Perceptions and Experiences with Effort Management

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Scope

- Effort Management Systems introduced as part of long-term plans.
- Does not cover Western Waters nor deep-sea systems

Some Perceptions:

- "Effort management is not limiting effort: F is too high, effort ceilings are not being reached"
- "Effort management creates perverse incentives
  - **to target the most valuable species**
  - **to fish nearer to the coasts**
  - **to fish with smaller-mesh gear"**
- "Effort management creates an incentive to adjust fleet capacity to the available fishing opportunities"
- "Effort management is seriously affecting fleet operations and fleet profitability"
- "If effort management isn't hurting, it isn't working"

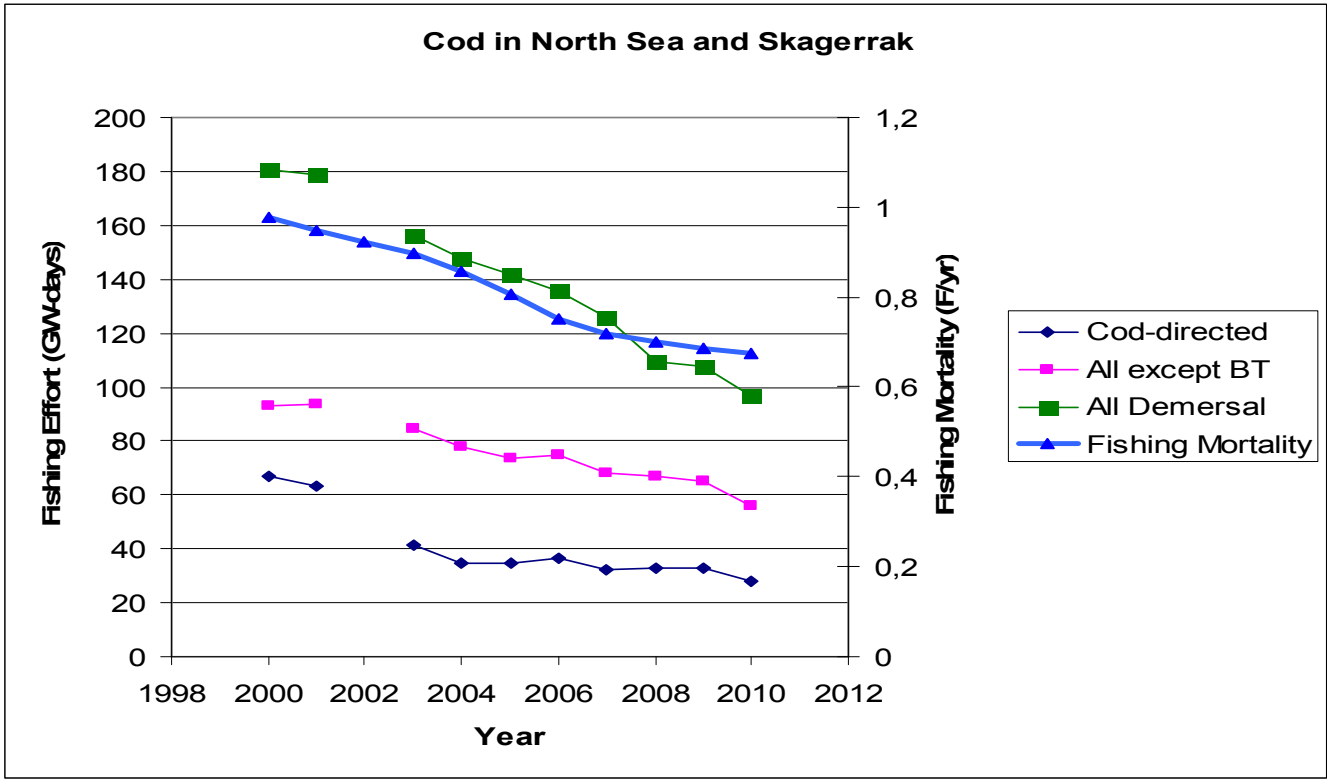
Some simple analyses

- 1: Does lower F coincide with lower nominal effort, for sensitive species ? And how has effort actually changed ?
- 2: Does effort management help reduce fishing mortality ?
- 3: Are effort ceilings limiting on fishing fleets?
  - **at the Member State level ?**
  - **at the level of individual vessels ?**
- 4 How have changes in fleet size worked in relation to effort management ?

Source: STECF and DCF data sets

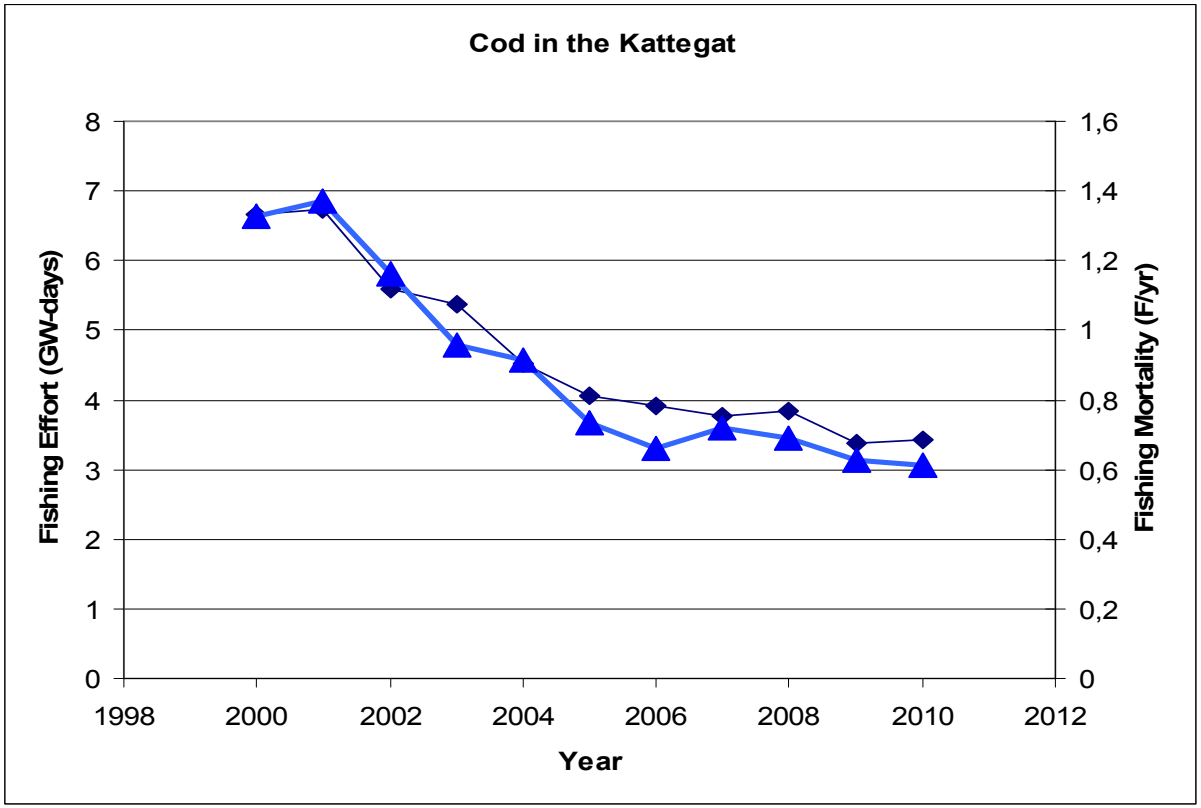
- 1: Does lower F coincide with lower nominal effort, for sensitive species ? And how has effort actually changed ?

Cod: North Sea and Skagerrak



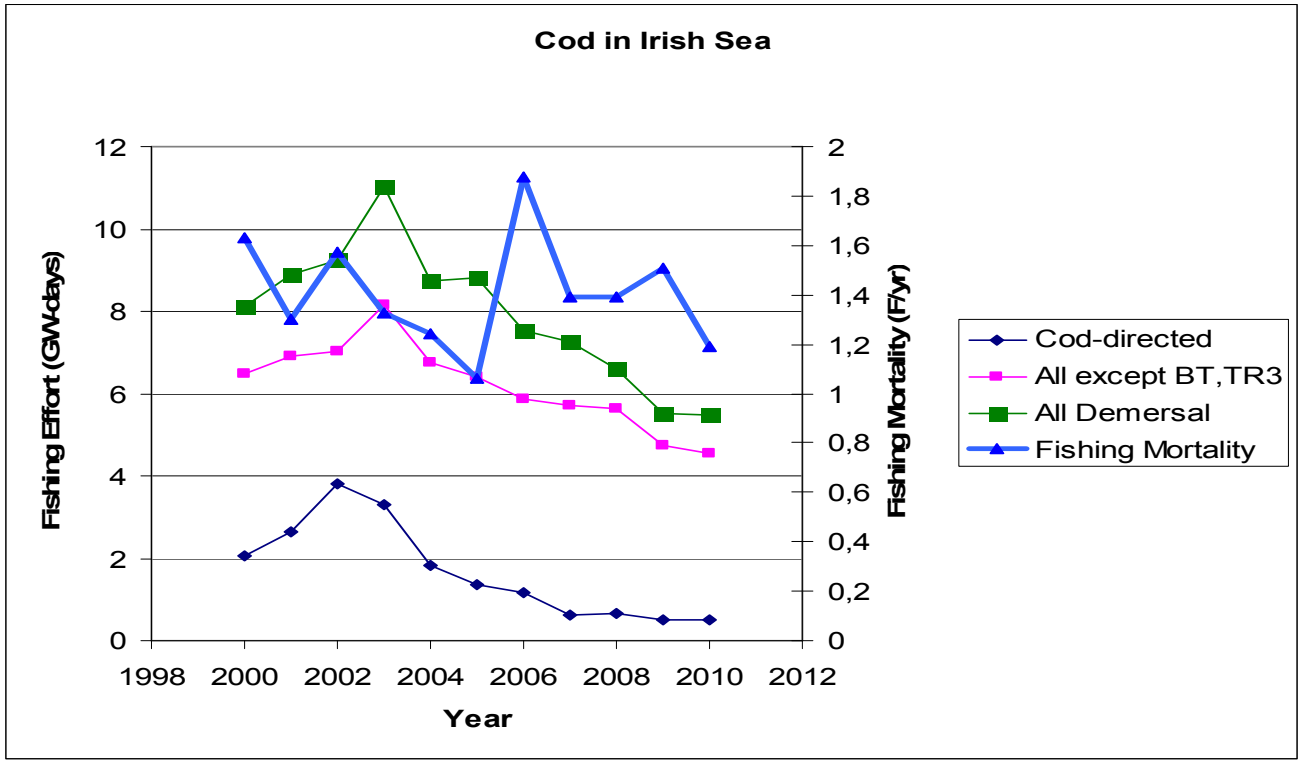
Demersal effort: r=0,95; Over 110mm gear r=0,75

