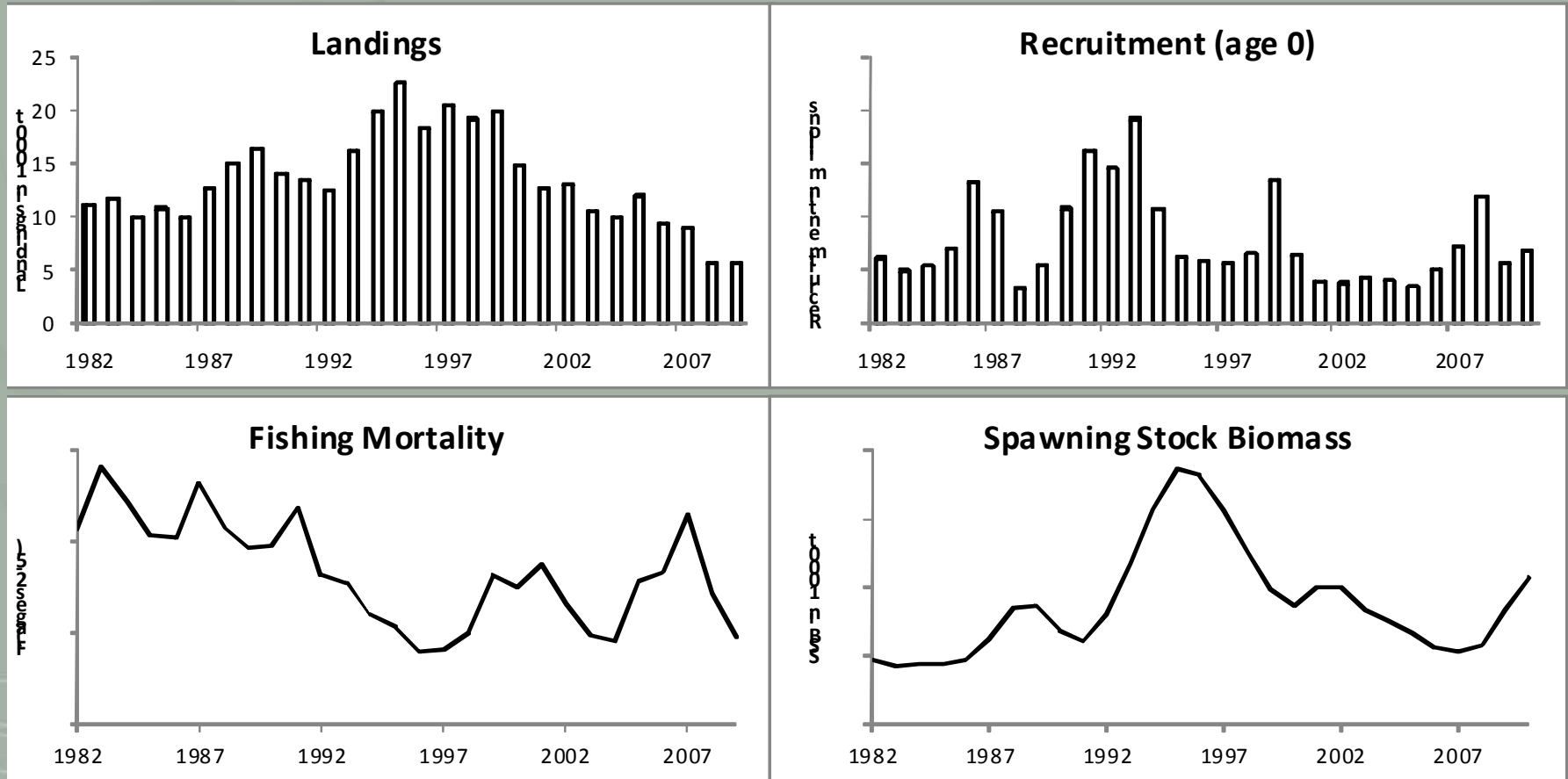
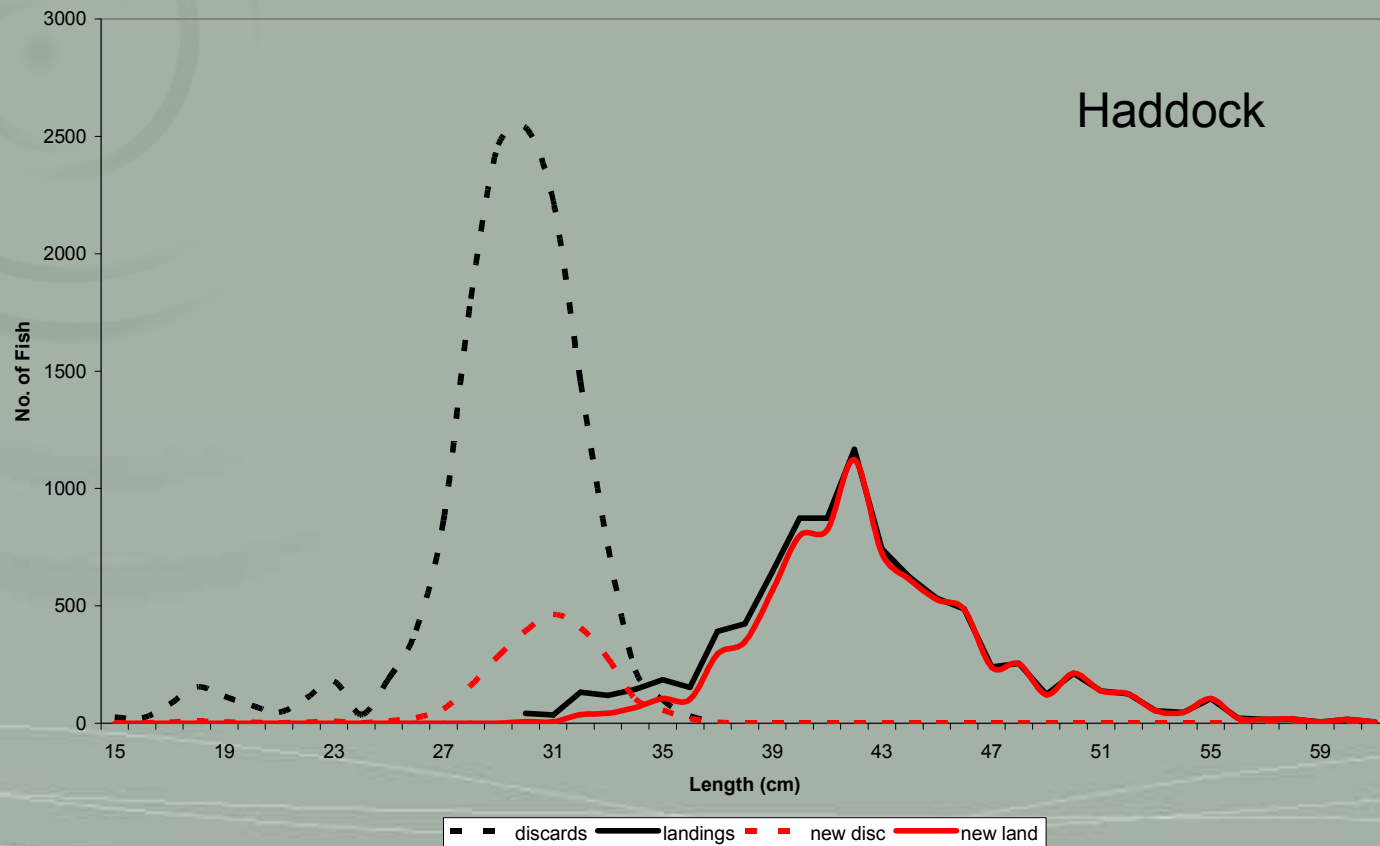


