

Biological assessment of Celtic Sea stocks

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Celtic Sea cod

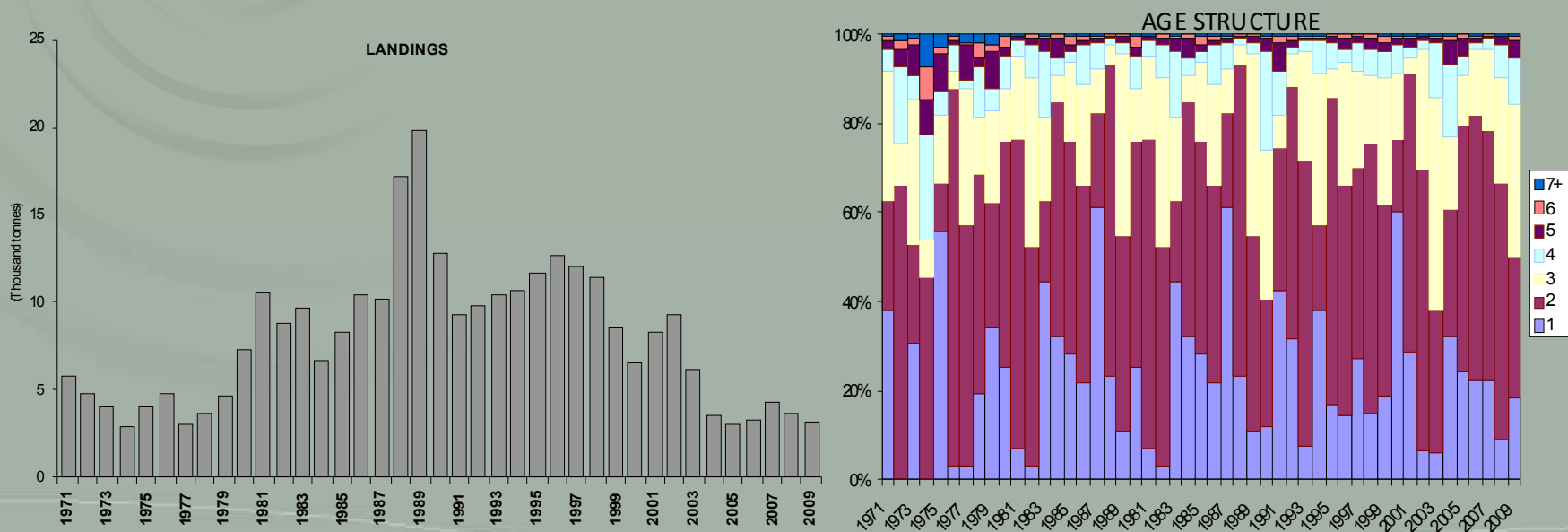


Figure 5.4.2.1 Cod in Divisions VIIe-k (Celtic Sea Cod). Landings (weights in '000 tonnes) and age structure of the landings.

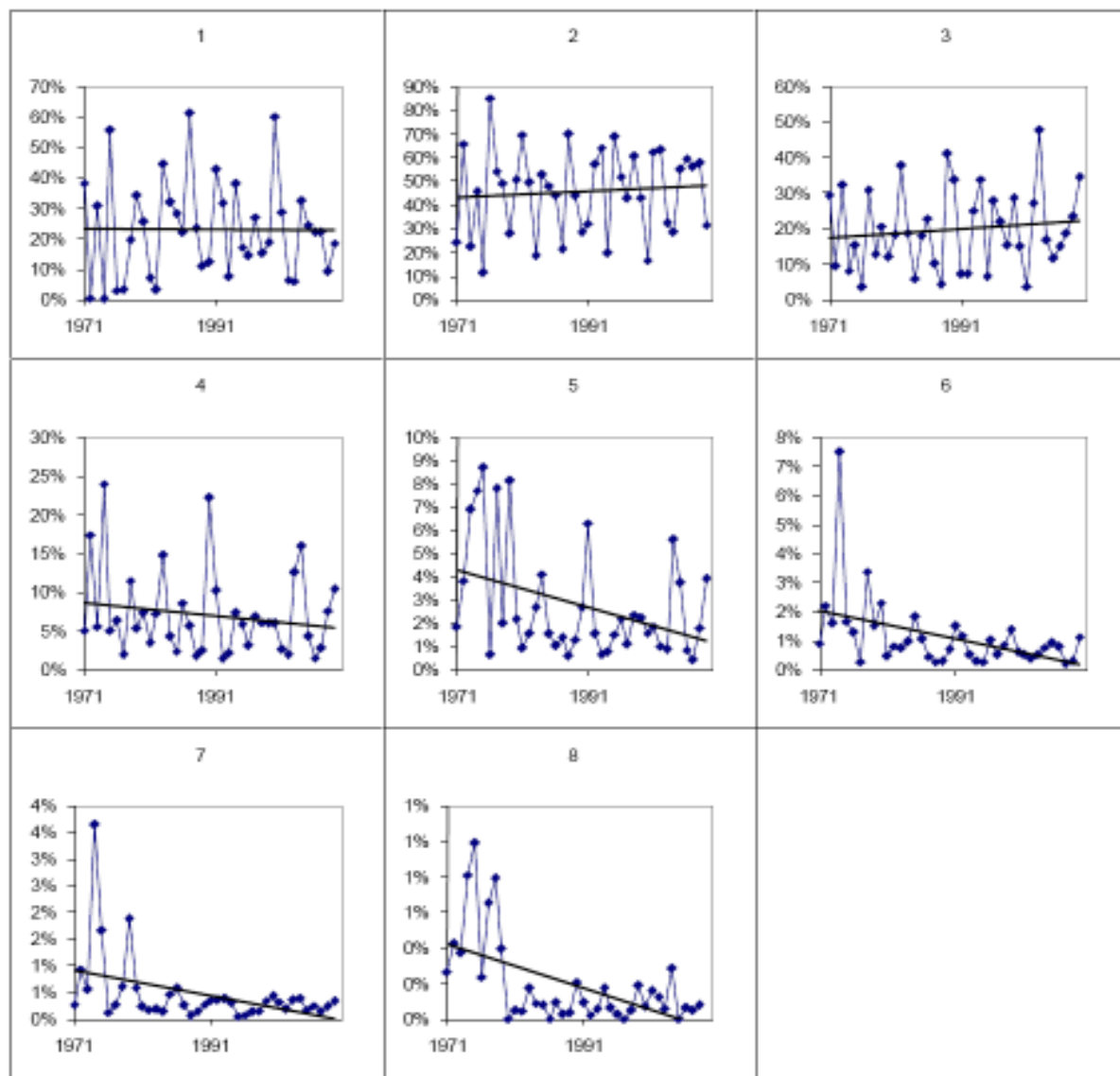


Figure 7.2.3. Cod in Divisions VIIe-k. Percentage of landings accounted for by each age class in Celtic Sea cod over the time-series (Data Source: WGCSE 2009).