Cod: Kattegat



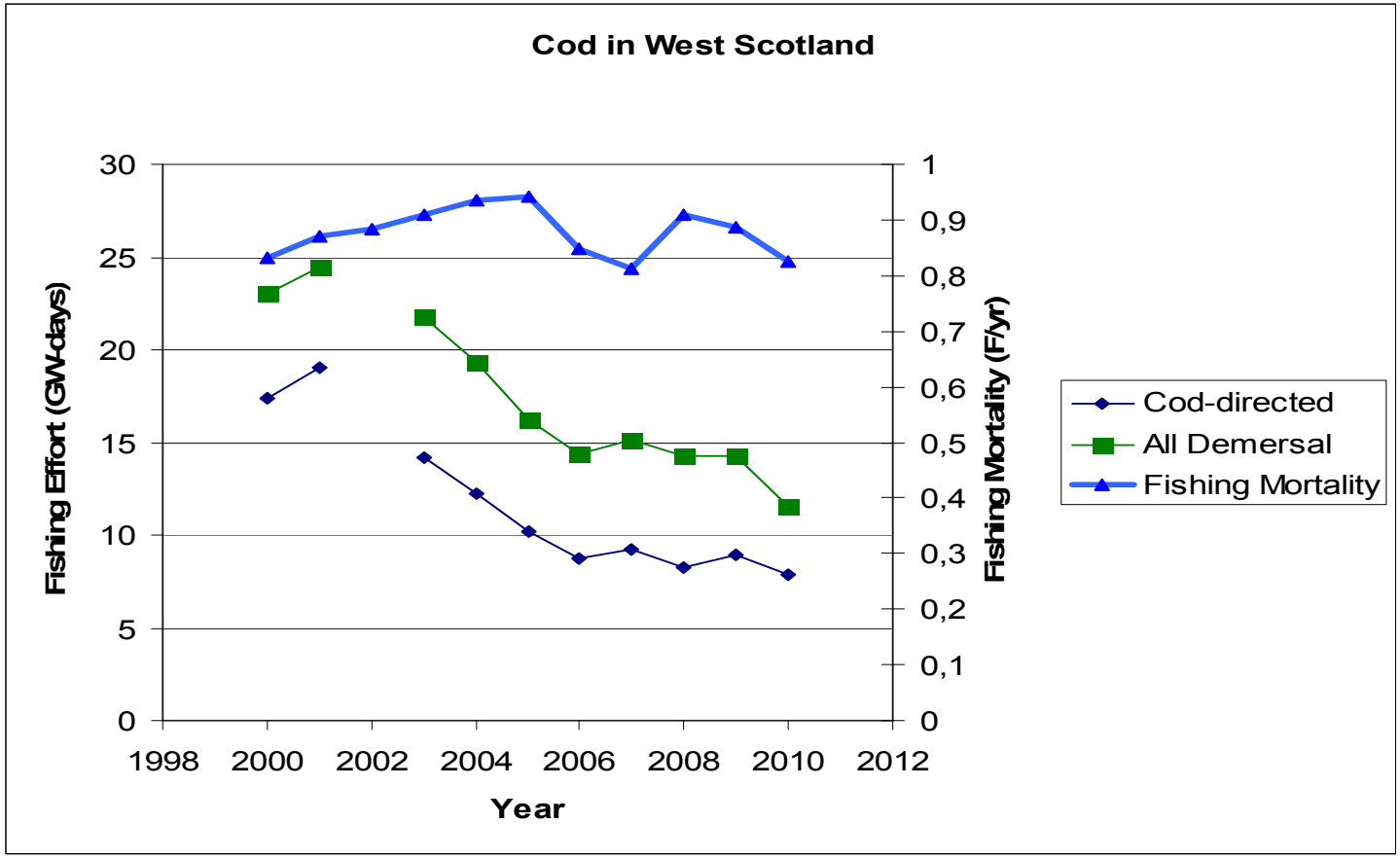
Demersal effort: r=0,97

Cod: Irish Sea



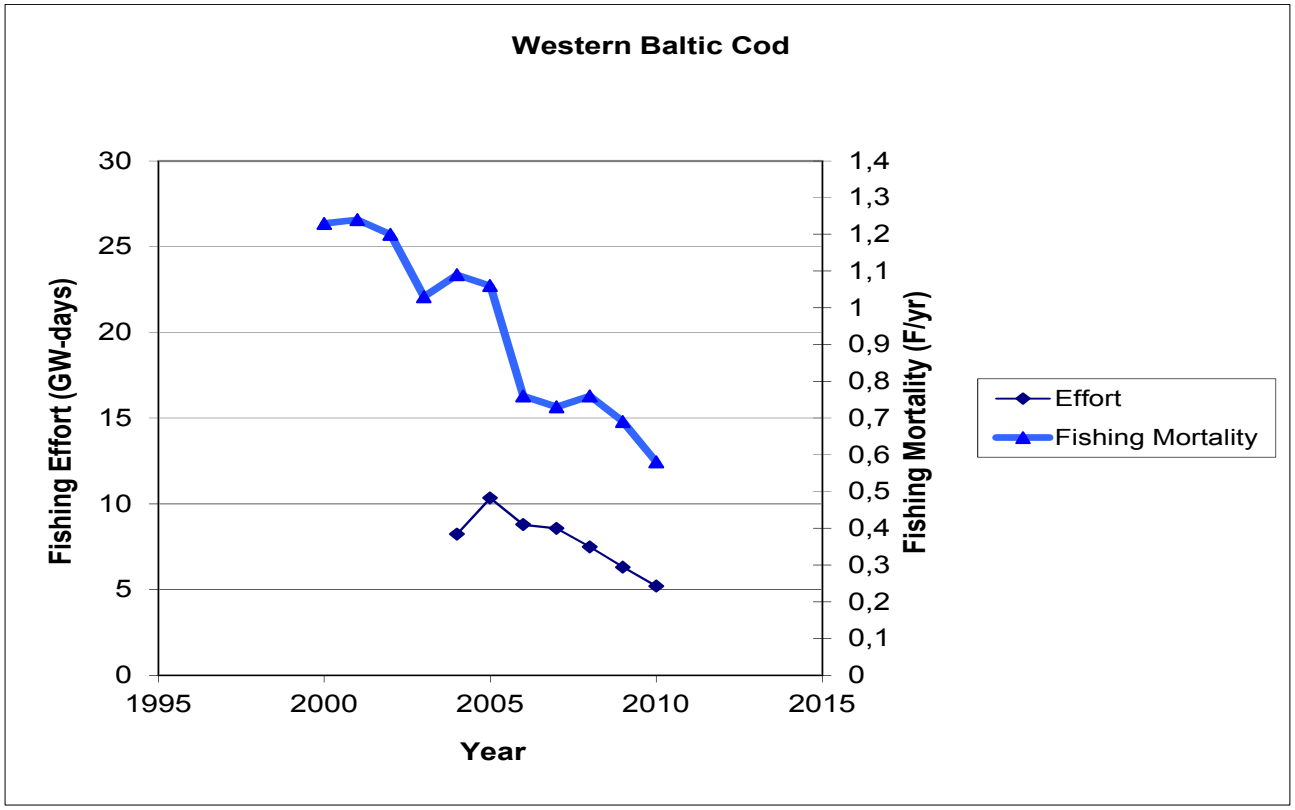
Demersal effort: r=0,01

Cod: west of Scotland



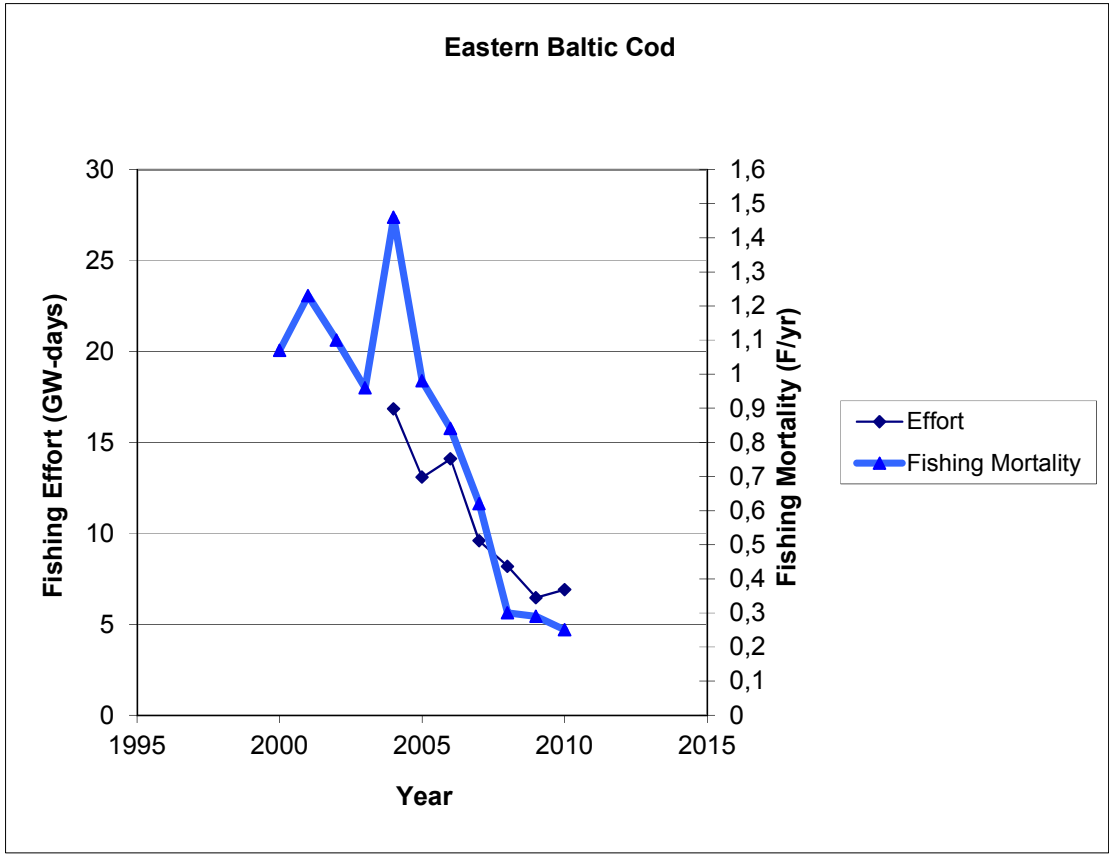
Demersal effort: r=0,17

Cod: western Baltic Sea



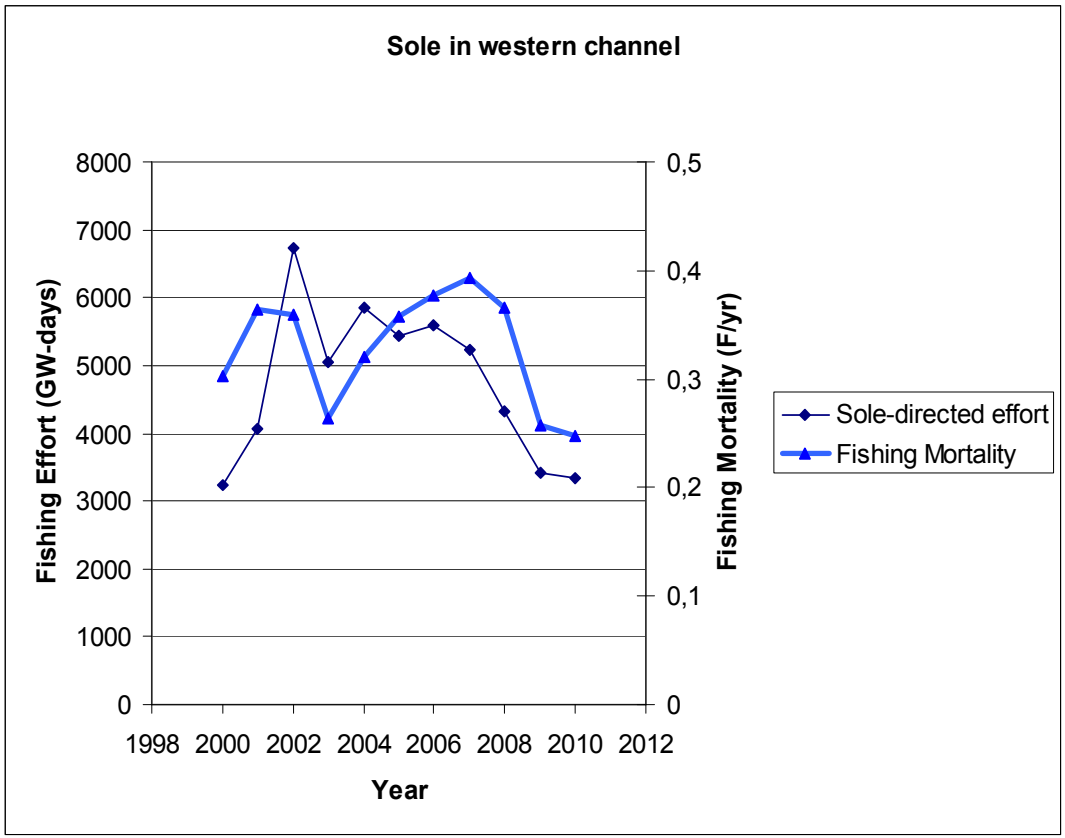
Demersal effort: r=0,54