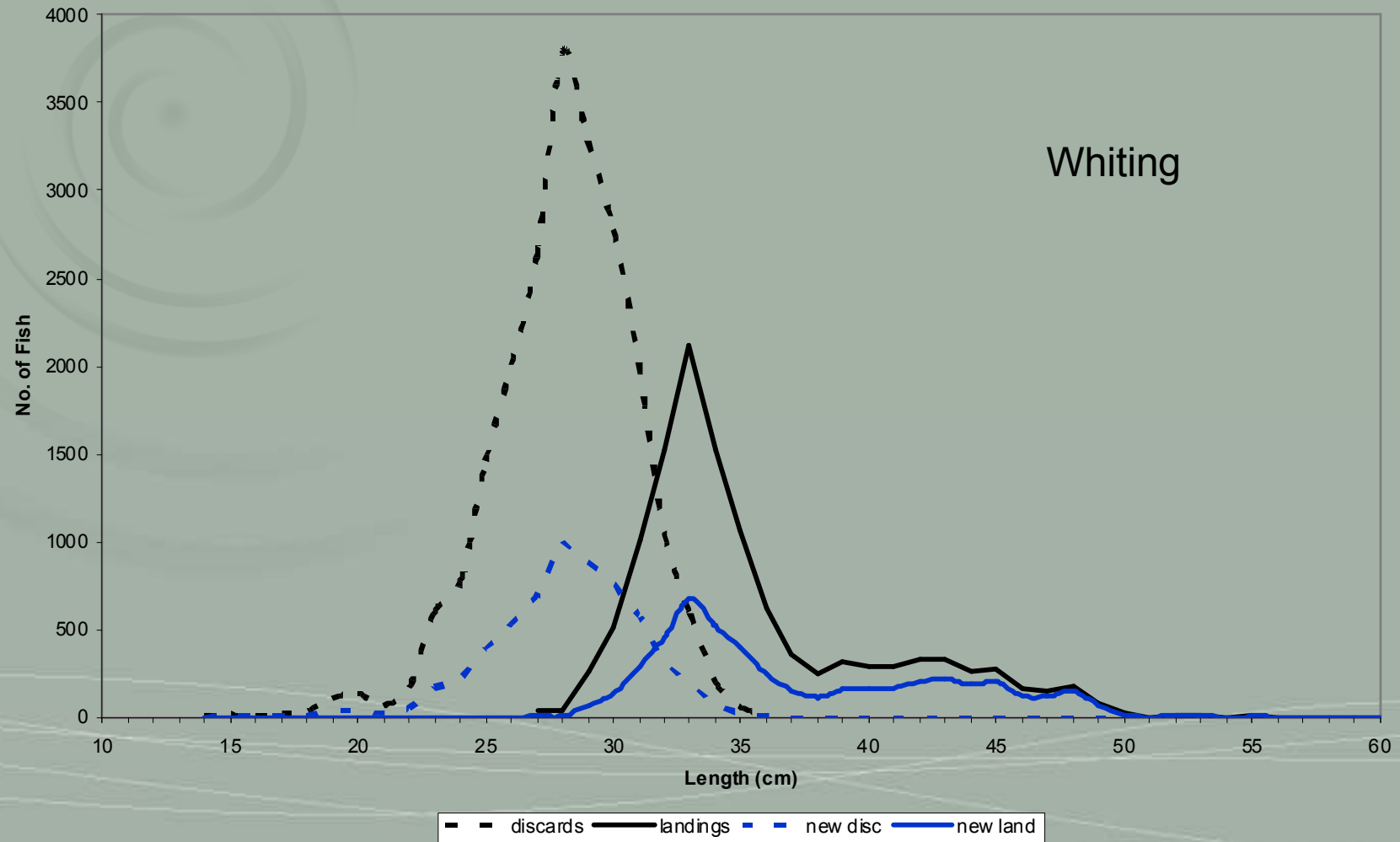
Figure 5.4.6.1 Whiting in Divisions VIIe–k. Summary of stock assessment, accepted for trends only.