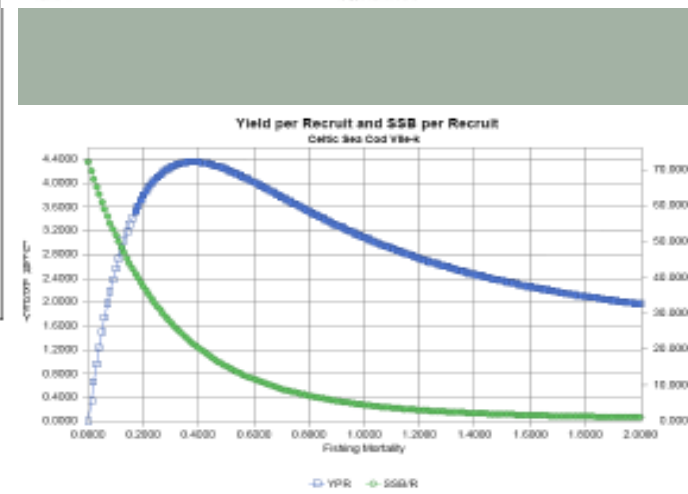
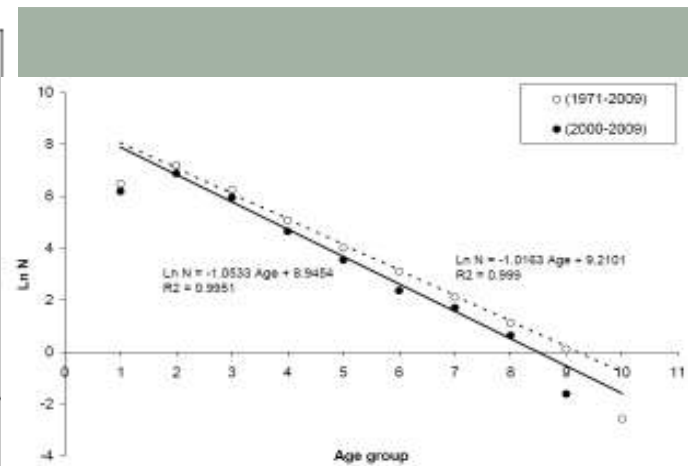
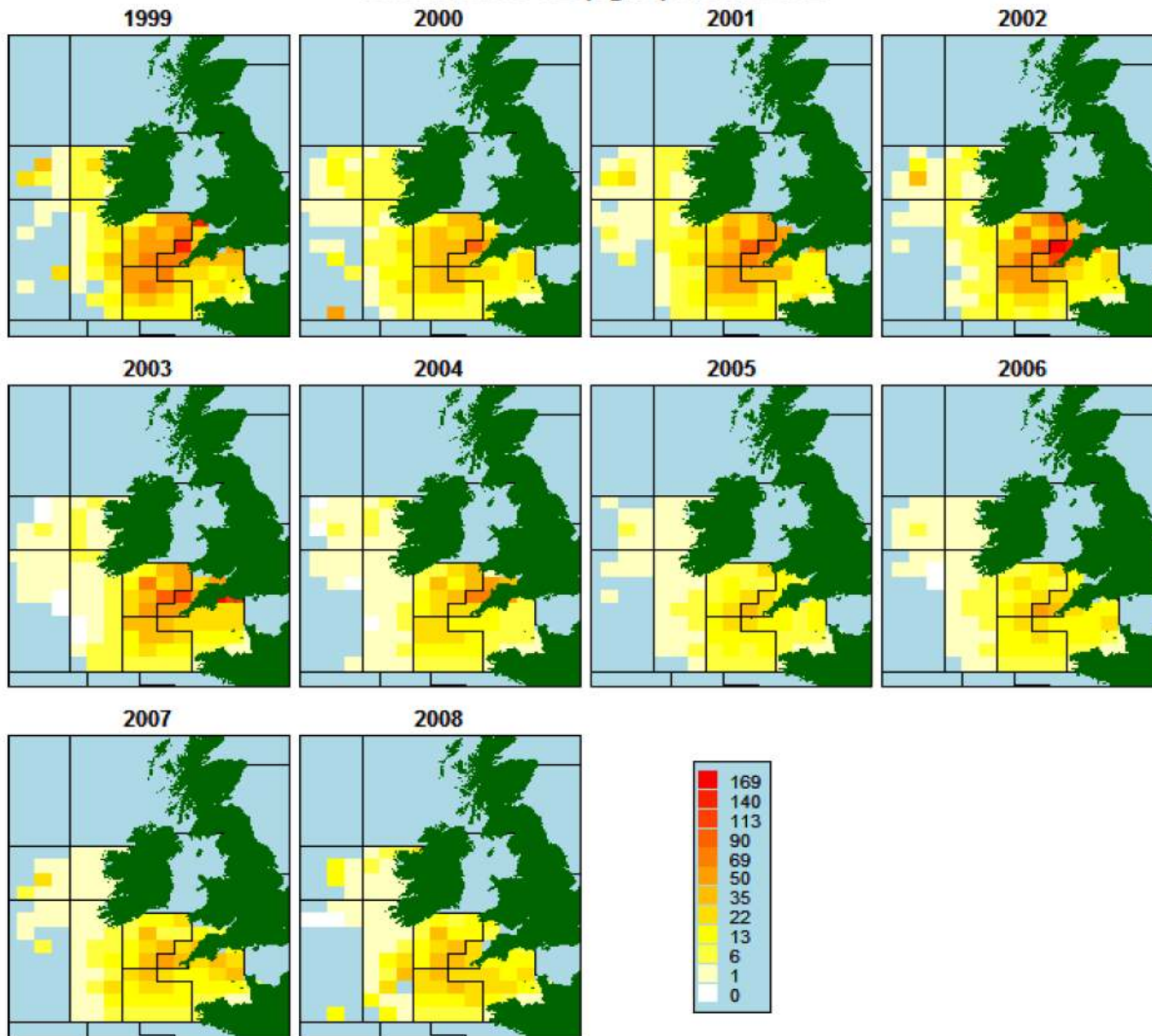
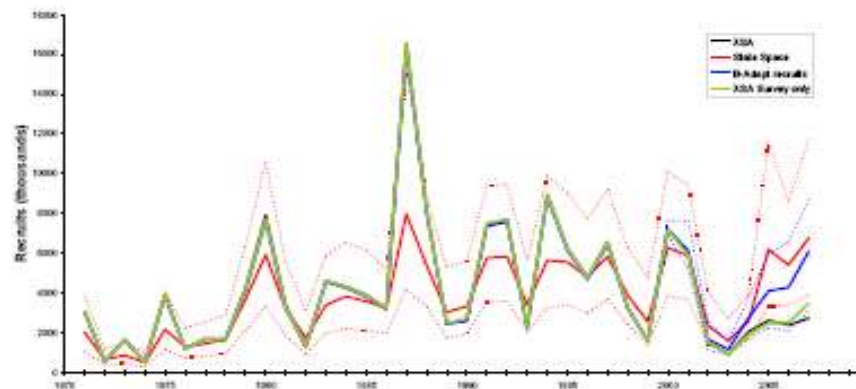
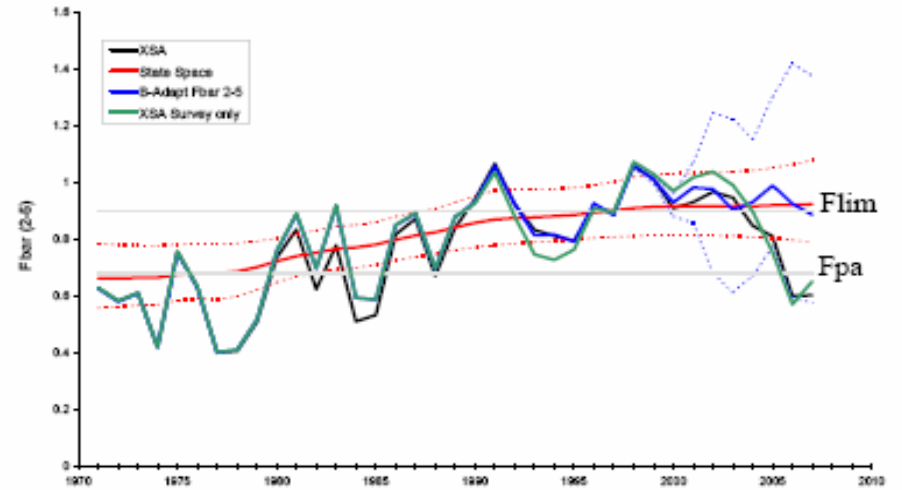
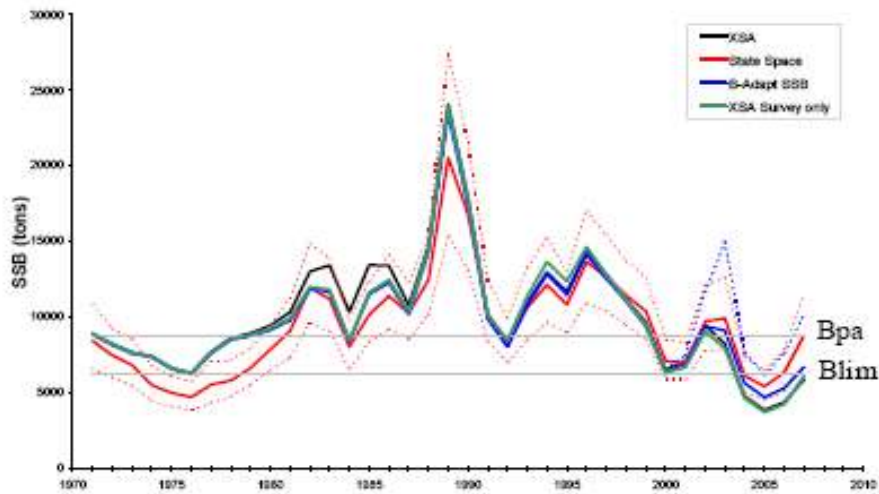


Figure 7.2.10. Cod in VIIe-k. Exploratory yield and SSB per recruit.

Otter trawl LPUE (kg/hr) FR and IRL



Exploratory Assessments (WKROUND 09)



Main Developments

- Self Sampling By France since 2008
- But no French logbook data for 2009
- Irish Industry-Science partnership survey initiated in Q1 2010
- New tagging data – DST and Conventional
- Reduced high grading in 2009
- Plan for benchmark of all western Cod stocks at end of 2011 for advice in 2012

Celtic Sea Haddock

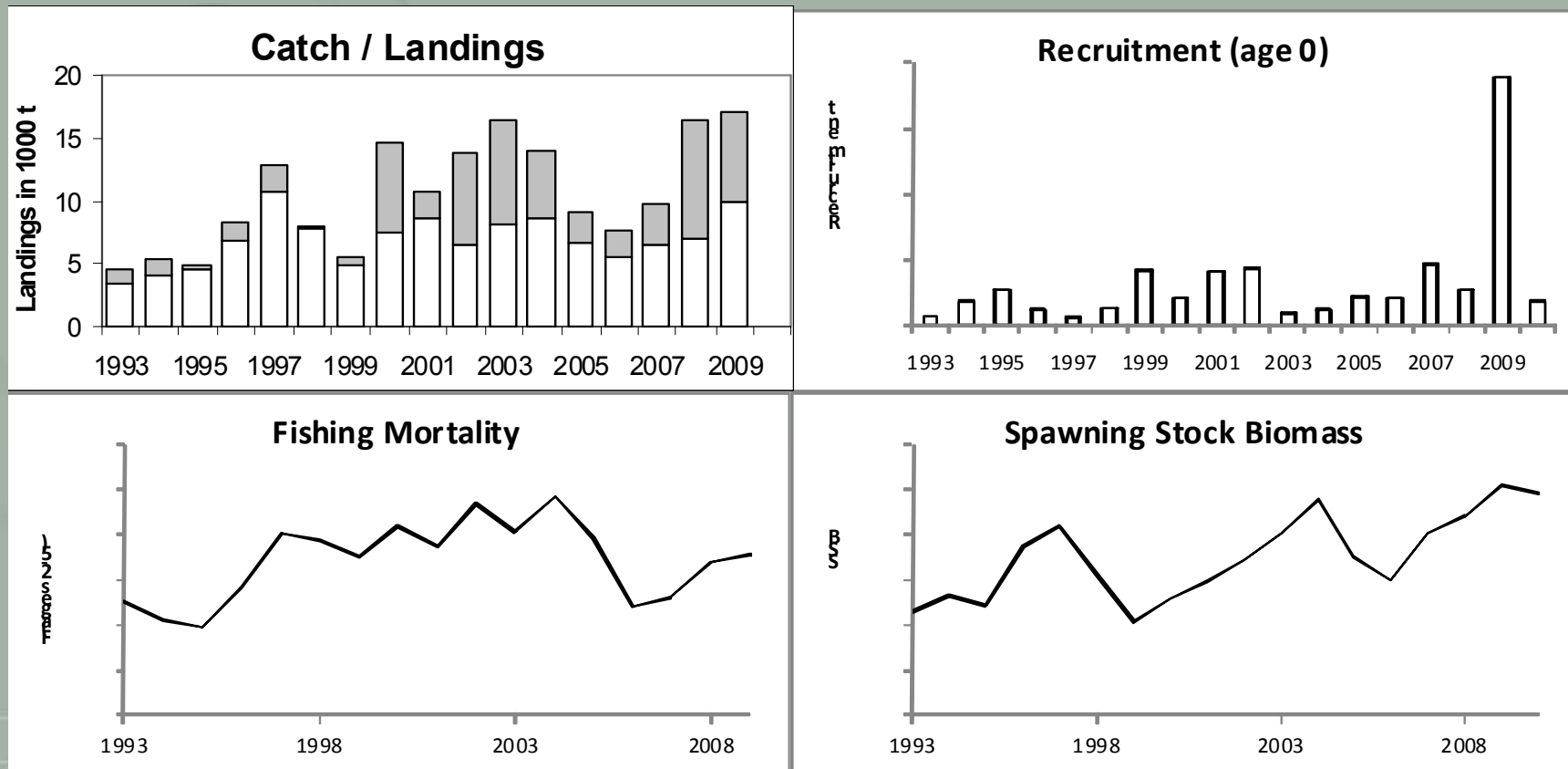


Figure 5.4.4.1 Haddock in Divisions VIIb-k. Summary of stock trends. Top right panel: Catches (landings (white) + discards (grey)). The recruitment value for 2010 is a GM 93-07 estimate. SSB in 2010 is estimated from the short-term forecast.