Cod: eastern Baltic



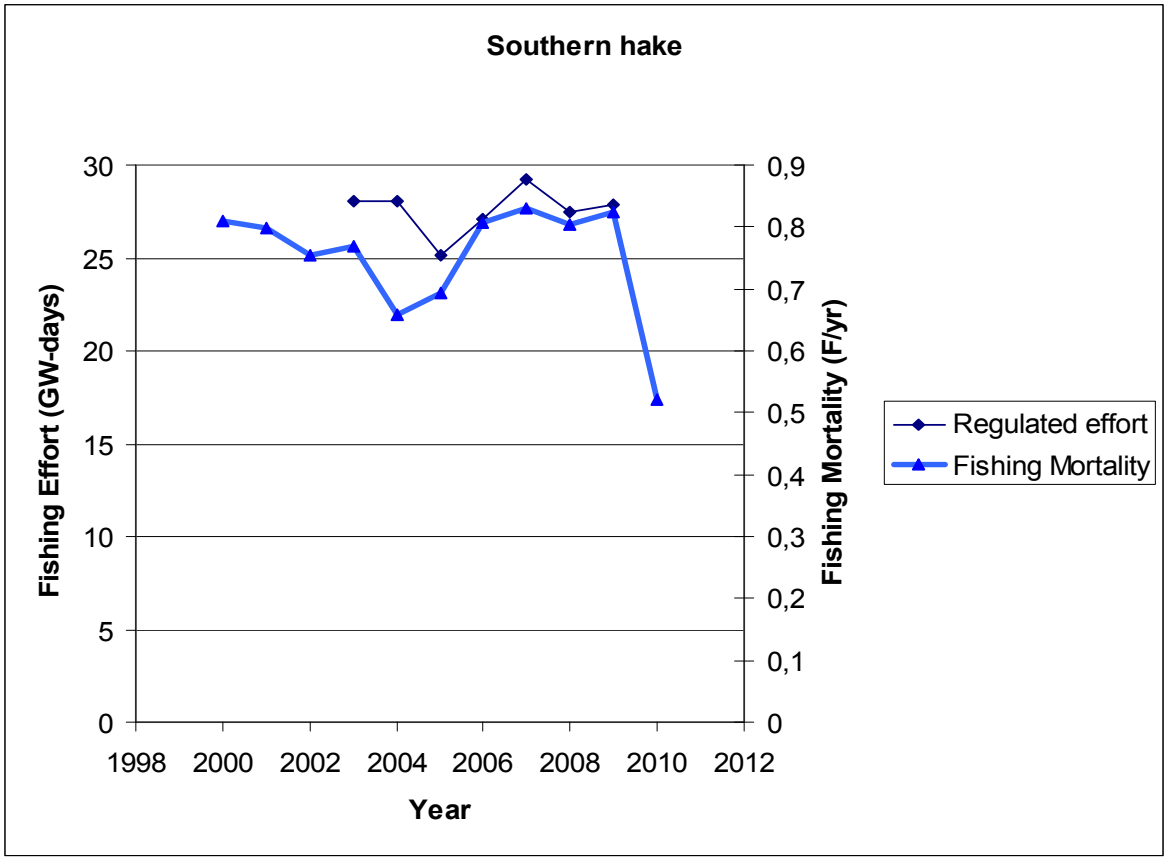
Demersal effort: r^2=94%

Sole: western channel



Beam-trawl and gill-net effort: r^2=31%

Hake: southern stock

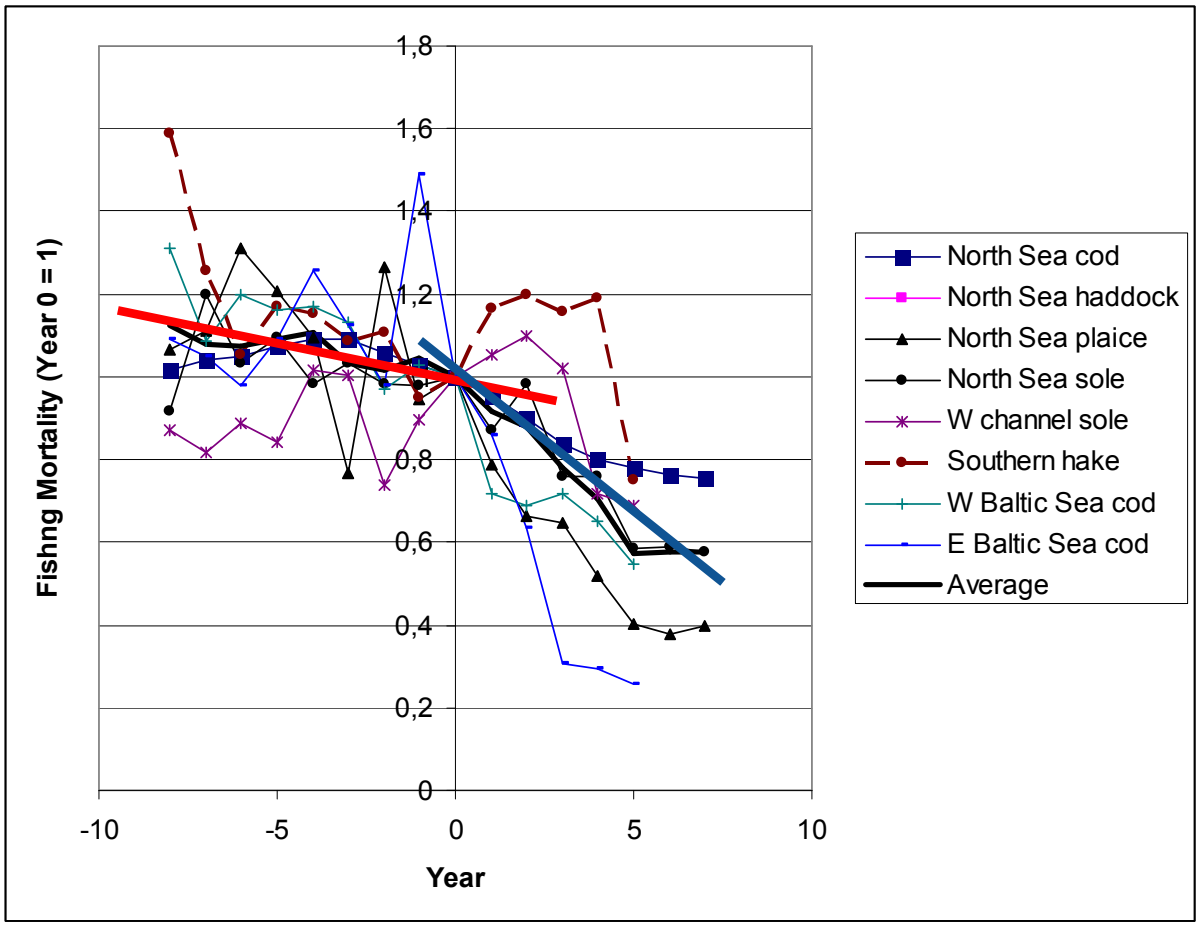


Regulated effort: r=0,20

- 1: Does lower F coincide with lower nominal effort, for sensitive species ? And how has effort actually changed ?