90mm \rightarrow 100mm with 110mm SMP



Evaluation by Norman Graham and Dominic Rihan

90mm -> 100mm with 110mm SMP



Conclusions

- Discard rates in all trawl and seine fisheries in the Celtic Sea are excessively high
- Reducing discards should improve yield from the stock and help towards achieving F_{msy} for both stocks.
- *Nephrops* fisheries have the highest discard rate but demersal otter trawl and seine net métiers are responsible for >70% of the discards in absolute terms.
- Improving cod-end selectivity via increases in mesh size (100mm) and the inclusion of a square mesh panel (110mm) results in substantial reductions in haddock and whiting discards, with limited impact on haddock landings.
- Whiting landings are significantly impacted with the combined increase in cod-end mesh size and introduction of a 110mm square mesh panel
- Substantial, albeit lower reductions in discards can be achieved by the introduction of a 110mm square mesh panel. This has no impact on haddock landings and a reduced impact on whiting landings

Celtic Sea Plaice

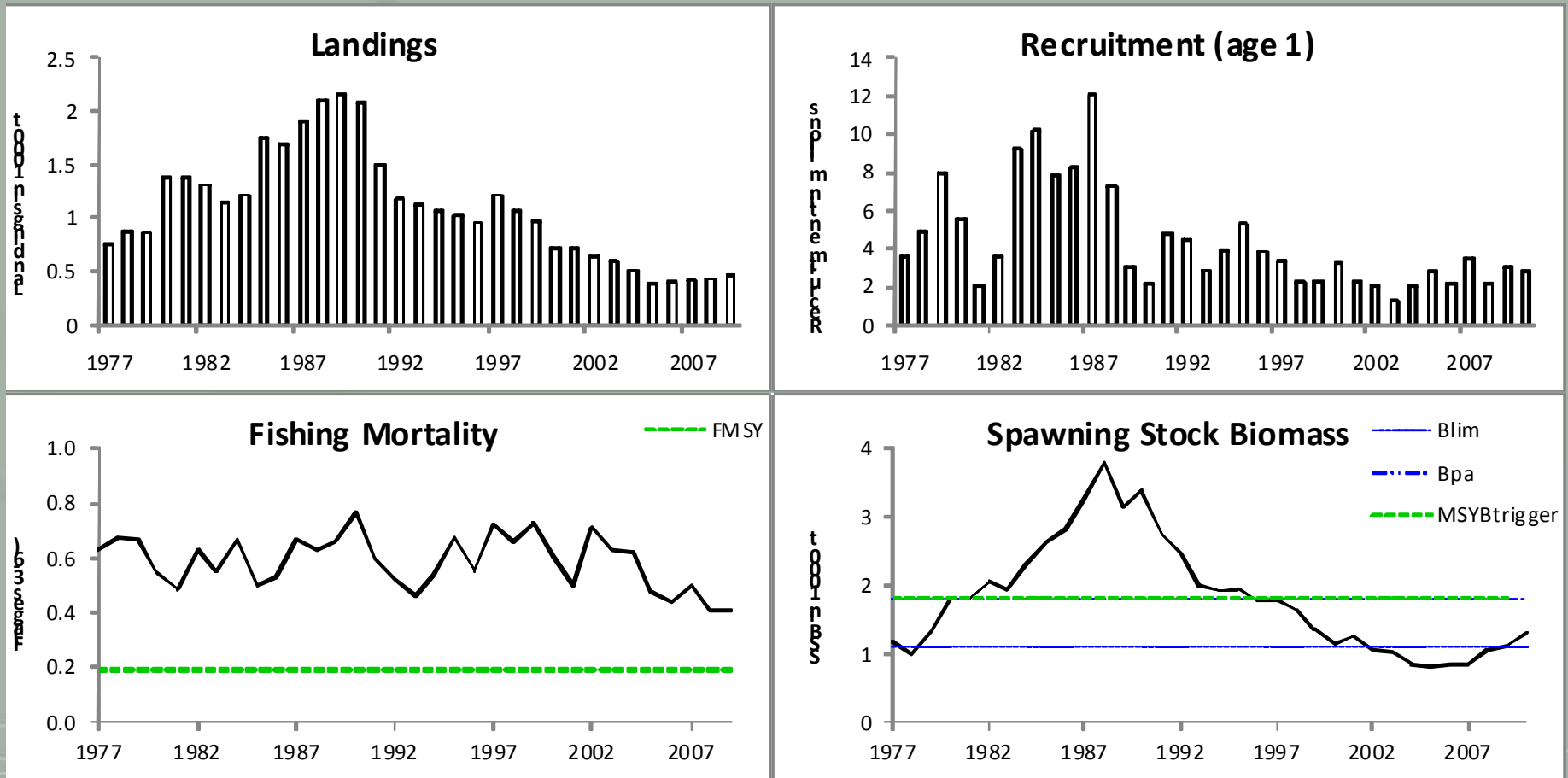


Figure 5.4.8.1 Plaice in Divisions VII f and g. Summary of stock assessment (weights in '000 tonnes). Top right: SSB and F over the years.