Celtic Sea Whiting

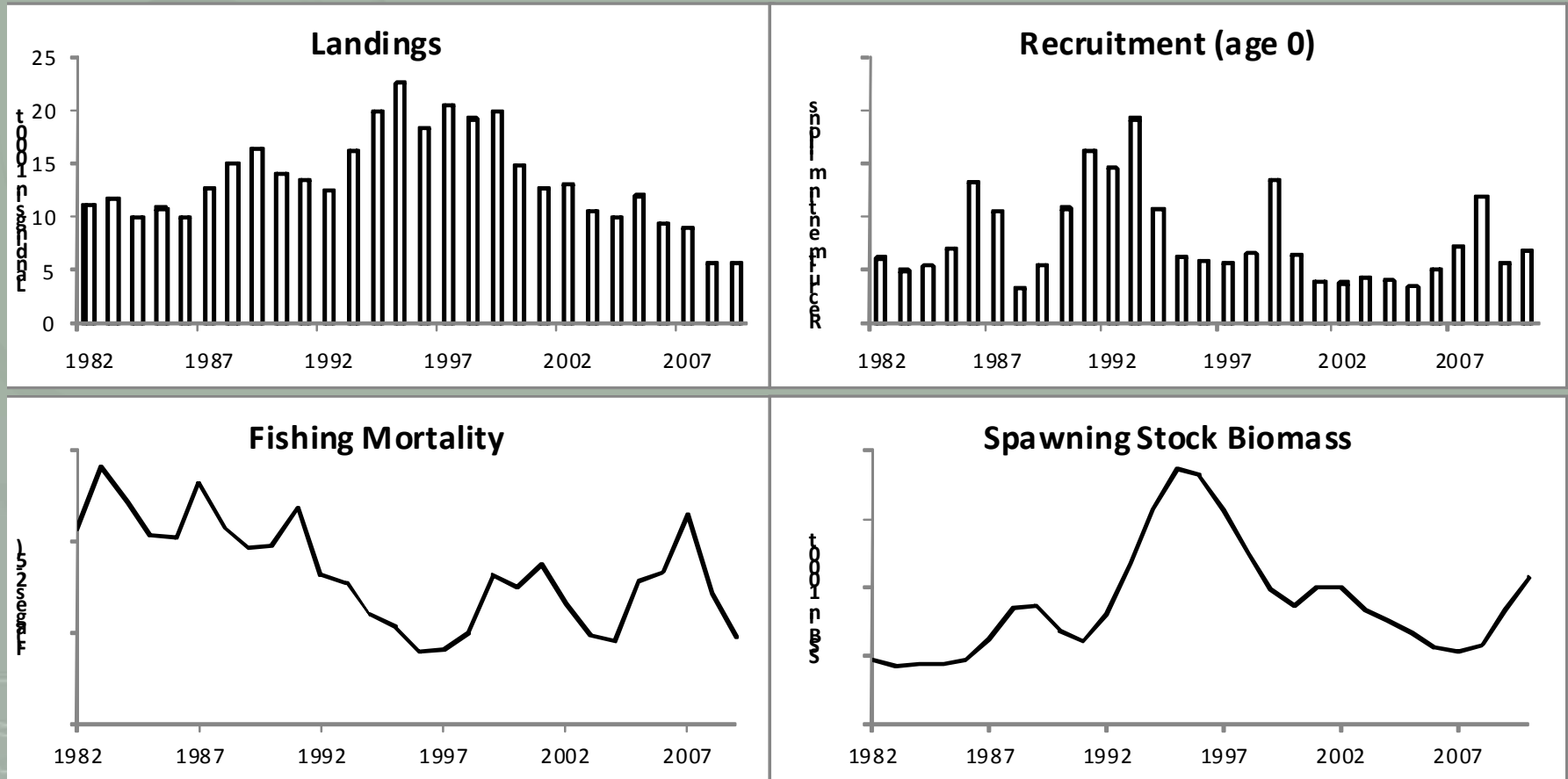


Figure 5.4.6.1 Whiting in Divisions VIIe–k. Summary of stock assessment, accepted for trends only.