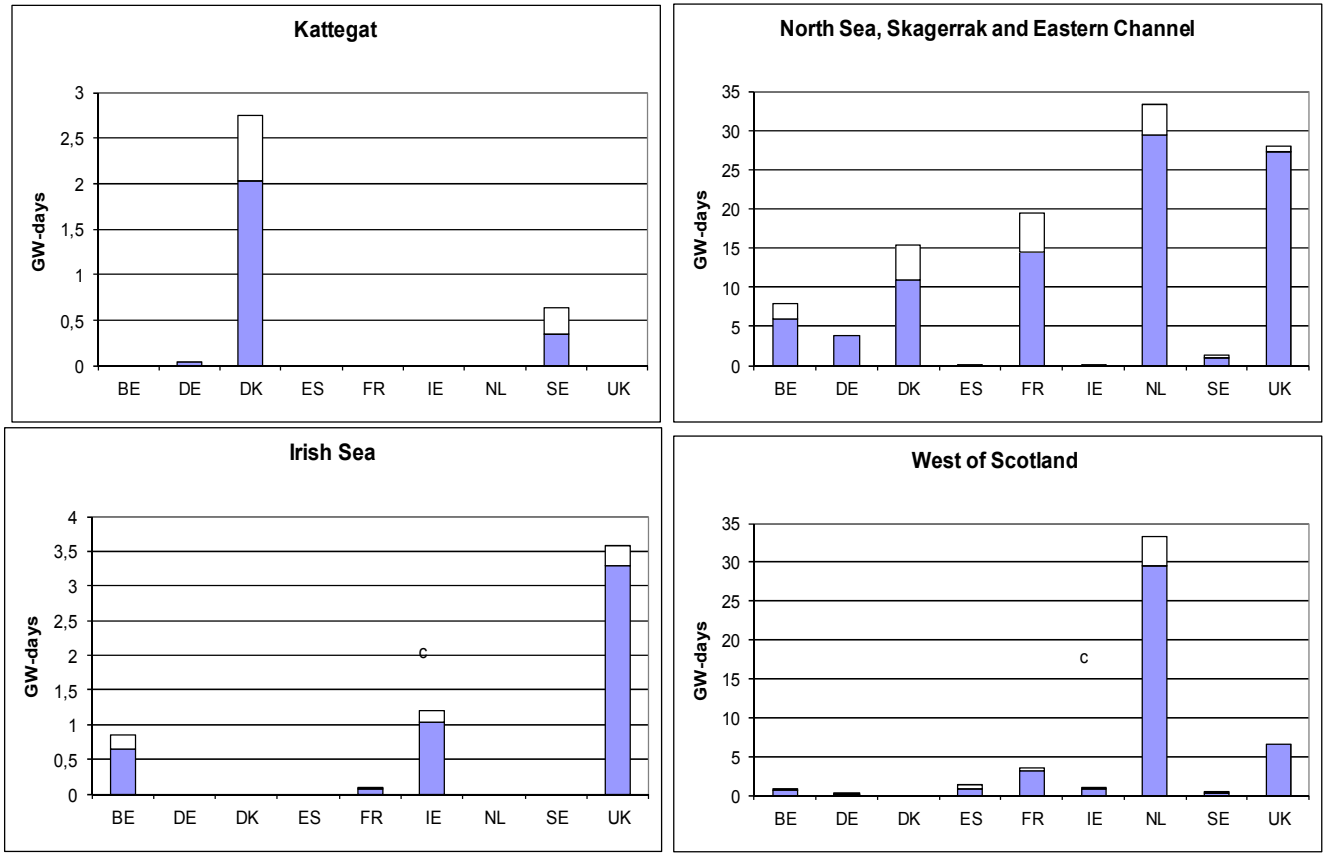
Stock	North Sea cod	Cod in Kattegat	Cod in Irish Sea	Cod W of Scotland	Western Baltic cod	Eastern Baltic cod	W. channel sole	Southern hake
Close link between effort and fishing mortality ?	Yes	Yes	No	No	Partial	Yes	Partial	Partial
Clear decline in effort ?	Yes	Yes	Yes	Yes	Yes	Yes	No	No

- 1: Did the introduction of effort management lead to a conservation improvement?

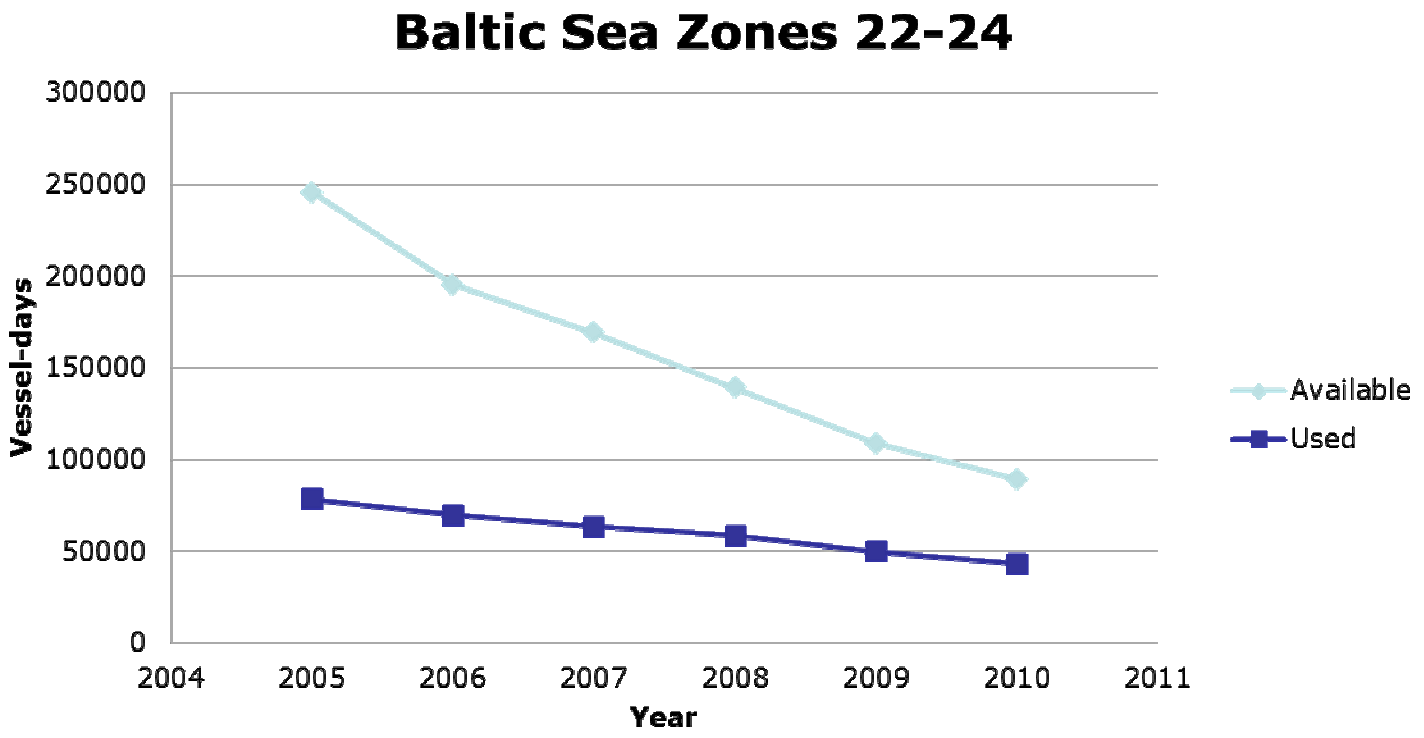


- 2: Are effort ceilings limiting on fishing fleets?
  - **at the Member State level ?**
  - **at the level of individual vessels ?**

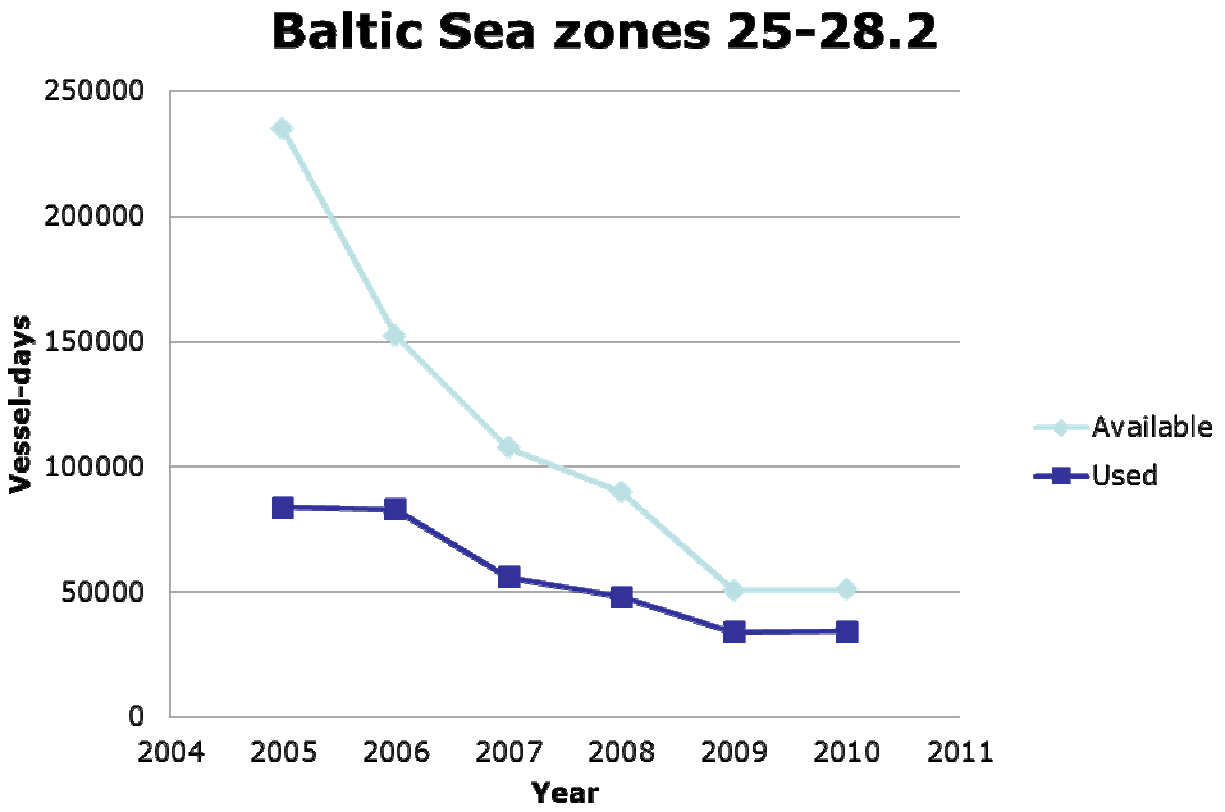
- Are effort ceilings limiting on fishing fleets at the Member State level (2010 Figures)?