To Be Benchmarked Next Week at WKFLAT 2011

Celtic Sea Sole

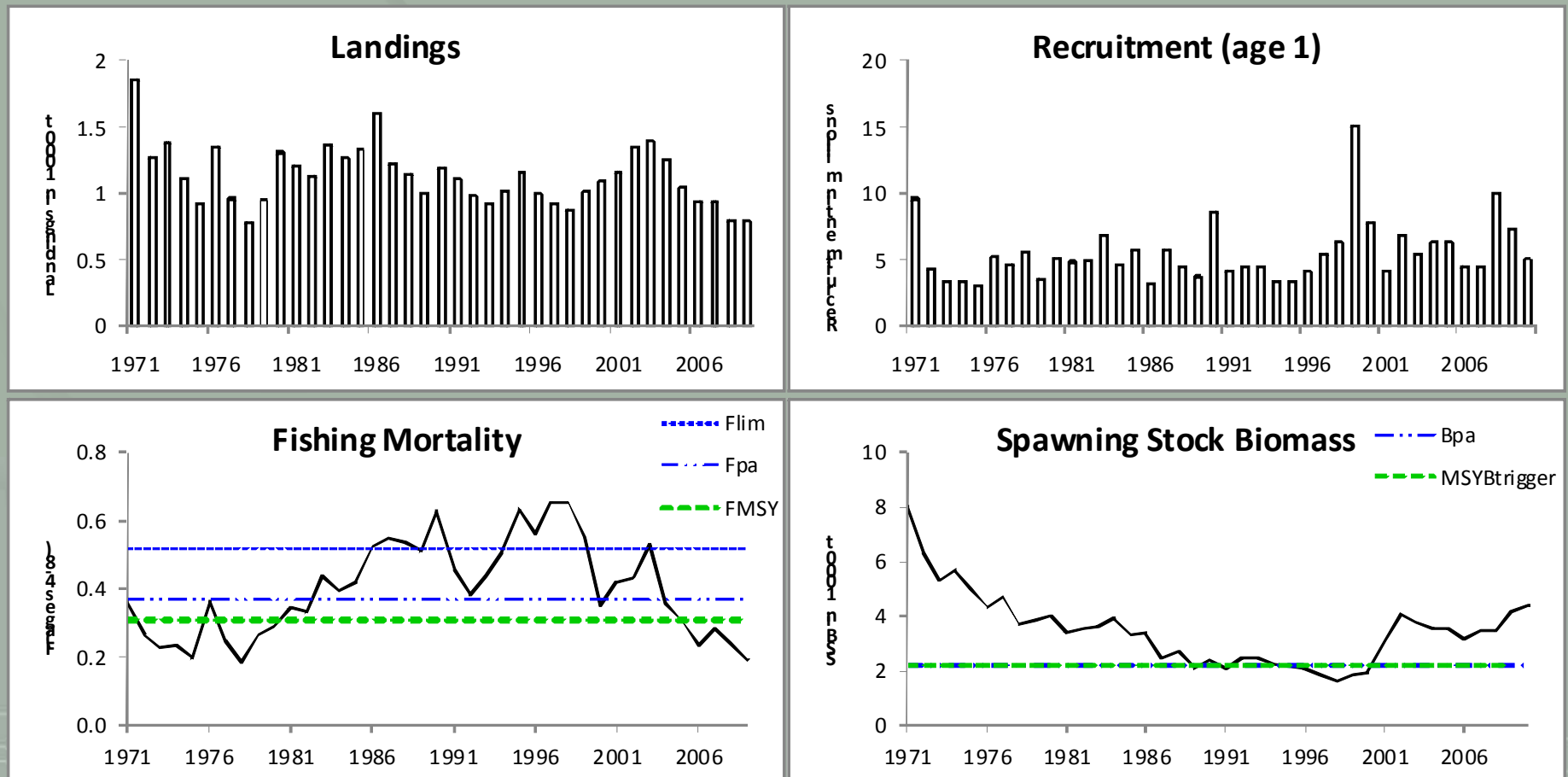


Figure 5.4.13.1

Sole in Divisions VII f, g. Summary of stock assessment (weights in '000 tonnes). Top right: SSB and F over the years.