Celtic Sea Plaice

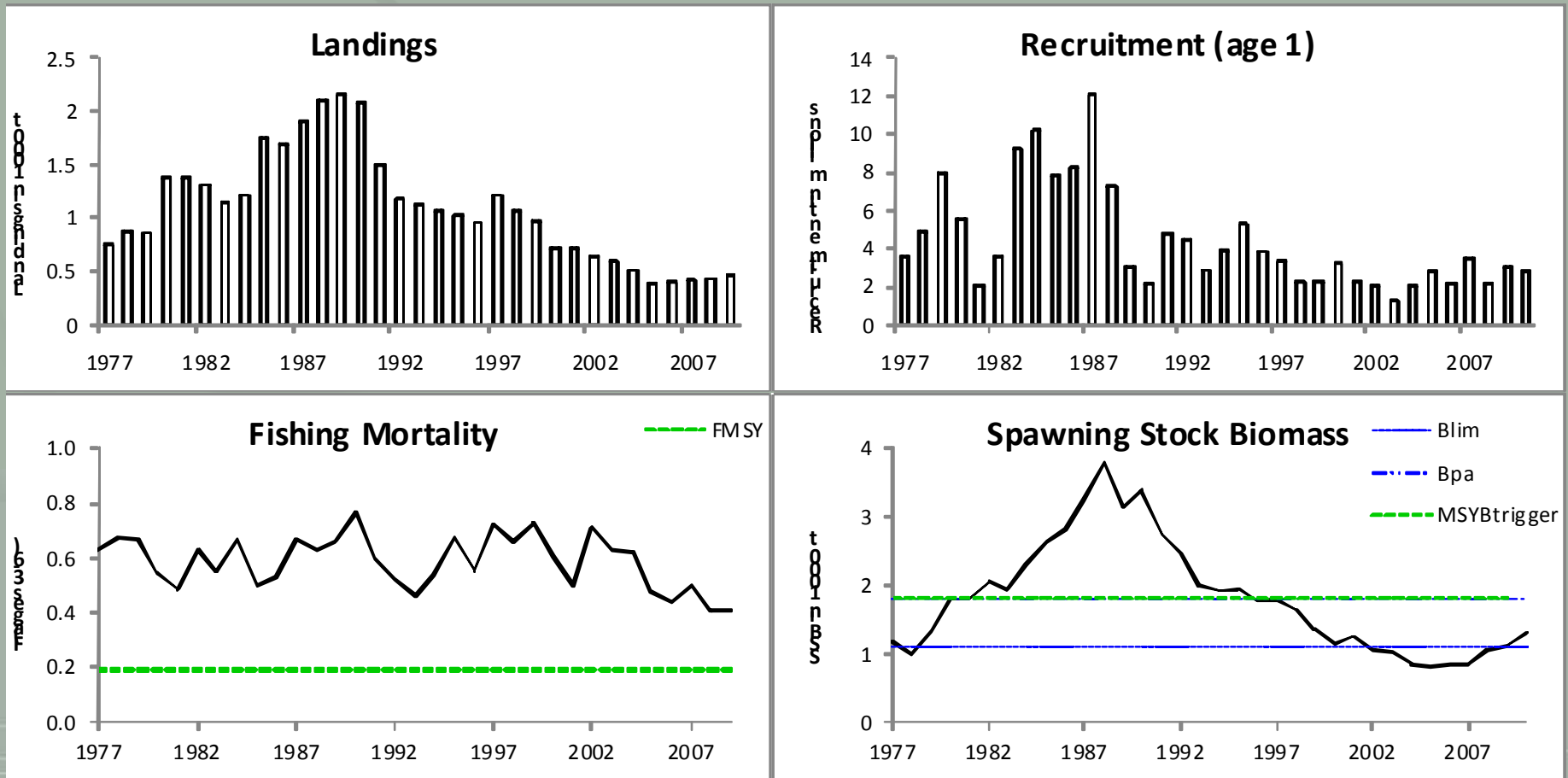


Figure 5.4.8.1

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

Celtic Sea Sole

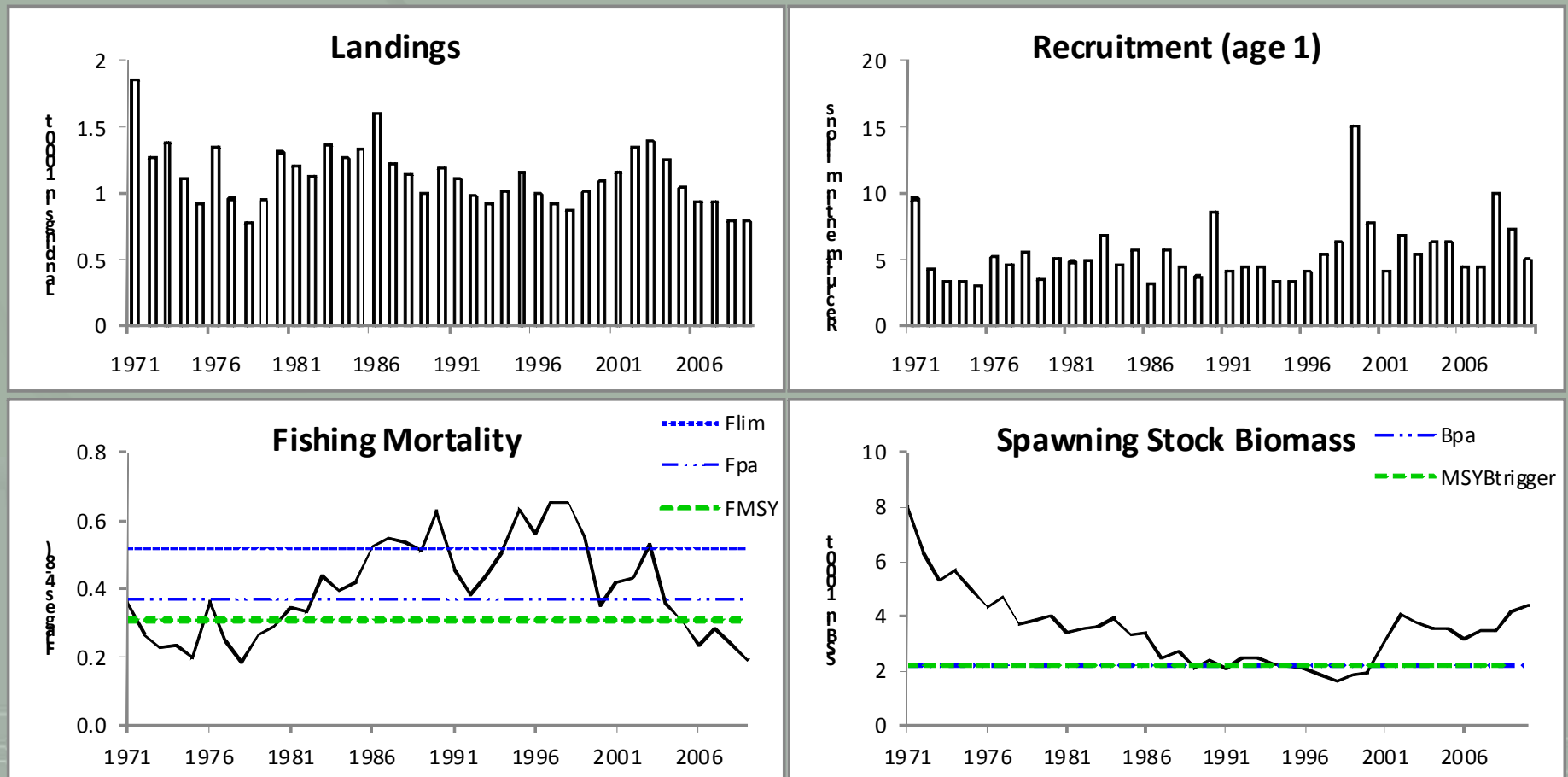


Figure 5.4.13.1

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

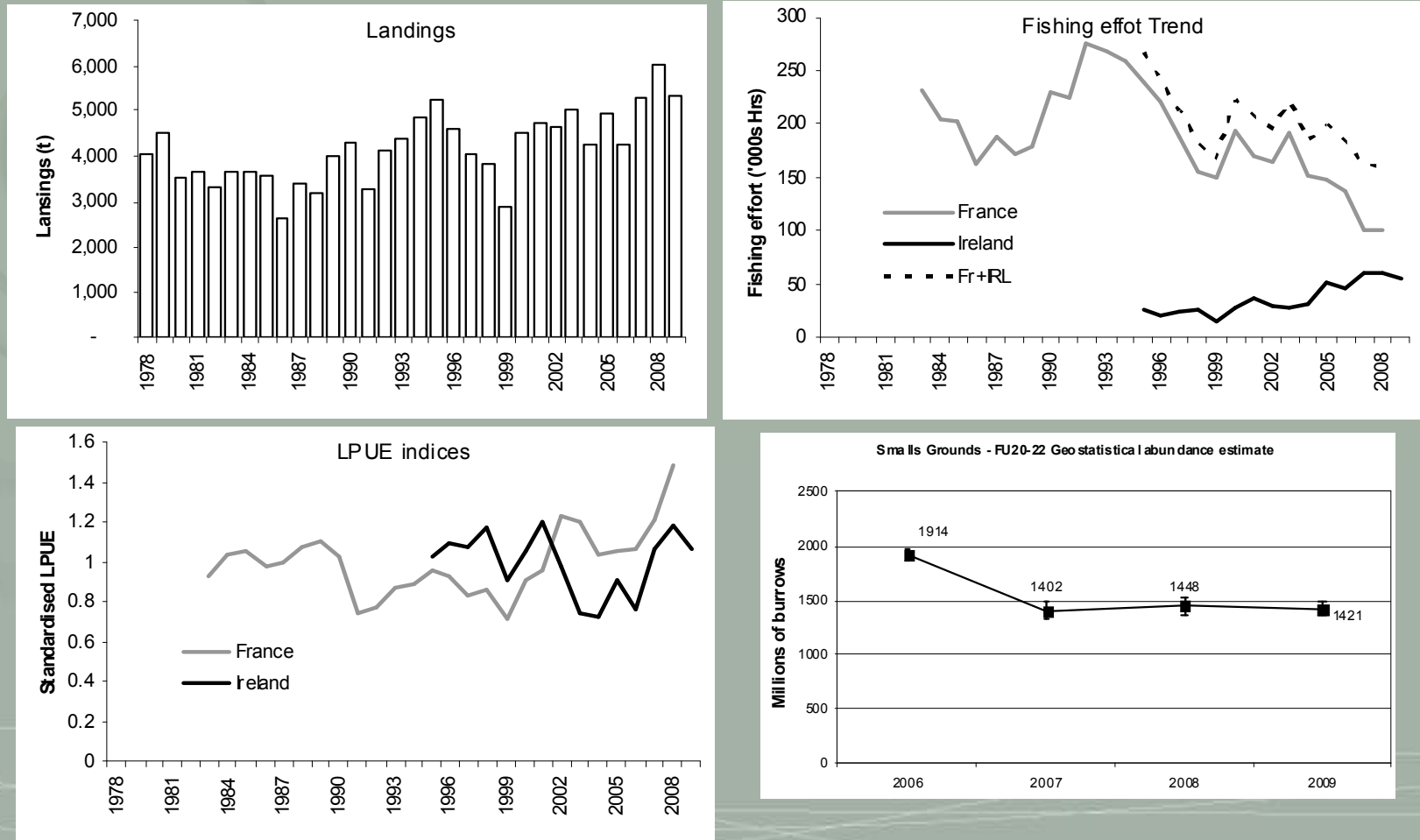


Figure 5.4.34.5.1 *Nephrops* in the Celtic Sea (FU 20–22): top: long-term trends landings and effort by country, below: lpue indices and recent UWTV survey data for “Smalls” component (~50% of recent landings).

Celtic Sea *Nephrops* FU19

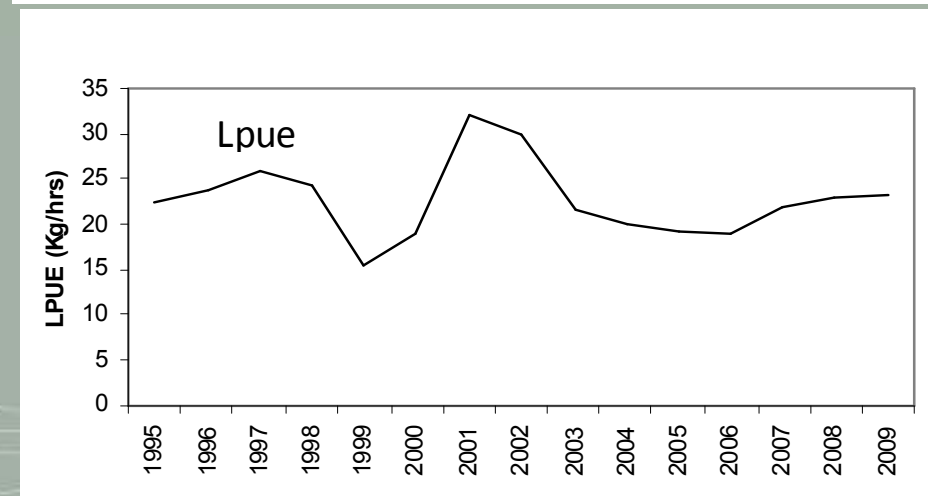
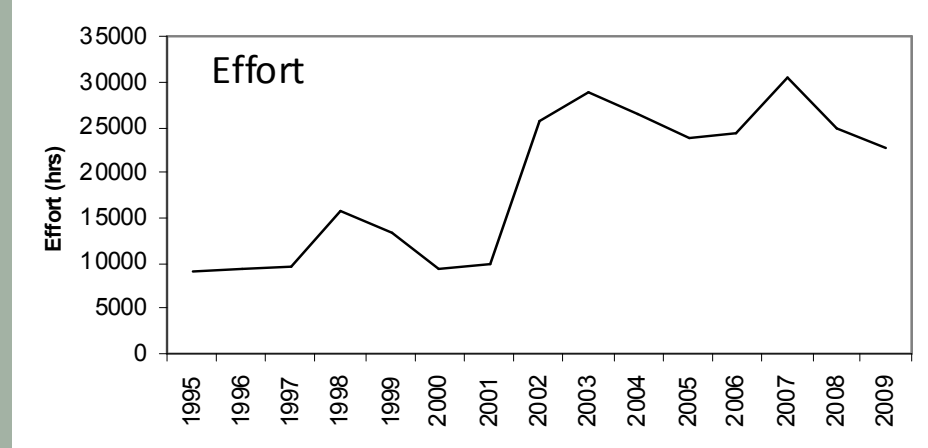
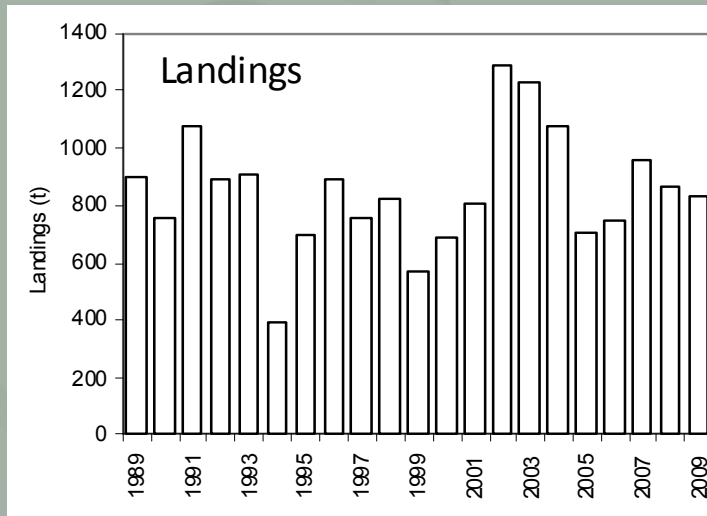


Figure 5.4.34.5.1 *Nephrops* off the south-eastern and south-western coasts of Ireland (FU 19): Long-term trends in landings, effort, lpues.

VII & VIII Megrin

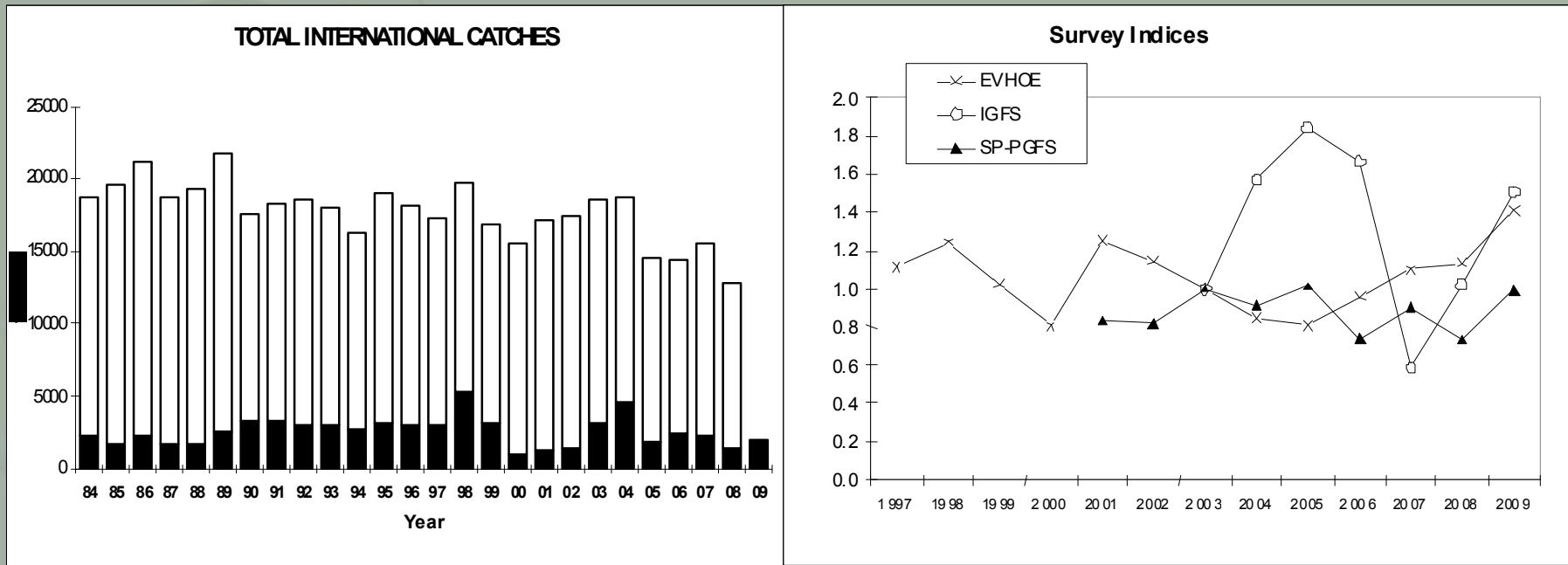


Figure 5.4.19.1 Megrin in Divisions VIIb-k and VIIIa,b,d. Left: Total catches (tonnes, white: landings, black: discard estimates). For 2009, no landing data are available for the French fleet. Right: Scaled indices for three different surveys (biomass for EVHOE and SP-PGFS; abundance for IGFS)