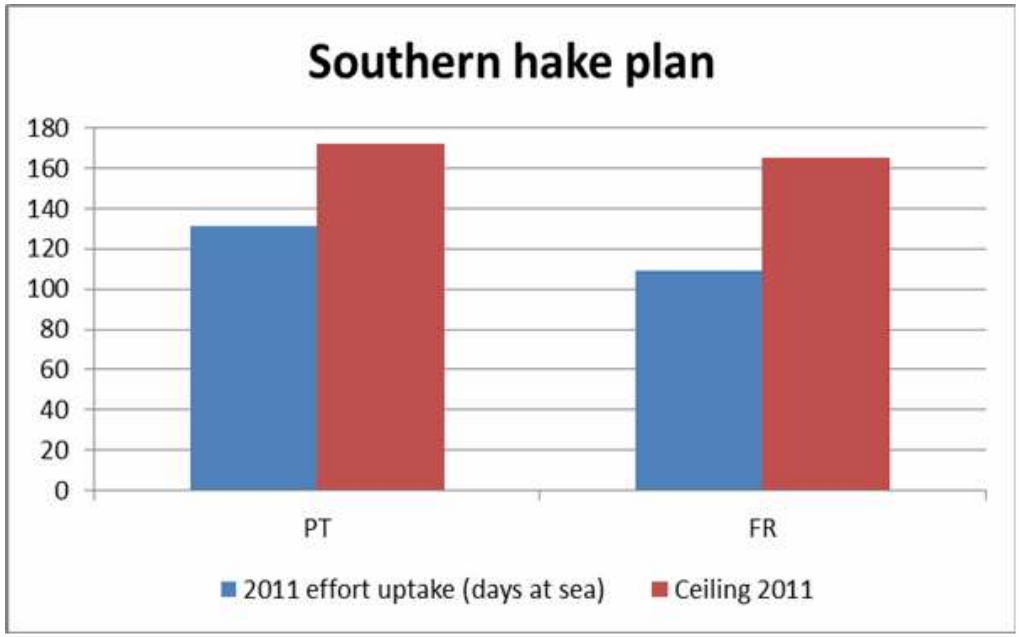
- Are effort ceilings limiting on fishing fleets at the Member State level ?



- Are effort ceilings limiting on fishing fleets at the Member State level ?



- Are effort ceilings limiting on fishing fleets at the Member State level.



Spain did not provide data.

- Are effort ceilings limiting at the level of individual vessels ?
- Has the average number of days fishing per vessel reduced ?

- Data source : DCF economic data sets, available to 2009

Average days-at-sea per vessel

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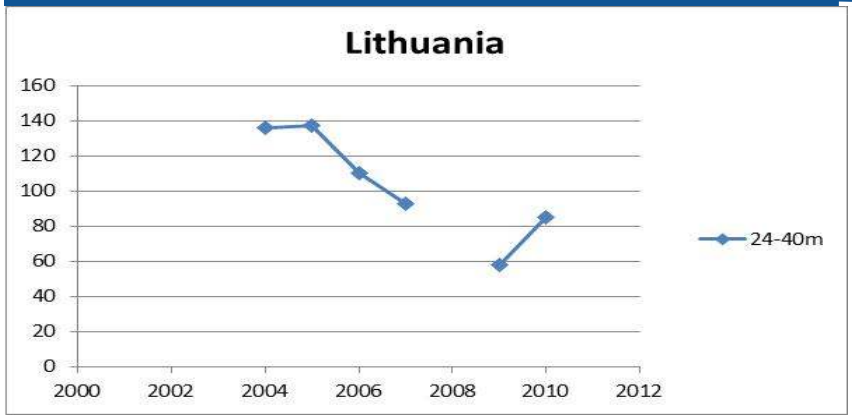
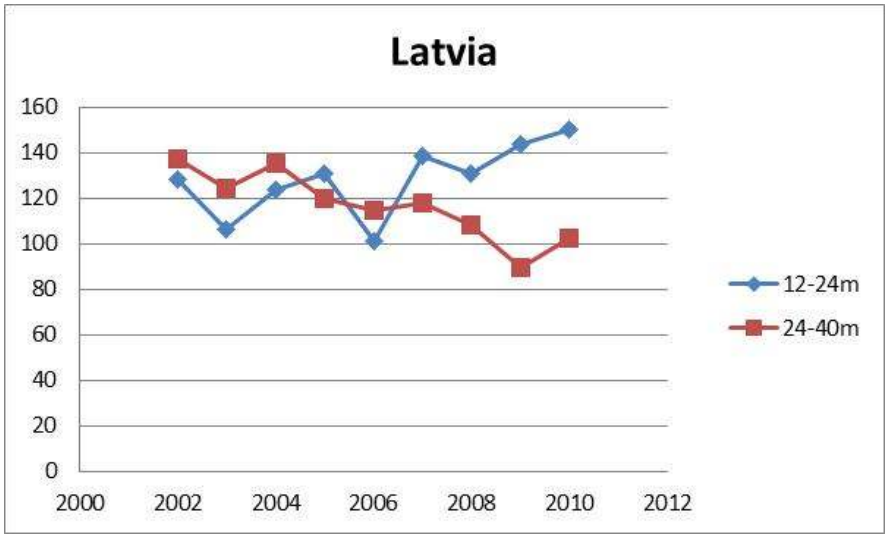
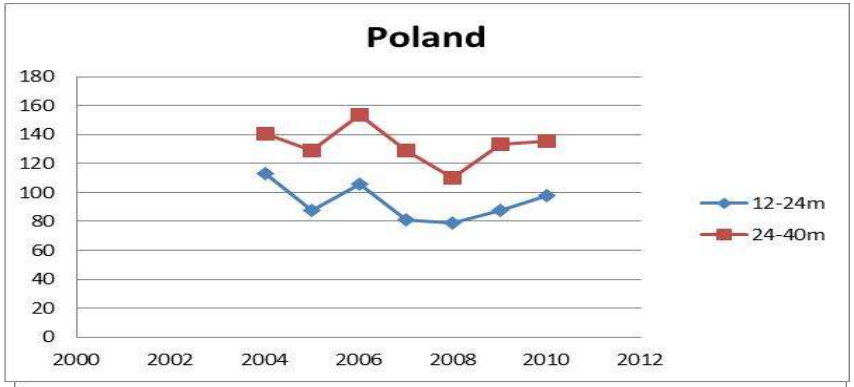
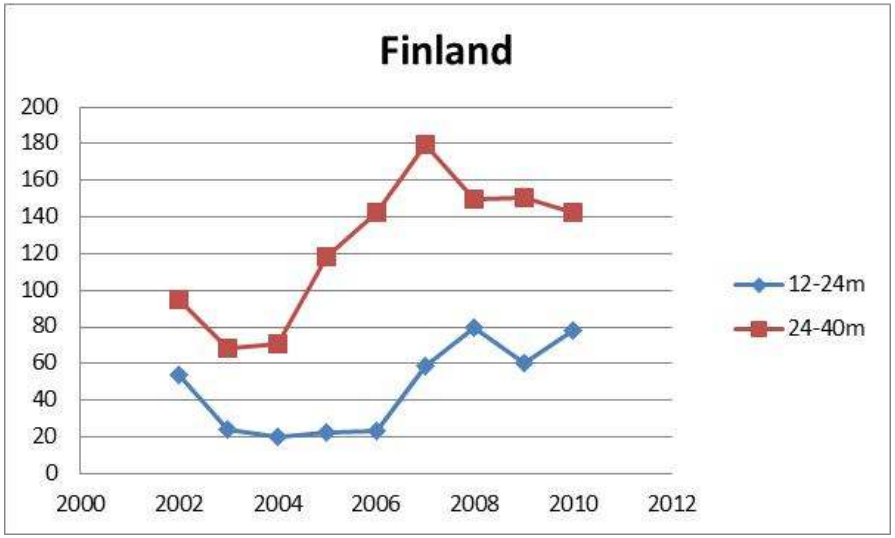
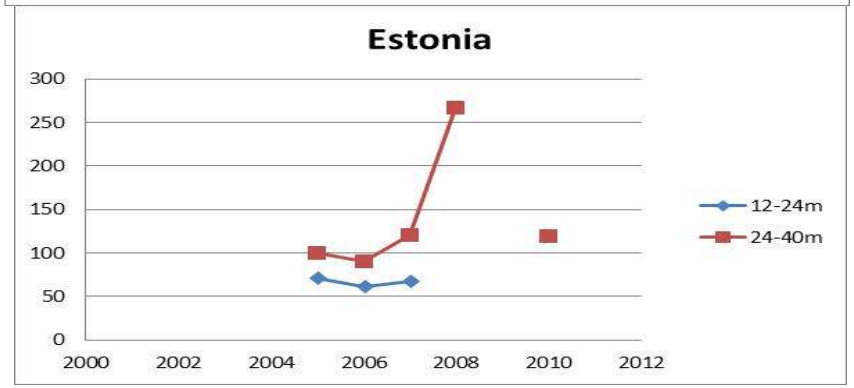