Celtic Sea *Nephrops* FU20-22

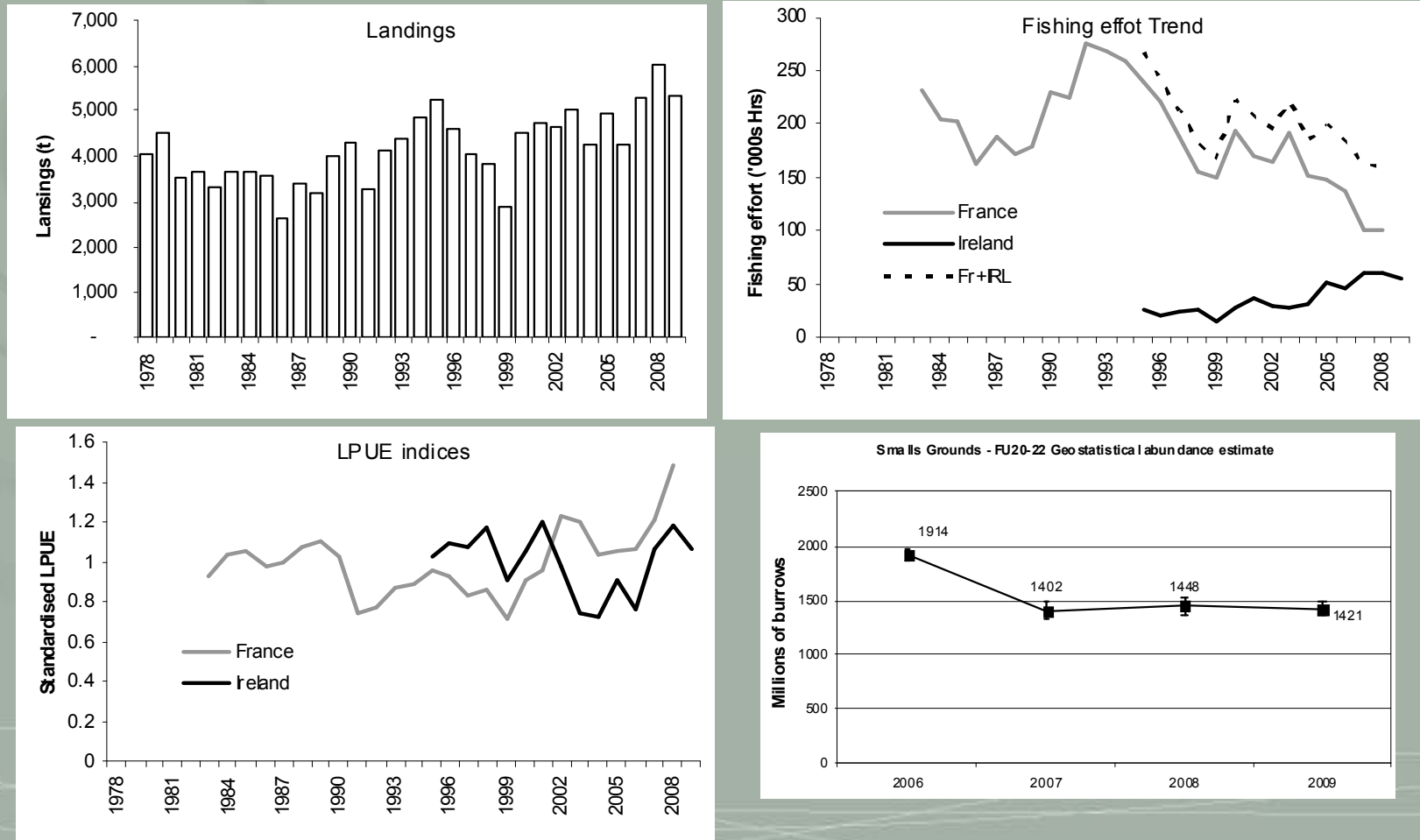


Figure 5.4.34.5.1 *Nephrops* in the Celtic Sea (FU 20–22): top: long-term trends landings and effort by country, below: lpue indices and recent