VII & VIII Anglerfish

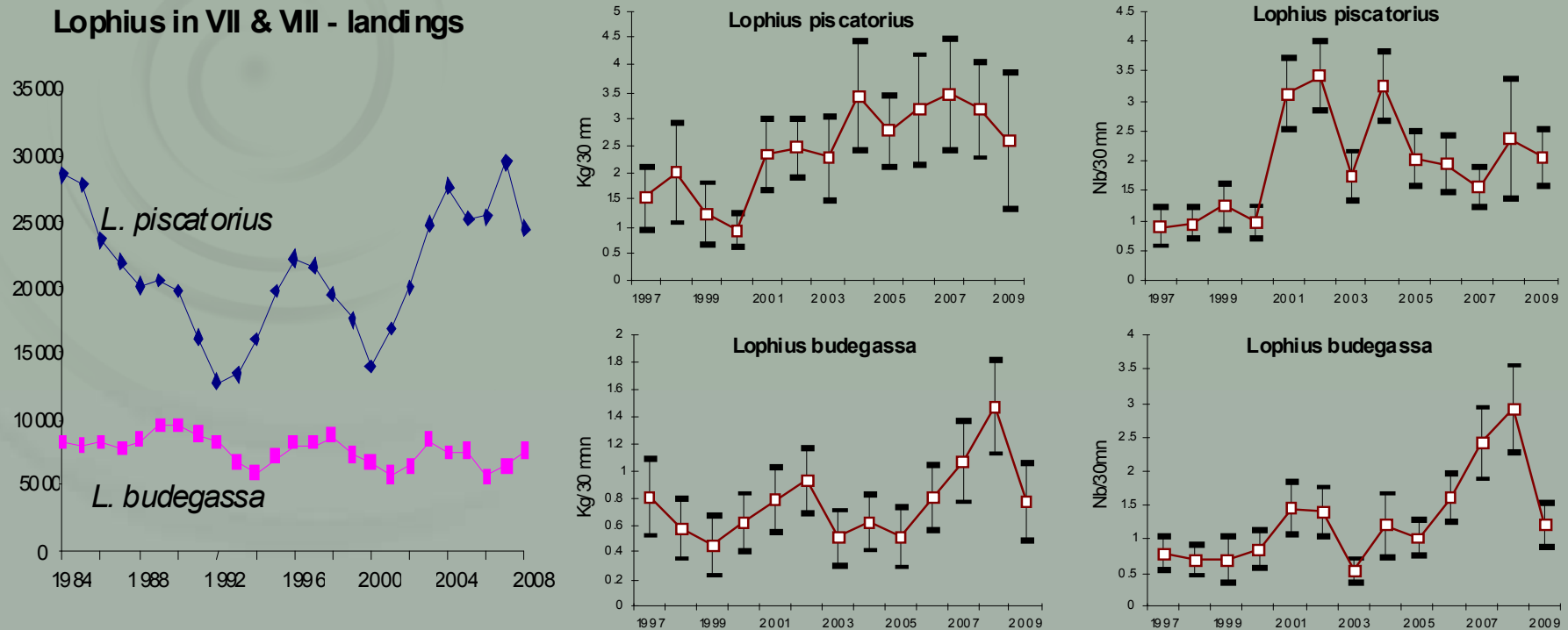
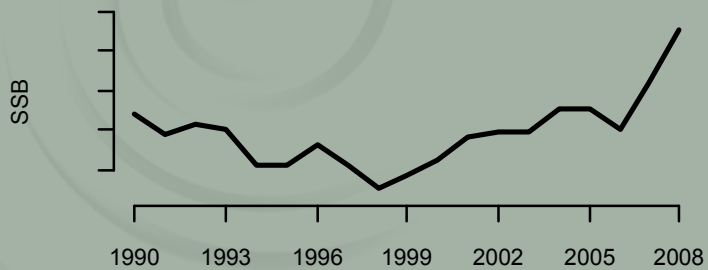


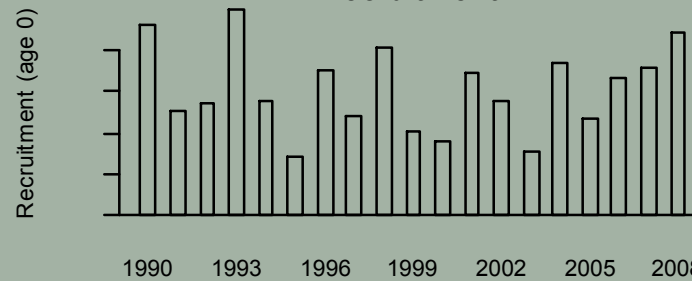
Figure 5.4.20.1 Anglerfish (top: *L. Piscatorius*, below: *L. budegassa*) in Divisions VIIb–k and VIIIa,b,d. Left: landings in tonnes until 2008. Survey trends (EVHOE), middle: biomass and right; total abundance indices. Error bars indicate ± 2 s.d.

Northern Hake

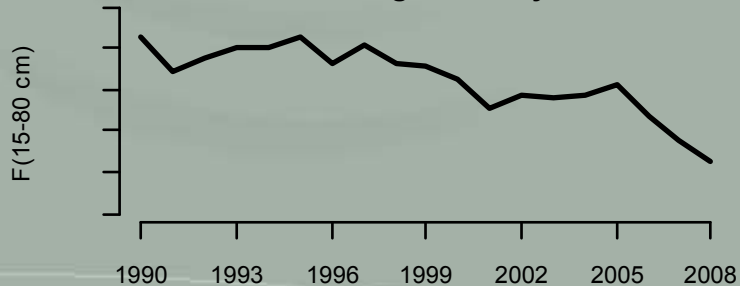
Spawning Stock Biomass



Recruitment



Fishing mortality



**2009: missing data;
The assessment is found to be limited
in its ability to precisely estimate
current stock abundance and mortality**

Summary

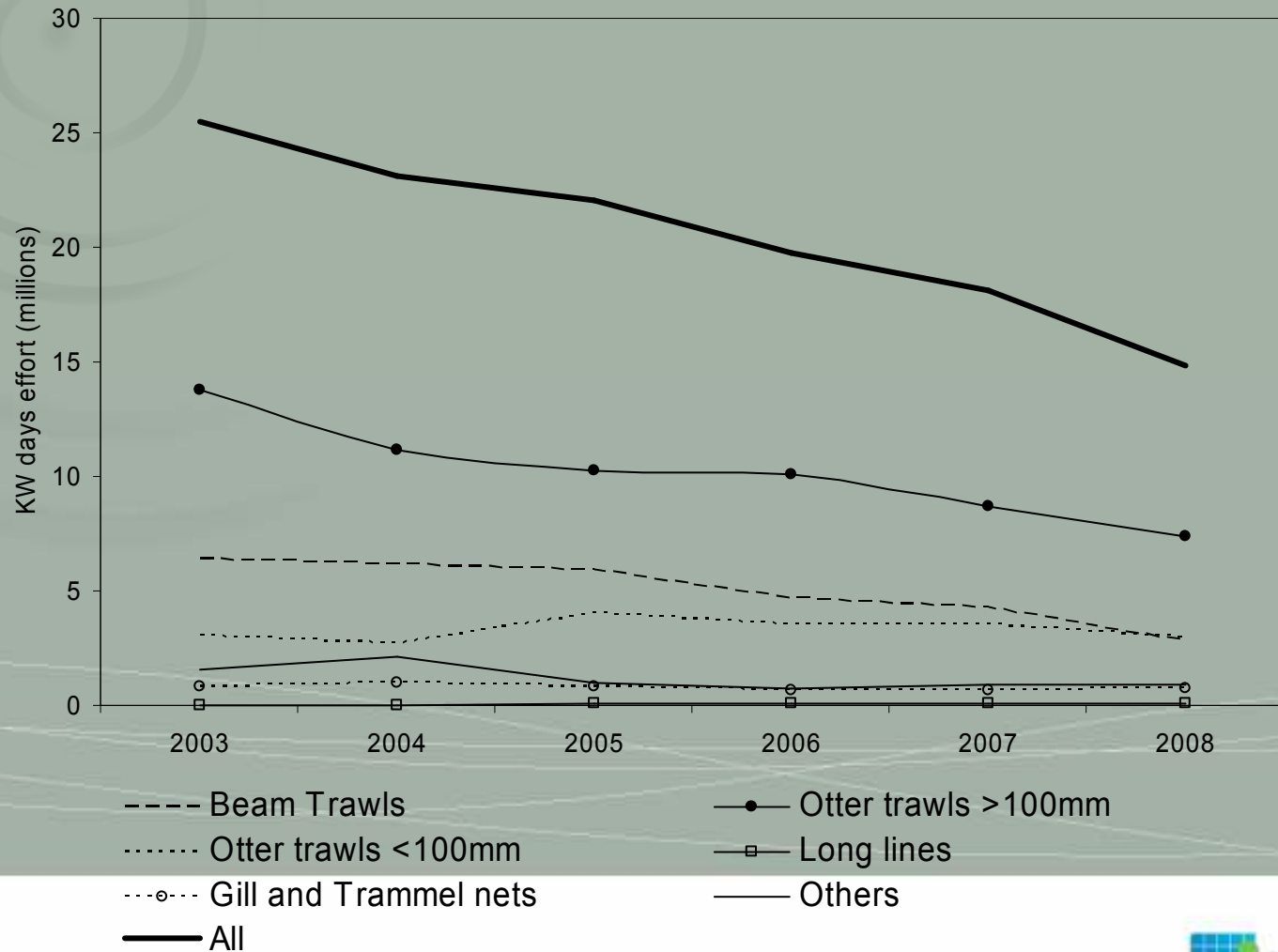
Species	Stock area	Landings 2009	TAC 2010	Catch in Vifg	Scientific advice					
					State of Stock			Catch/Advice options		Policy/Paper
					F	SSB	Recruitment	ICESMSY	ECMSY PA	Category
Cod	Vle-k	3,235	4,023	>80%	??	??	??	↓ catch & effort	↓ catch & effort	Cat 7 ↓ 15%
Haddock	Vllb-k	10,000 (17,100)	11,579	~70%	?	?	↑08	→ effort ↓ discards	→ effort	Cat 8 ↑ 15%
Whiting	Vle-k	5,700	14,407	>80%	↓ since 07	?		→ effort	→ effort	Cat 8 ↑ 15%
Plaice	Vlfg	463	450	100%	↓ since 02	~Blim	Low →	<390t	500 < 150t	Cat 3 < 410t
Sole	Vlfg	790	993	100%				<1400t	1200 < 1700t	Cat 1 1200t
Nephrops (FU19)	Vlfg	830		>80%	?	?	?	↓ catch	<800t	Cat 6
Nephrops (FU20-22)	Vllfh	5,300		>80%	?	?	?	↓ catch	<5300t	Cat 6
Megrim	Vllb-k & Vllabe	11,500 (13,500)	20,400	<10%	?	?	?	↓ catch & effort	→ catch & effort	Cat 7 ↓ 15%
Anglerfish	VI & VIII	32,200	41,400	<10%	?	?	?	→ catch & effort	→ catch & effort	Cat 8 ↑ 15%
Hake	VI, VI, VIII	47,800	55,100	<5%	↓ since 05	↑ since 00		<44800	<44800	Cat 8 ↑ 15%