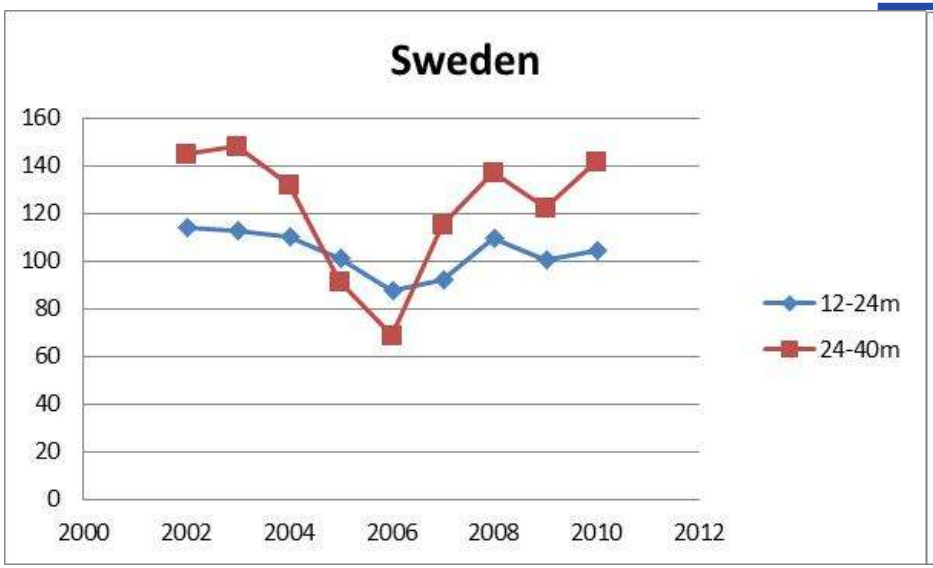


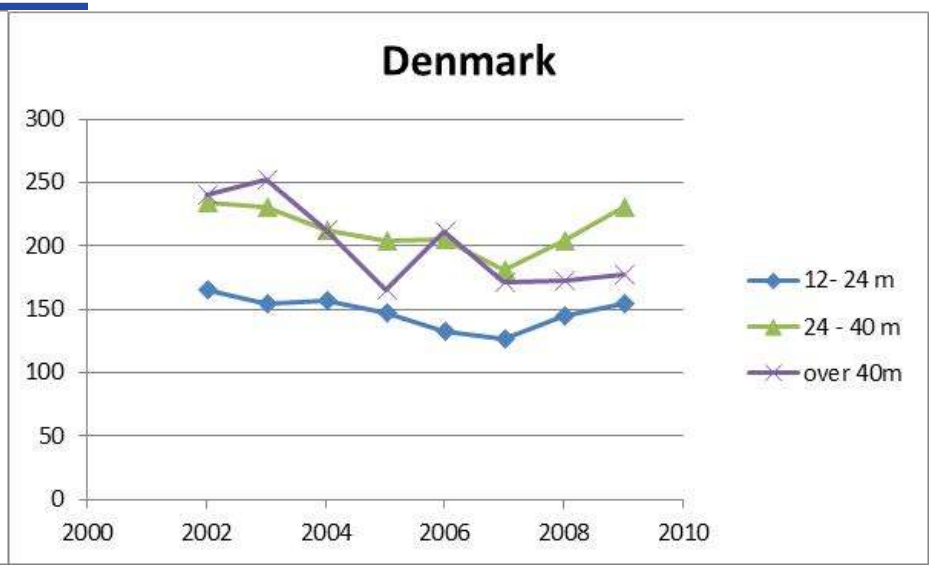


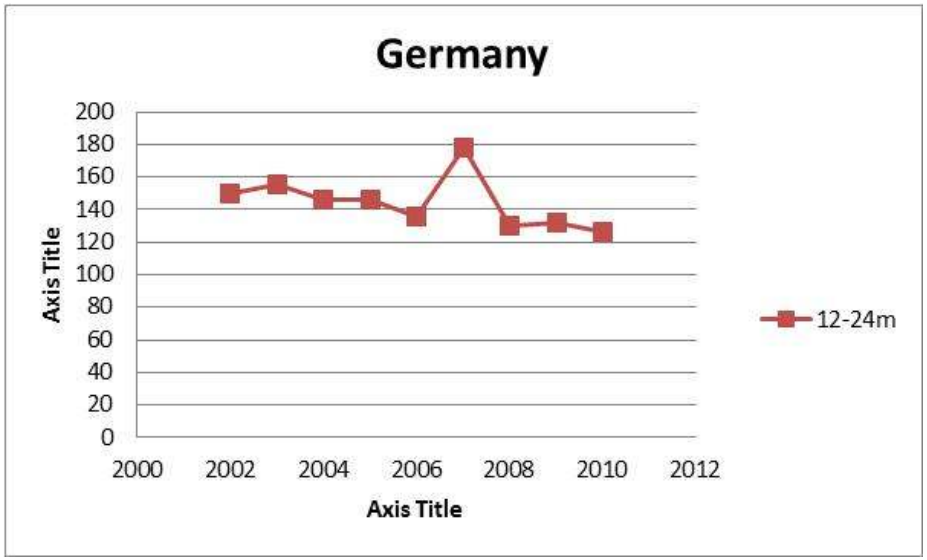




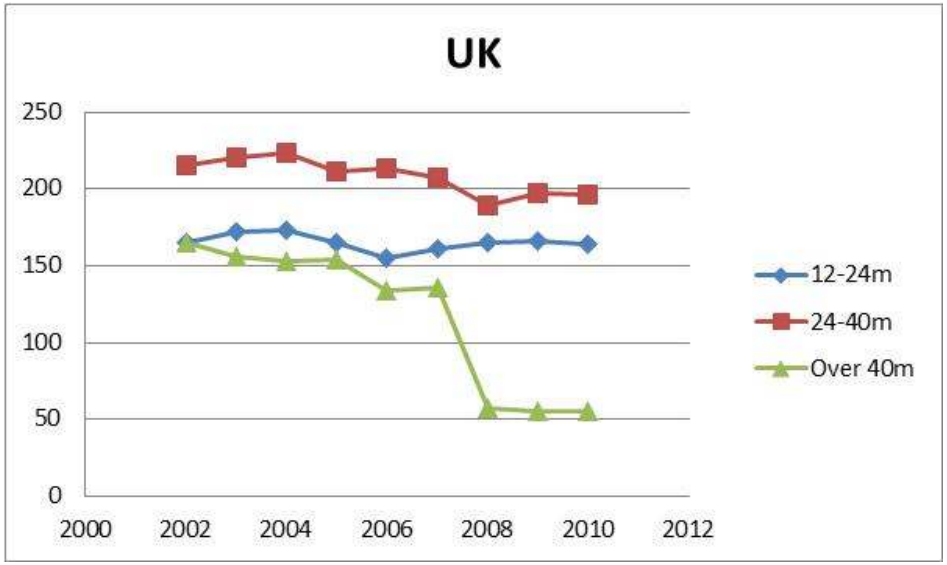
Average days-at-sea per vessel

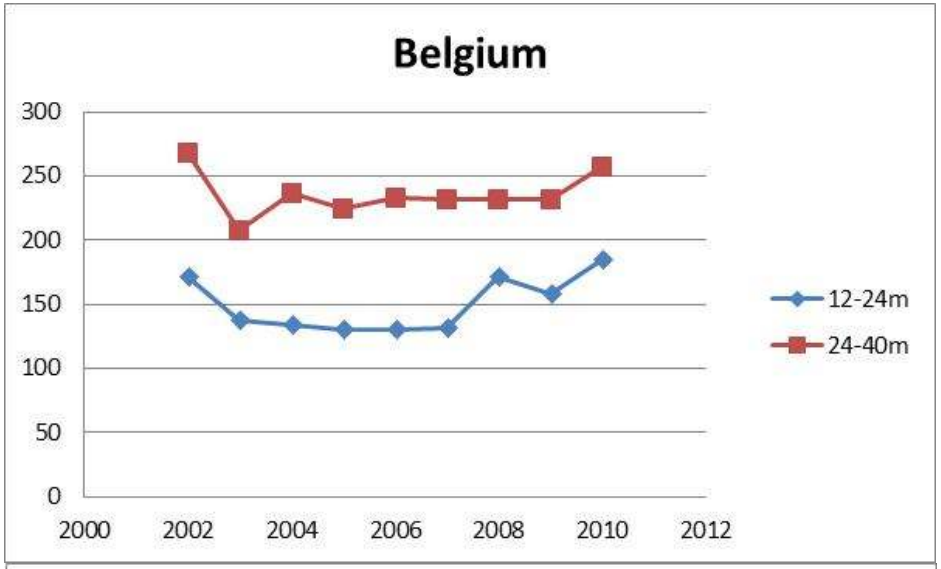


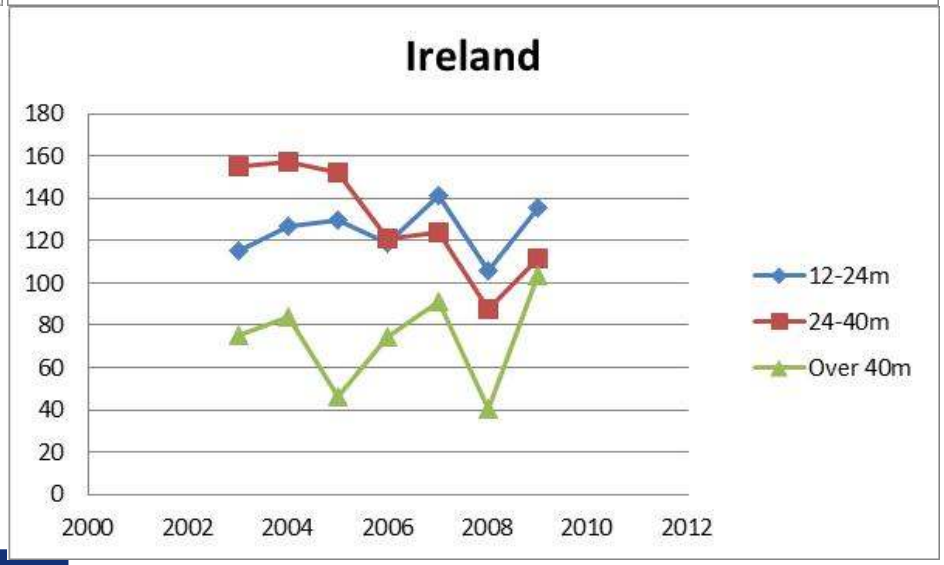




Average days-at-sea per vessel