UWTV survey data for “Smalls” component (~50% of recent landings).

Celtic Sea *Nephrops* FU19

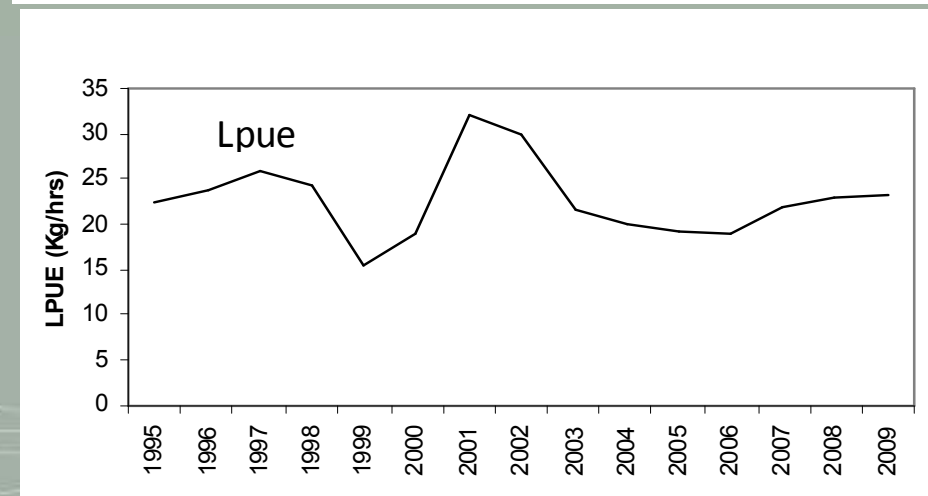
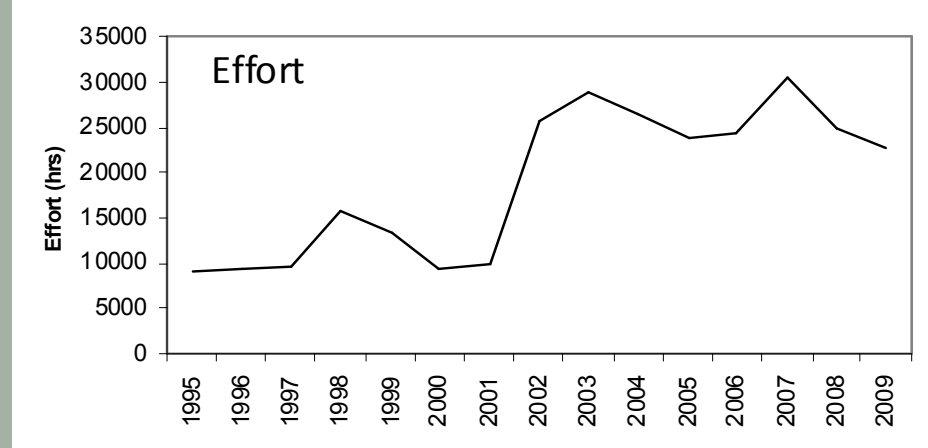
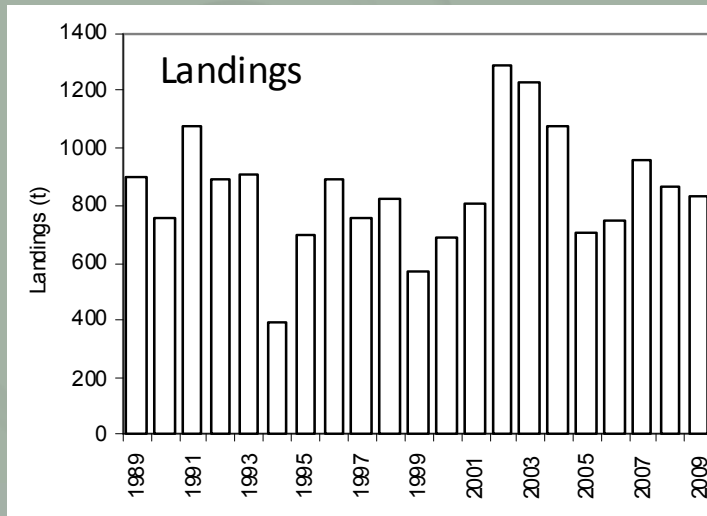