Activity of Fleets in VIIfg

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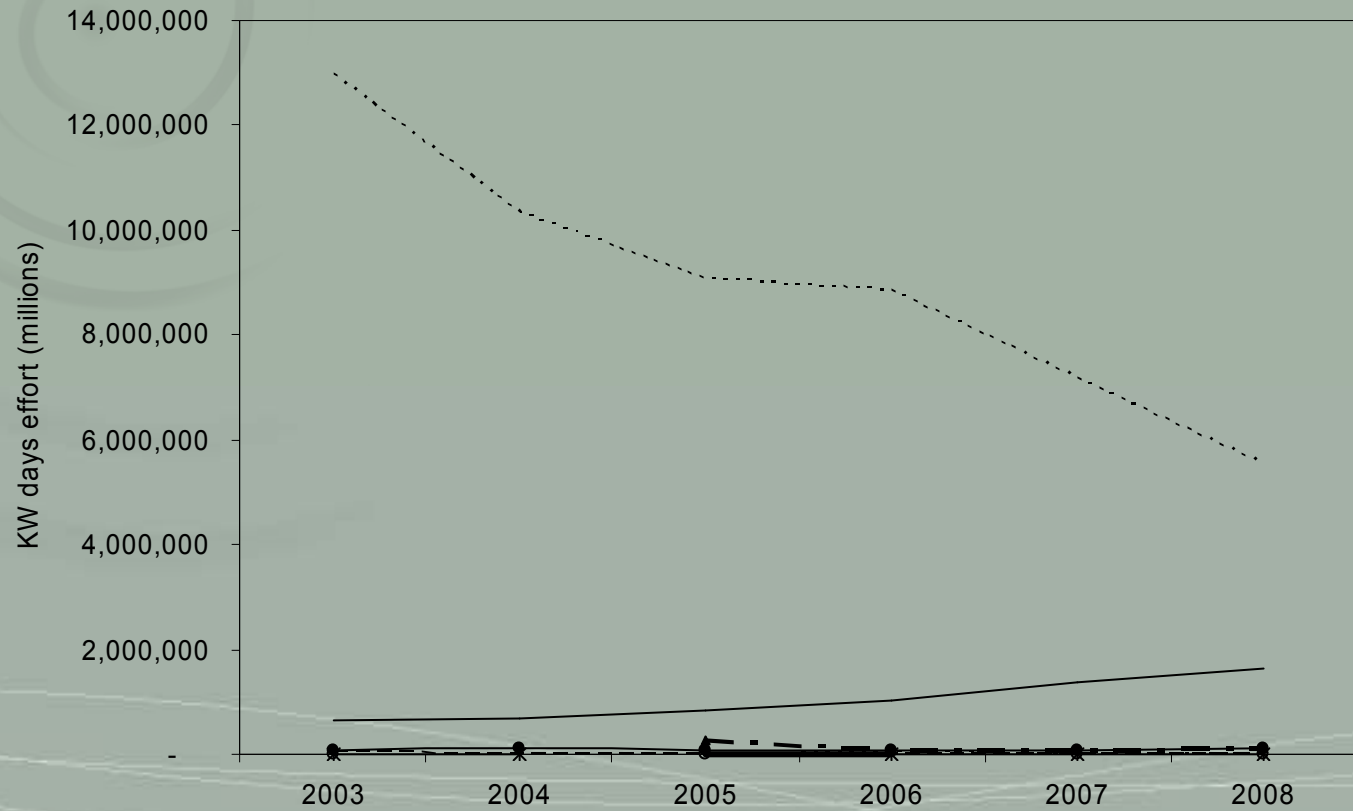
KW Days By Gear Category

Effort Trends in VIIfg (SGMOS)



TR1 – Otter Trawls >100mm

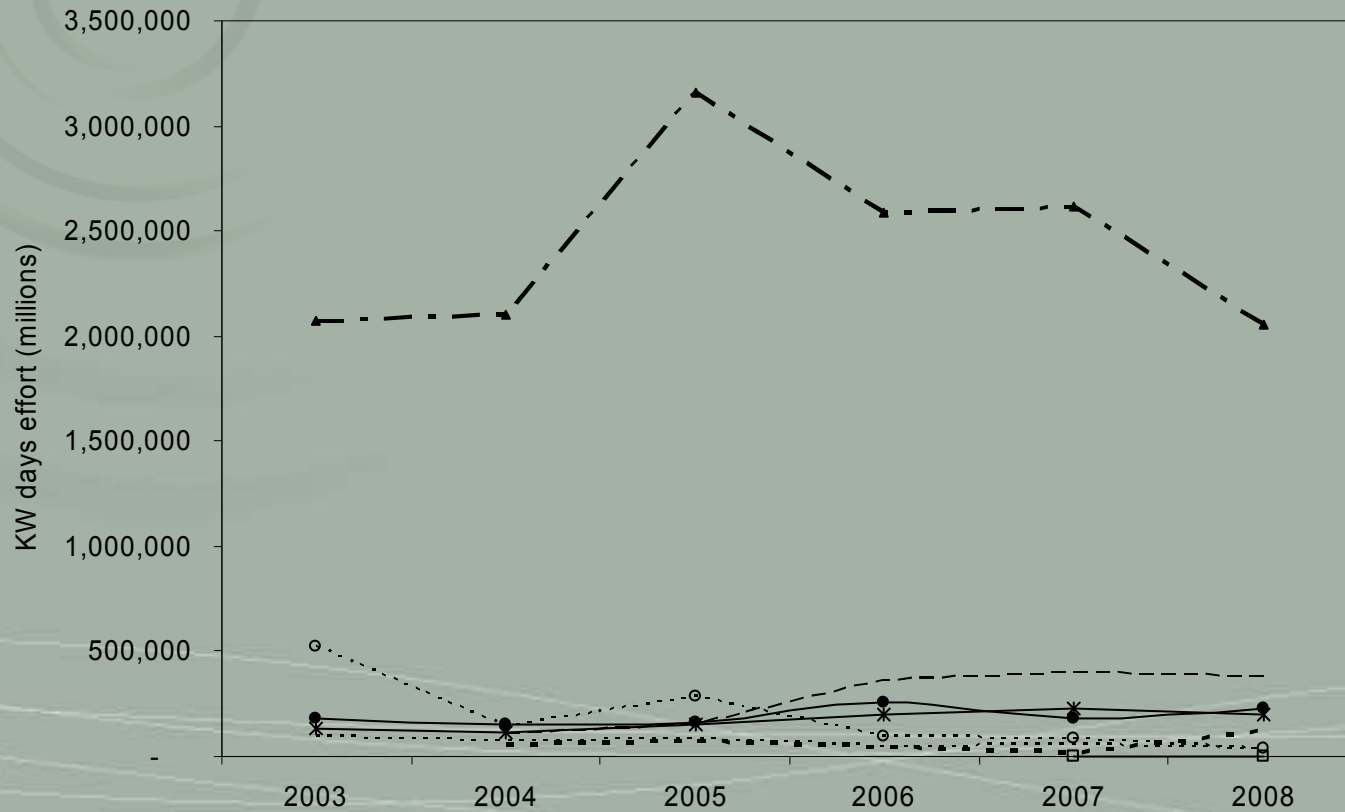
Effort Trends in VIIfg (SGMOS)



--- ENGo10t15m —●— ENGo15m FRAo15m
—□— IOMo15m - - - - - IRLo10t15m — IRLo15m
— NIRo15m —*— SCOO15m - - - - - SPNnone