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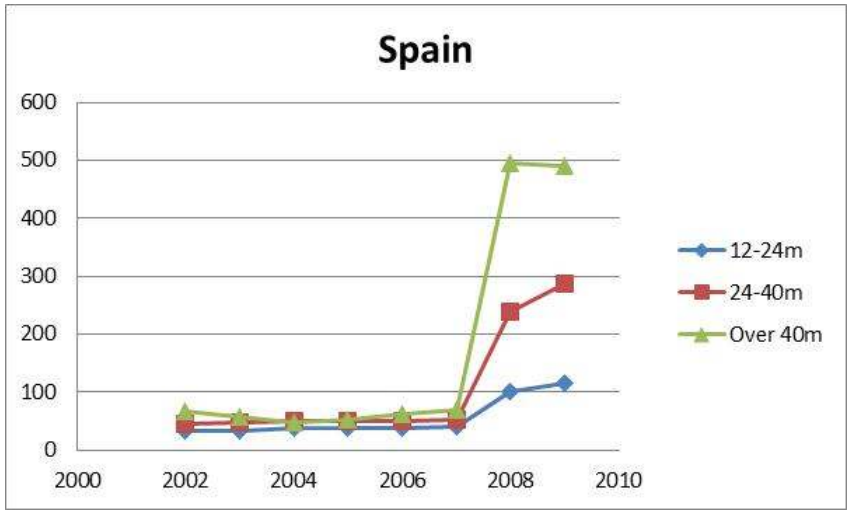
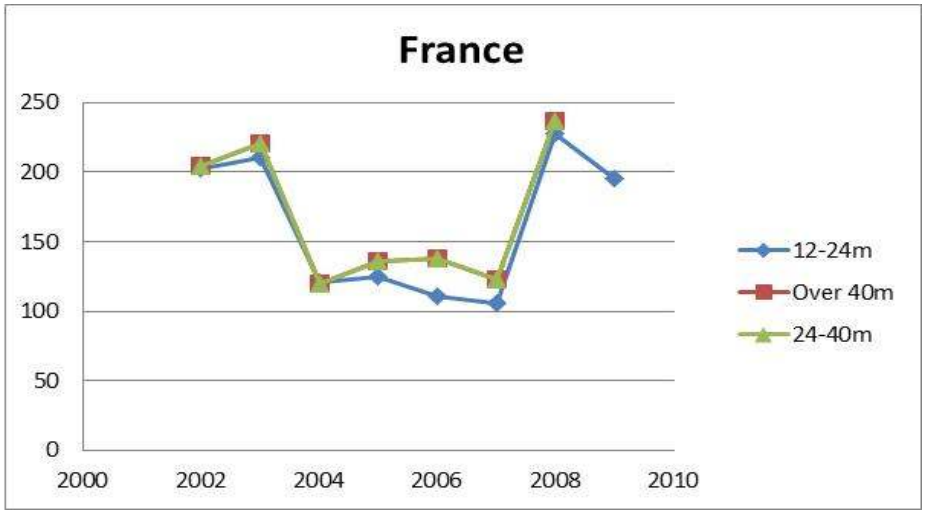
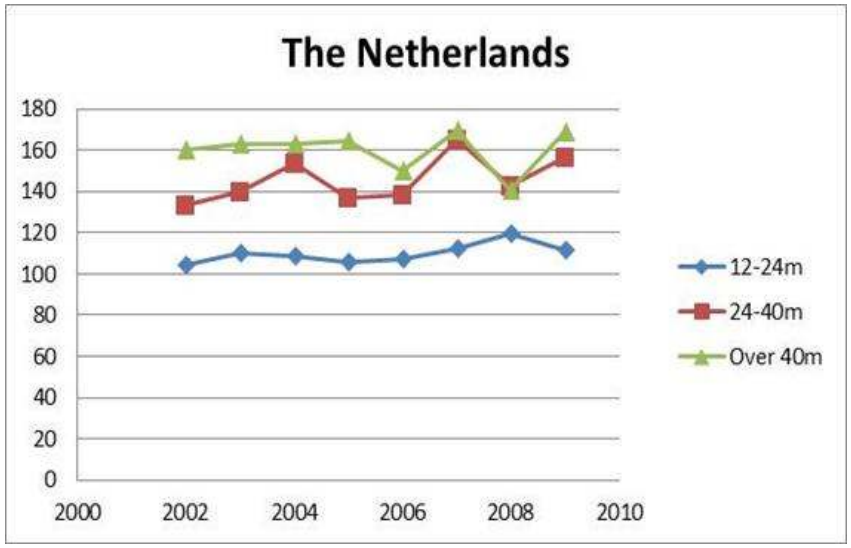
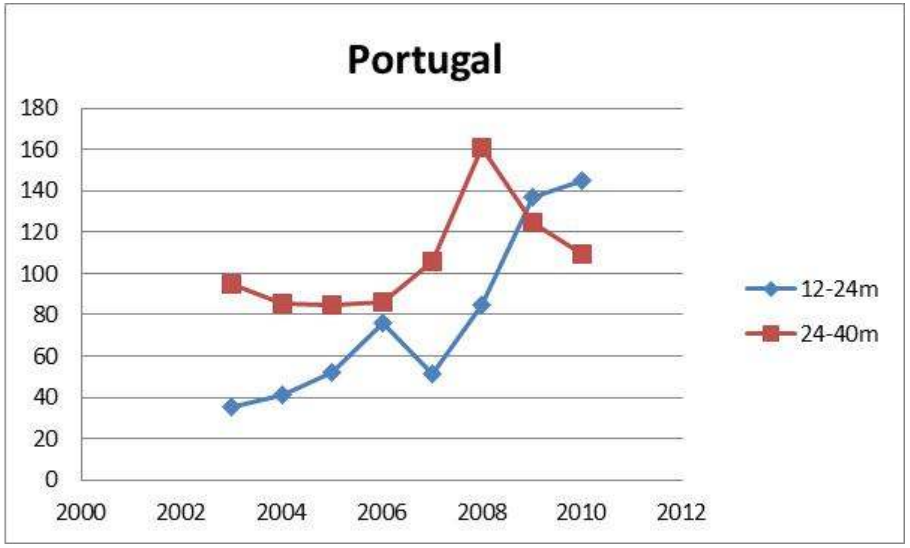








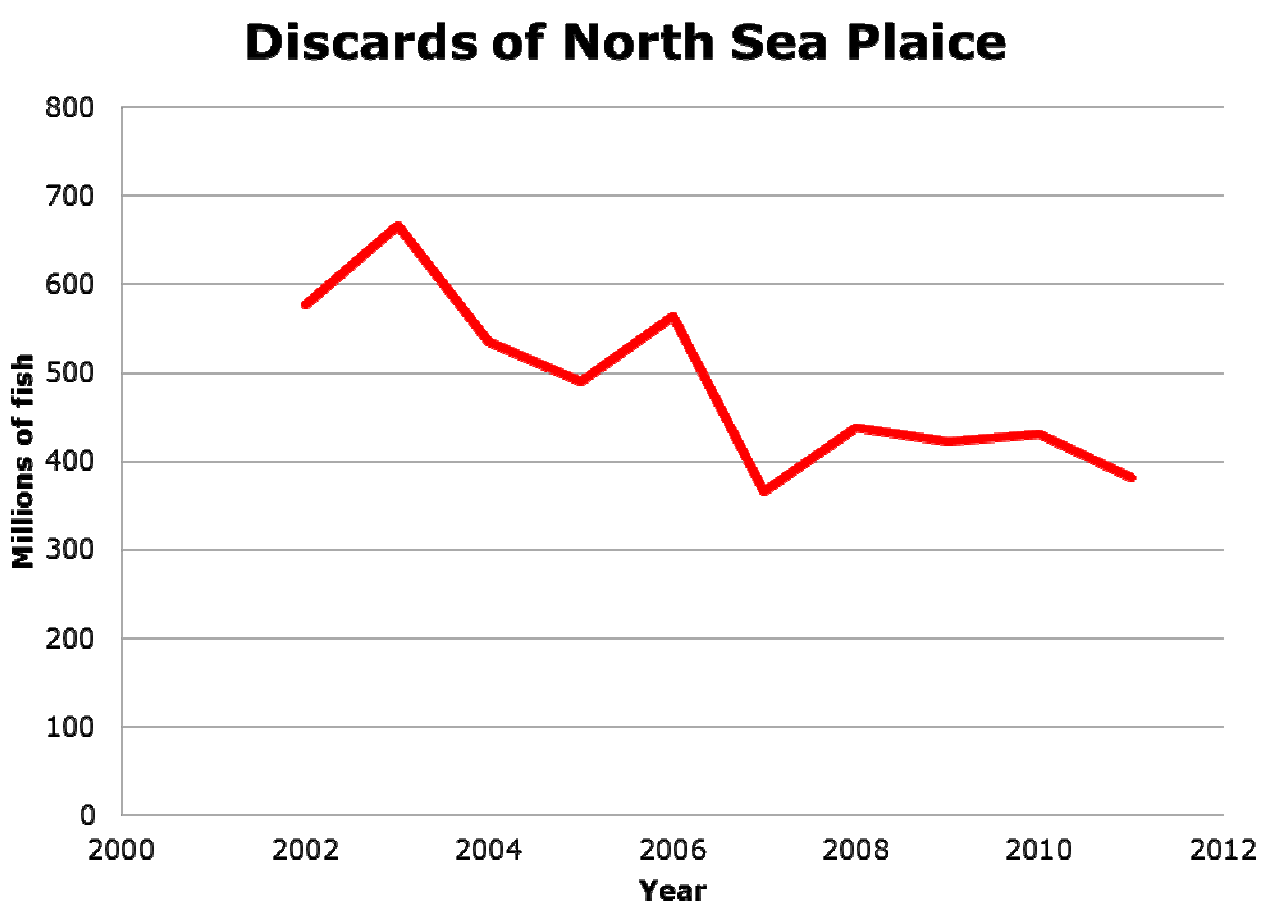
Effect on discards

Discards: Difficult to quantify separate effects of:

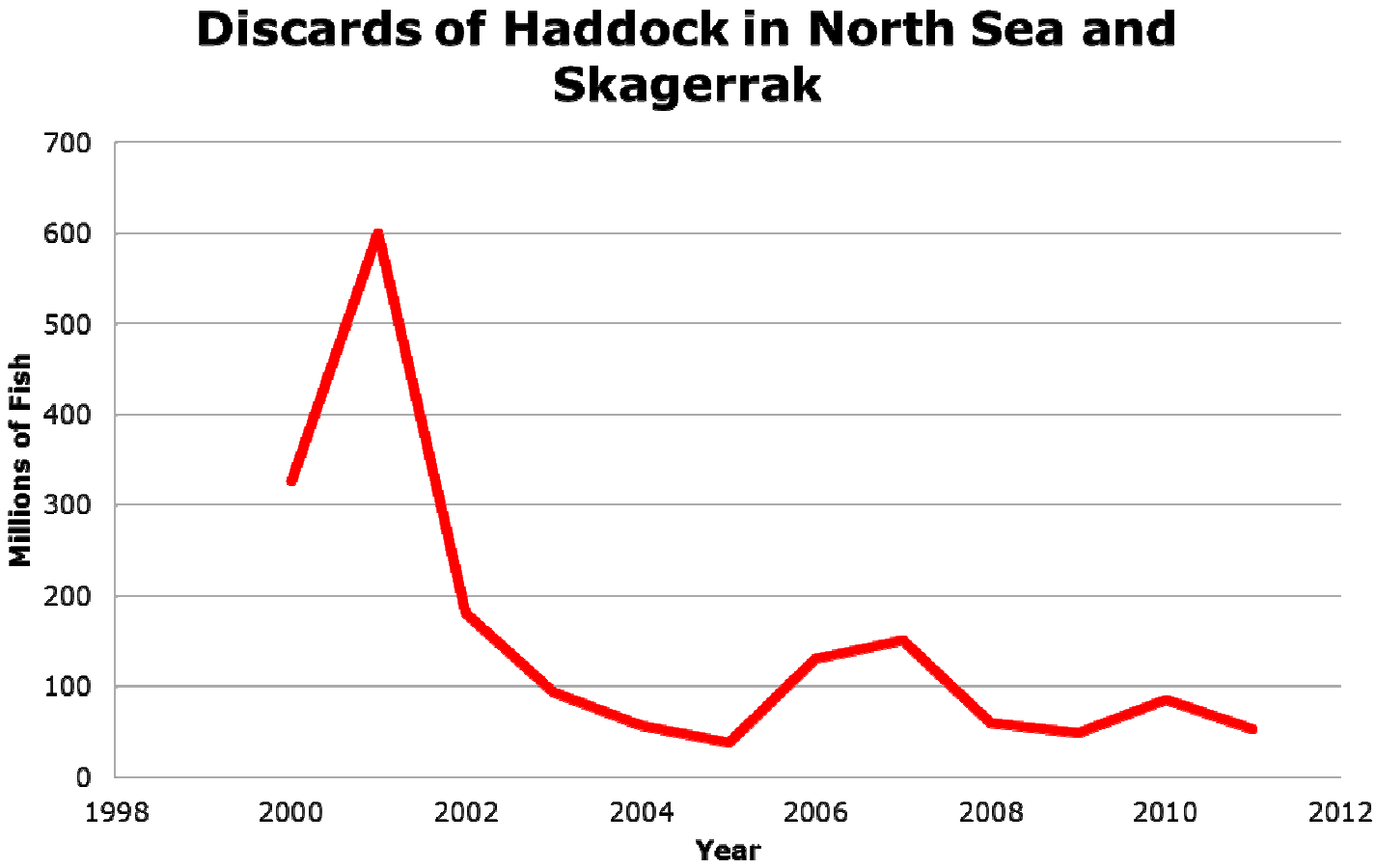
- **Increasing mesh sizes**
- **Real-time closures**
- **Effort reductions**
- **Lower fishing mortality rates**

- **3 examples: Haddock, plaice and cod in the North Sea**

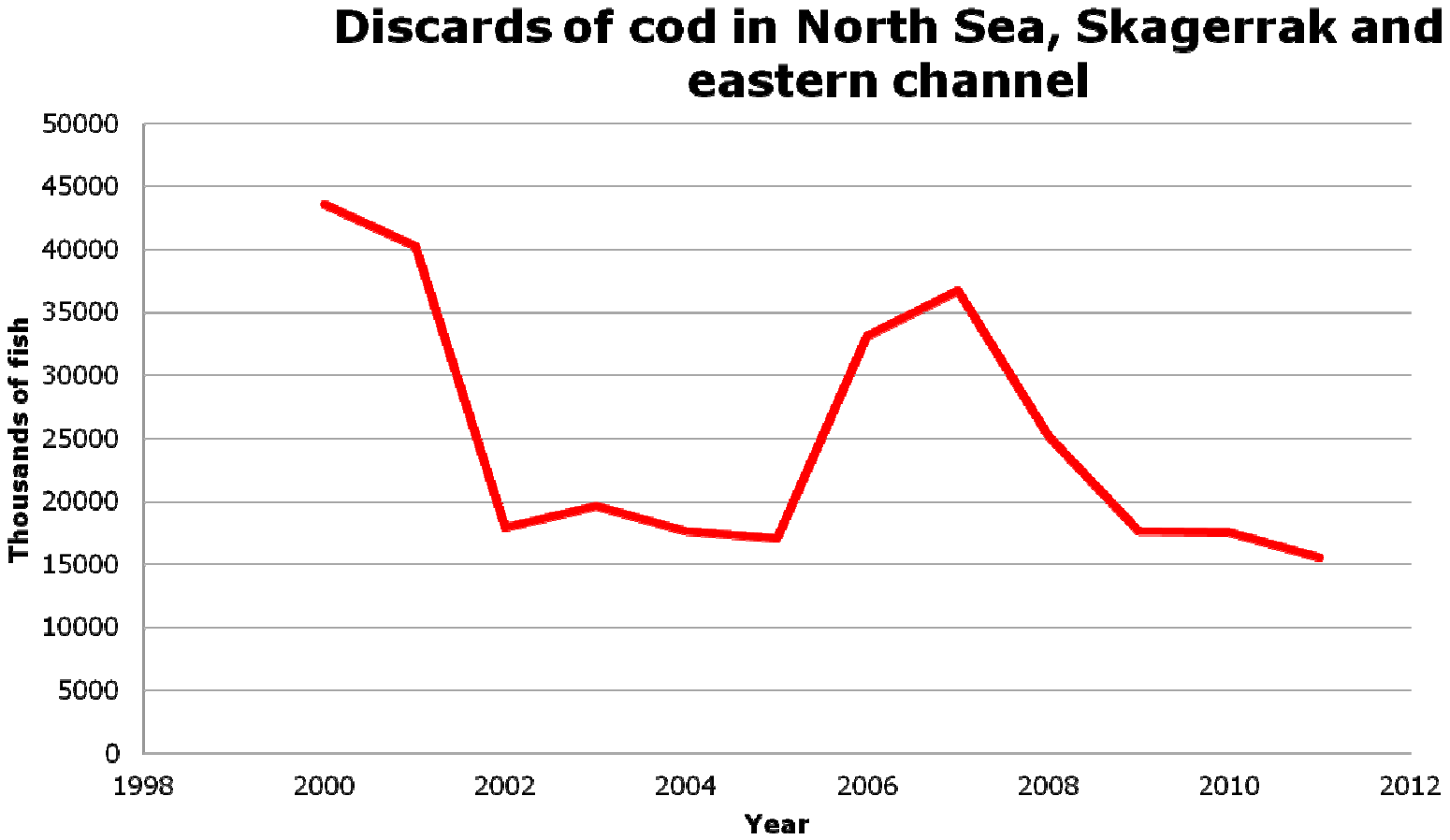
Effect on discards



Effect on discards



Effect on discards



Analysis of fleet database

- State of data in June 2012.
- Exclude vessels under 10m.
- Include demersal gears likely to catch cod, hake, plaice or sole: SDN, SSC, SPR,TBB,OTB,PTB,OTM,OTT,GNS,GTR,GTN,LLS.
- Calculation of total GT on 1 January each year.

MS	1-1-2003	1-1-2004	1/01/2005	1/01/2006	1/01/2007	1/01/2008	1/01/2009	1/01/2010	1/01/2011	1/01/2012
BE	24.358	23.794	22.747	22.579	20.035	19.292	19.007	16.048	15.812	15.326
BG					4.120	4.206	4.285	4.396	4.738	4.233
CY			9.842	7.089	3.486	3.036	3.076	2.710	1.996	1.847
DE	61.436	58.921	60.729	58.531	56.483	63.575	63.846	62.941	62.607	59.811
DK	93.648	89.846	88.932	85.100	79.443	70.354	66.933	61.467	60.279	58.645
EE			22.544	21.875	19.039	17.912	16.366	13.175	13.312	12.963
EL	61.933	59.016	56.715	54.584	55.091	53.781	52.302	51.764	50.508	48.422
ES	282.943	271.630	272.641	270.051	259.983	250.934	244.258	227.516	208.817	197.523
FI	12.102	11.964	10.870	10.204	10.102	10.137	9.987	10.201	10.327	9.694
FR	152.663	153.863	141.697	142.341	136.753	135.200	125.947	116.982	112.310	109.536
IE	75.160	73.083	68.095	59.617	57.551	46.794	50.328	49.906	51.998	48.585
IT	191.677	192.327	190.979	189.200	183.146	173.232	172.156	171.608	164.531	155.429
LT			75.339	64.366	61.913	60.729	50.268	49.117	45.817	45.089
LV			41.058	37.523	36.230	32.688	37.345	40.379	39.958	33.990
MT			11.604	11.574	11.598	11.502	7.788	9.088	5.477	5.406
NL	170.205	169.832	167.052	144.393	132.045	146.321	130.047	128.569	121.607	127.616
PL			42.532	27.695	29.269	27.984	39.113	36.383	35.436	31.701
PT	82.289	79.184	79.655	75.688	75.028	74.776	74.629	70.695	68.483	68.232
RO					1.995	2.058	1.296	1.489	811	511
SE	42.067	41.295	39.748	39.172	38.771	38.158	36.805	33.724	27.995	24.608
SI			787	787	789	697	706	716	716	710
UK	182.592	175.474	176.322	169.284	164.353	164.548	161.865	166.040	164.769	159.481

MS	Days-at sea, 12-24m segment, 2002-2009	Capacity Change, 1.1.2003-1.1.2010	Change in capacity.days	
Belgium	-8%	-34%	-39%	
Germany	-12%	+2%	-9%	
Denmark	-7%	-34%	-38%	
Spain	NA	-20%	NA	
France	-4%	-23%	-26%	
UK [from 99]	+1%	-9% [-14%]	-8% [-13%]	
Ireland	+18%	-34%	-22%	
Netherlands	+7%	-24%	-19%	
Portugal	NA	-14%	NA	

MS	Days-at sea, 12-24m segment, 2005-2009	Capacity Change, 1.1.2005-1.1.2010	Change in capacity.days	
Estonia	+3%	-42%	-40%	
Latvia	+15%	-2%	+13%	
Lithuania	NA	-35%	NA	
Poland	+12%	-14%	-4%	
Sweden(03-)	-8%	-20%	-26%	

Conclusions:

1. Effort and F do seem to be linked in many (but not all) cases.
2. Effort (and F) have reduced by up to 50% in some areas, in other areas there has been no significant reduction.
3. In Irish Sea and west of Scotland effort reduced but fishing mortality did not.
4. Fishing mortality reductions accelerated when fishing effort management was introduced.

5. MS implemented effort management by different combinations of fleet reductions and capacity reductions:

DE reduced activity but kept the fleet the same size.

UK had the second-lowest change in fleet size and did not reduce activity.

FR, BE, DK reduced both the capacity and the activity.

NL, IE made larger reductions in capacity and increased activity.

6. Data from ES, PT,LIT, EST are difficult to interpret.