Figure 5.4.34.5.1 *Nephrops* off the south-eastern and south-western coasts of Ireland (FU 19): Long-term trends in landings, effort, lpues.

VII & VIII Megrin

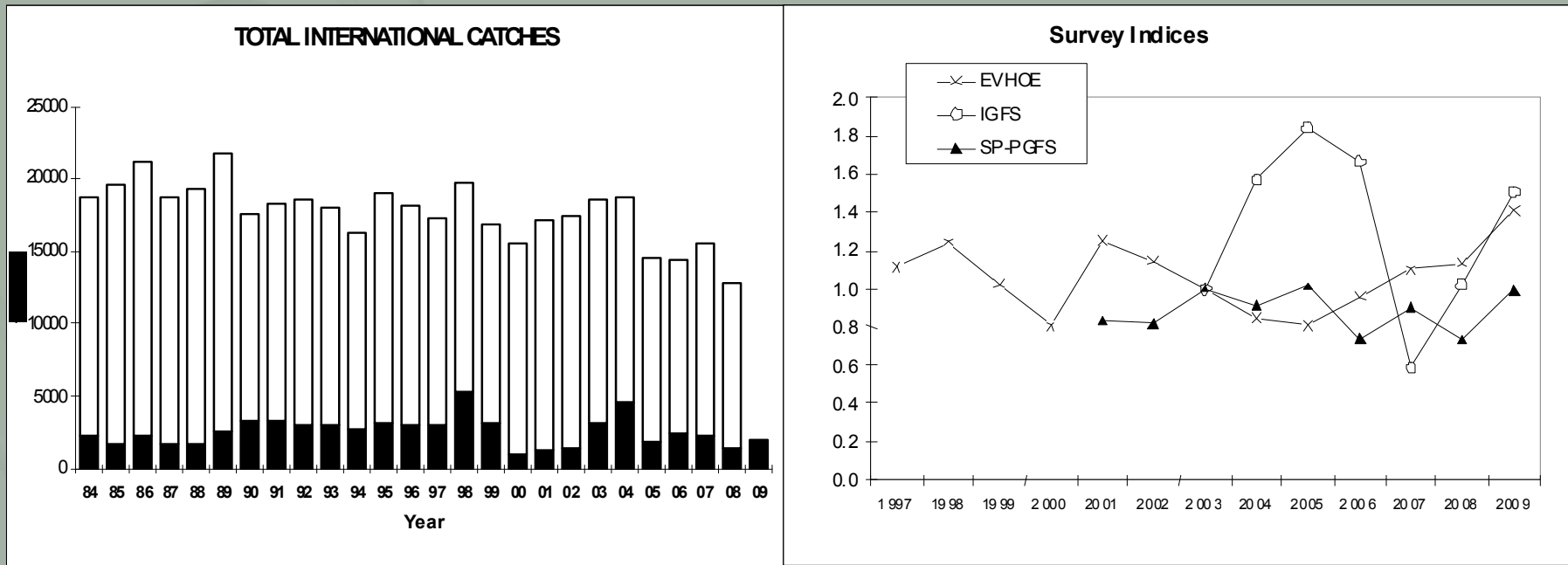


Figure 5.4.19.1 Megrin in Divisions VIIb-k and VIIIa,b,d. Left: Total catches (tonnes, white: landings, black: discard estimates). For 2009, no landing data are available for the French fleet. Right: Scaled indices for three different surveys (biomass for EVHOE and SP-PGFS; abundance for IGFS)