TR2 – Otter Trawls <100mm

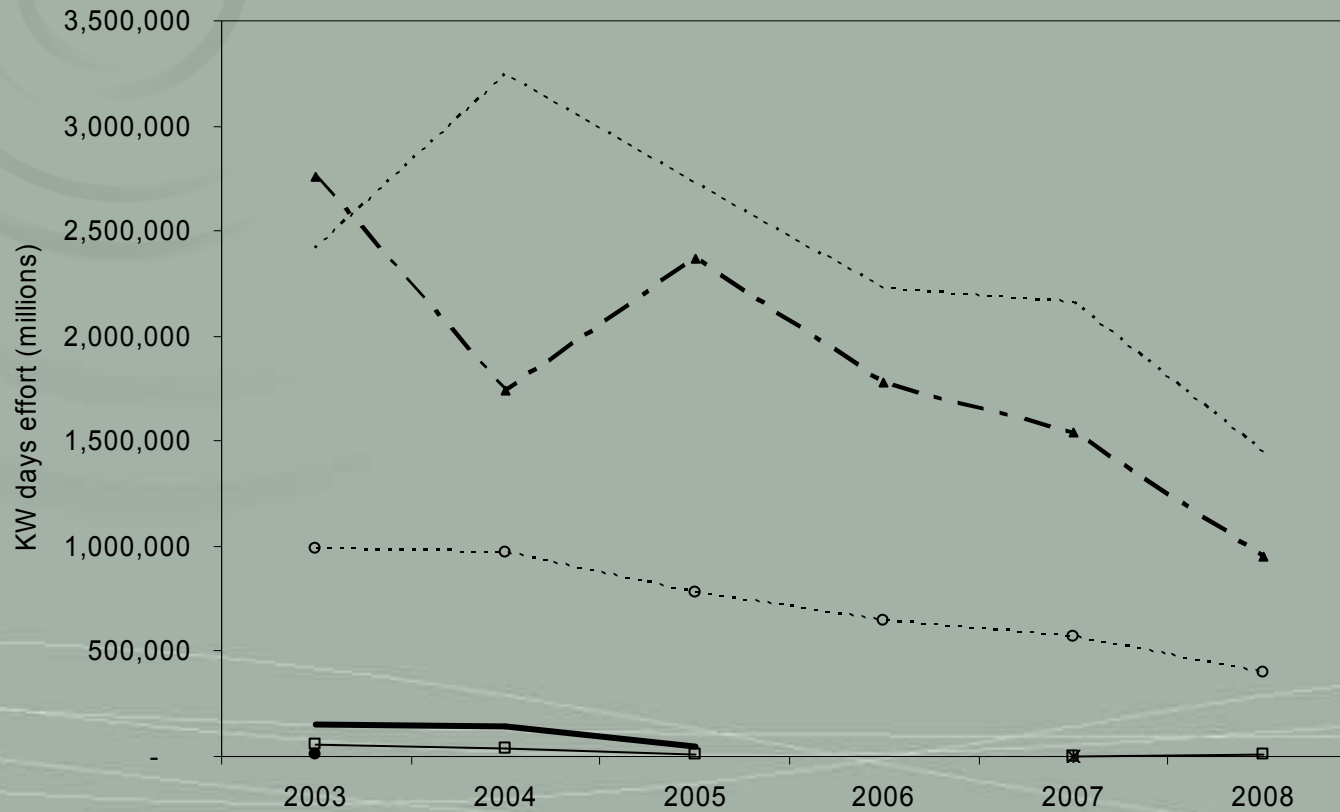
Effort Trends in VIIfg (SGMOS)



- BELo15m
- FRAo10t15m
- GBJo15m
- ... NIRo15m
- ENGo10t15m
- ...○... FRAo15m
- *— IRLo10t15m
- ENGo15m
- GBGo15m
- ▲— IRLo15m

BT1 – Beam Trawlers

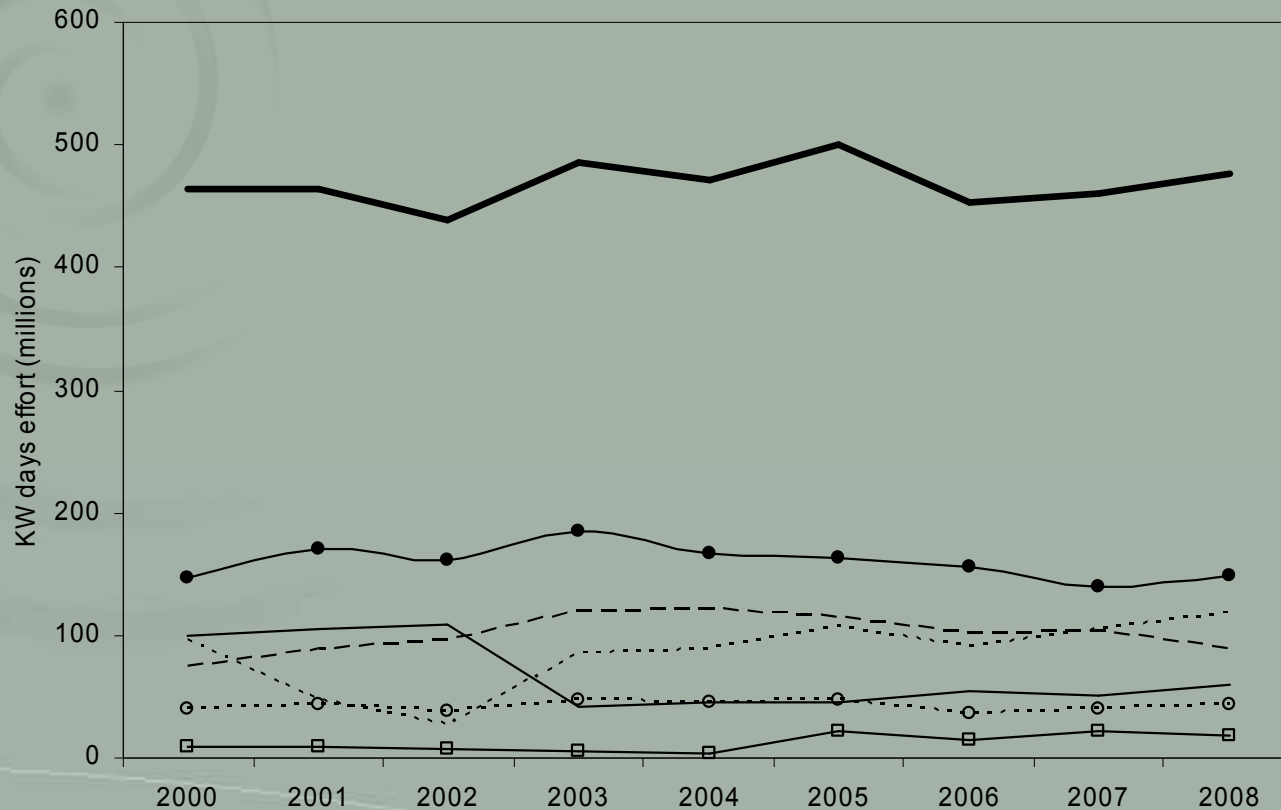
Effort Trends in VIIfg (SGMOS)



- ENGo15m
- IRLo15m
- BELo15m
- ENGo10t15m
- ENGo15m
- FRAo10t15m
- GBJo15m
- *— IRLo10t15m
- ▲— IRLo15m

Numbers of vessels By Gear Category

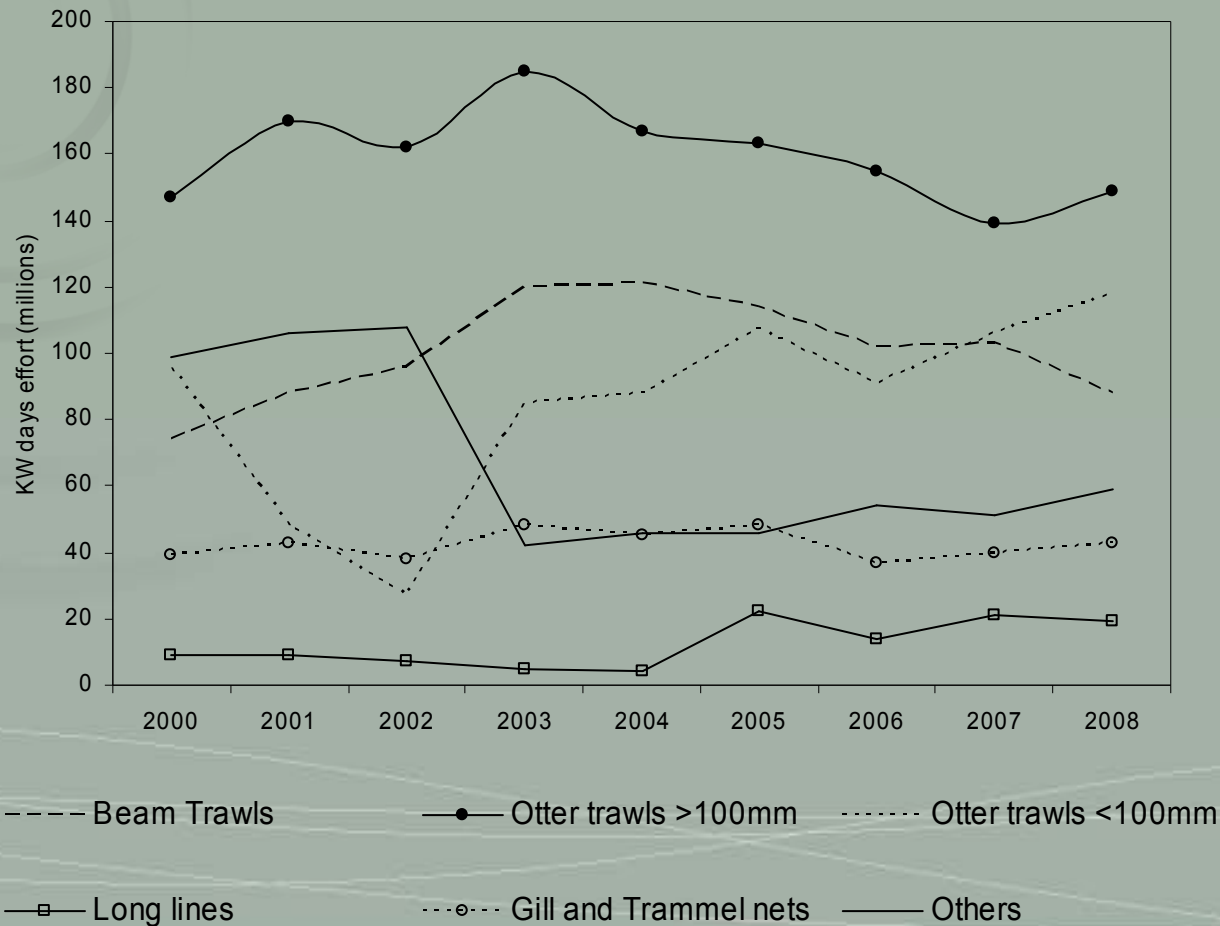
Number of vessels in Vllfg (SGMOS)