VII & VIII Anglerfish

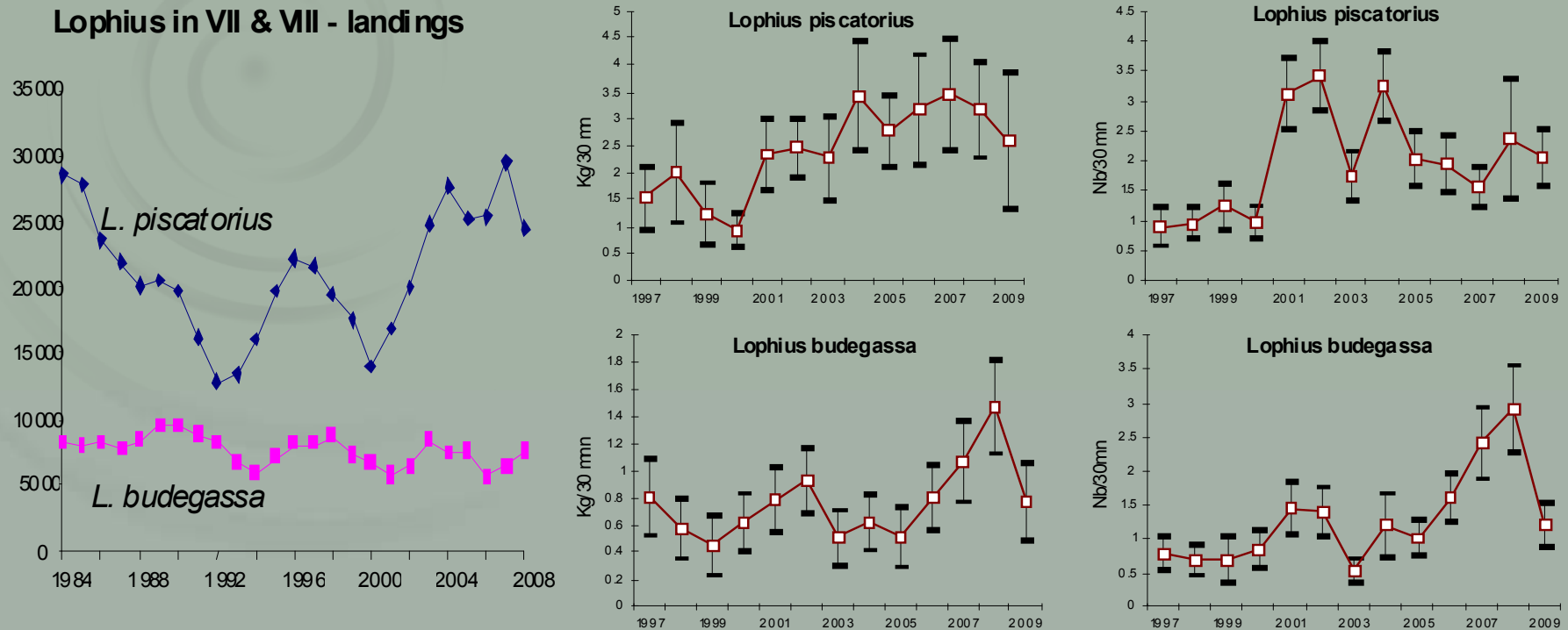


Figure 5.4.20.1 Anglerfish (top: *L. Piscatorius*, below: *L. budegassa*) in Divisions VIIb–k and VIIIa,b,d. Left: landings in tonnes until 2008. Survey trends (EVHOE), middle: biomass and right; total abundance indices. Error bars indicate ± 2 s.d.

Summary

Species	Stock area	Landings (catch) 2009 (t)	TAC 2010 (t)	Scientific advice					Dec Council Outcome (t)
				State of Stock			Advice options f	Policy Paper	
				F	SSB	cruitm			
Cod	VIIe-k	3,235	4,023	??	??	↑ 09	↓ catch & effort	Cat 7 ↓ 15%	→ 4,023
Haddock	VIIb-k	10,000 (17,100)	11,579	?	?	↑ 08	→ effort ↓ disc	Cat 8 ↑ 15%	↑ 15% 13,316
Whiting	VIIe-k	5,700	14,407	since	?		→ effort	Cat 8 ↑ 15%	↑ 15% 16,568
Plaice	VIIIfg	463	450	since	~ BlimLow	→	< 500 t	Cat 3 <410 t	↓ 9% 410
Sole	VIIIfg	790	993				< 1400 t	Cat 1 1200 t	↑ 25% 1,241
Nephrops (FU19)	VIIg	830	22,432	?	?	?	↓ catch	Cat 6	↓ 3% 21,759
Nephrops (FU20-22)	VIIIfh	5,300		?	?	?	↓ catch	Cat 6	
Megrim	VIIb-k & VIIIabe	11,500 (13,500)	20,400	?	?	?	↓ catch & effort	Cat 7 ↓ 15%	→ 18,300
Anglerfish	VII & VIII	32,200	41,400	?	?	?	→ catch & effort	Cat 8 ↑ 15%	→ 32,292
Hake	VI, VII, VIII	47,800	55,100	since	since 00		<44800	Cat 8 ↑ 15%	→ 30,900