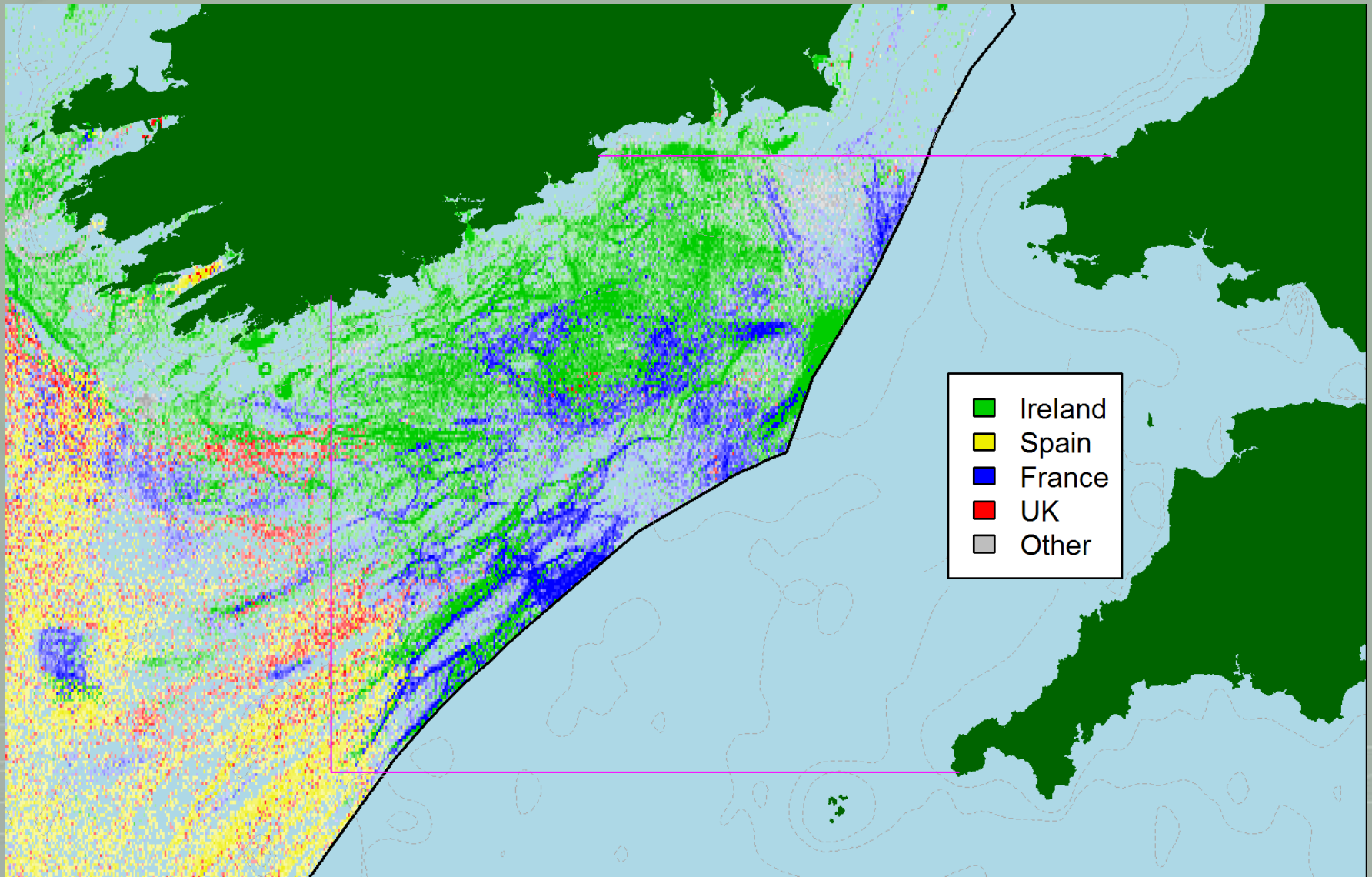


- Beam Trawls
- Otter trawls >100mm
- Otter trawls <100mm
- Long lines
- Gill and Trammel nets
- Others
- All

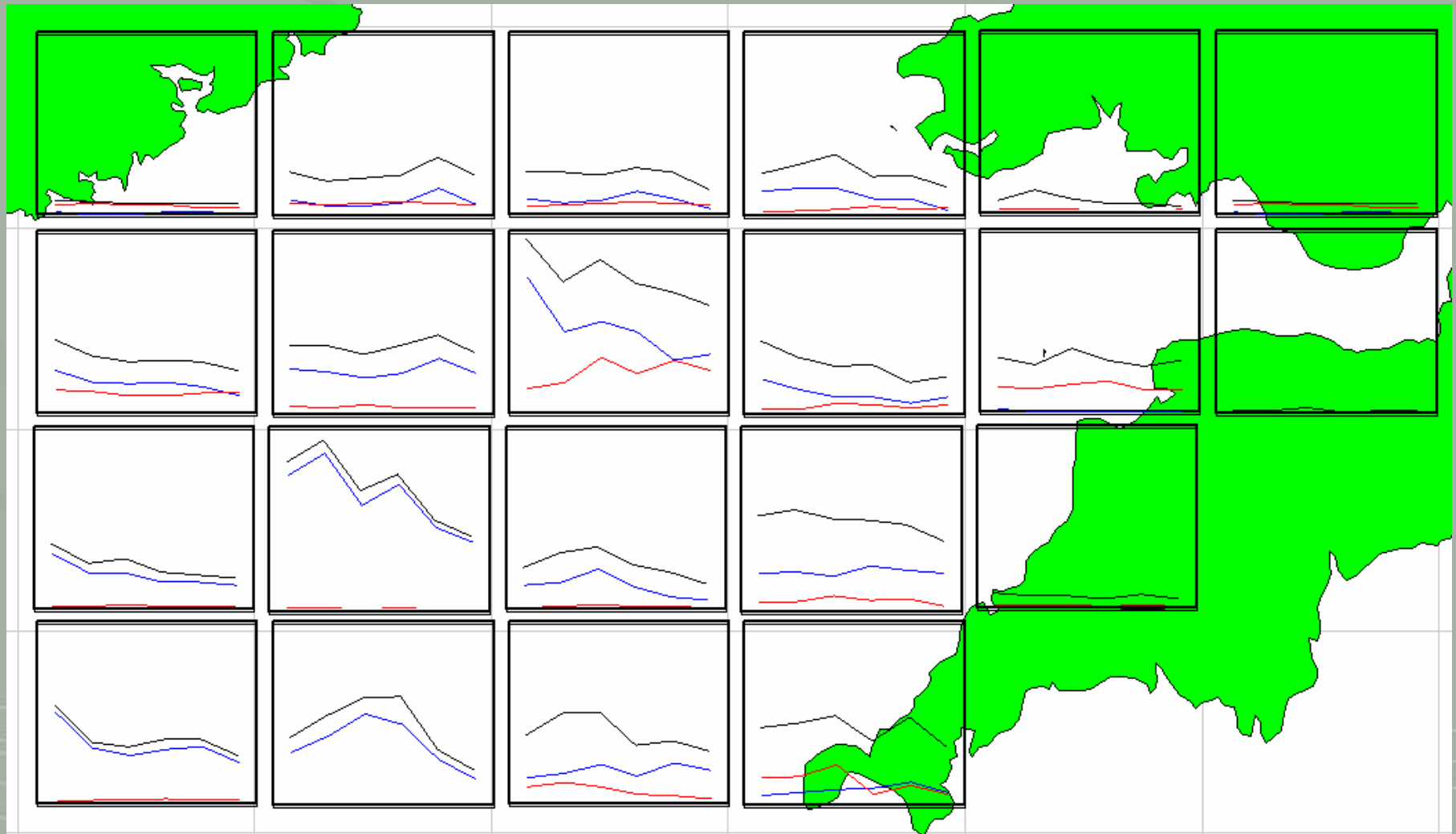
Numbers of vessels By Gear Category

Number of vessels in VIIfg (SGMOS)



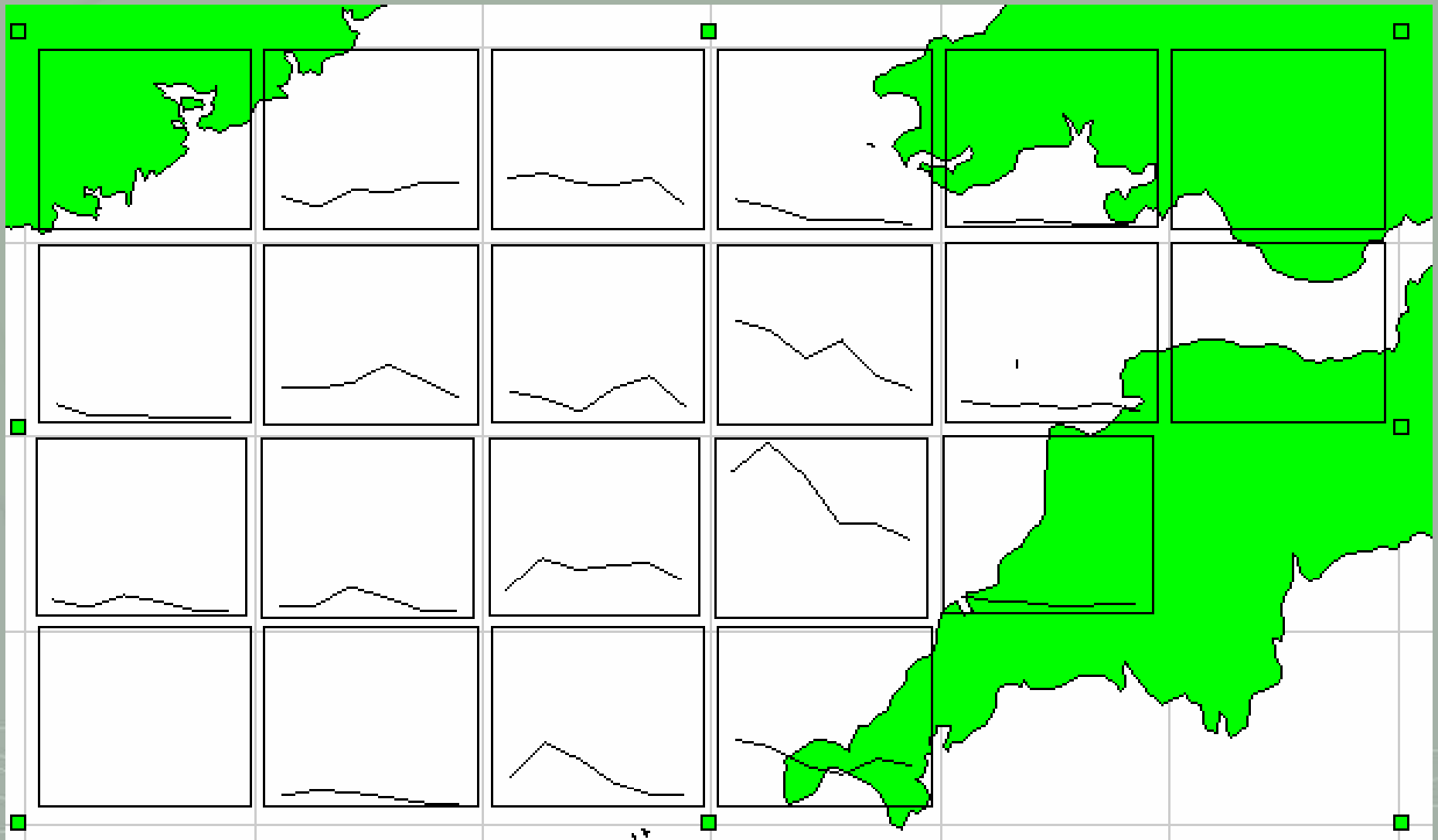


Spatial Distribution of Dominant effort by country in VIIfg within Irish Zone



Effective Effort Trends (2003-2008) By Rectangle (Days)

All gears, TR1 TR2



Effective Effort Trends (2003-2008) By Rectangle (Days)
Beam Trawl gears