

Biological Assessment of VI a Haddock

NWWRAC Focus Group LTMP VI a Haddock

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Overview

The Fishery:

Trends in catches, fishing effort & current management

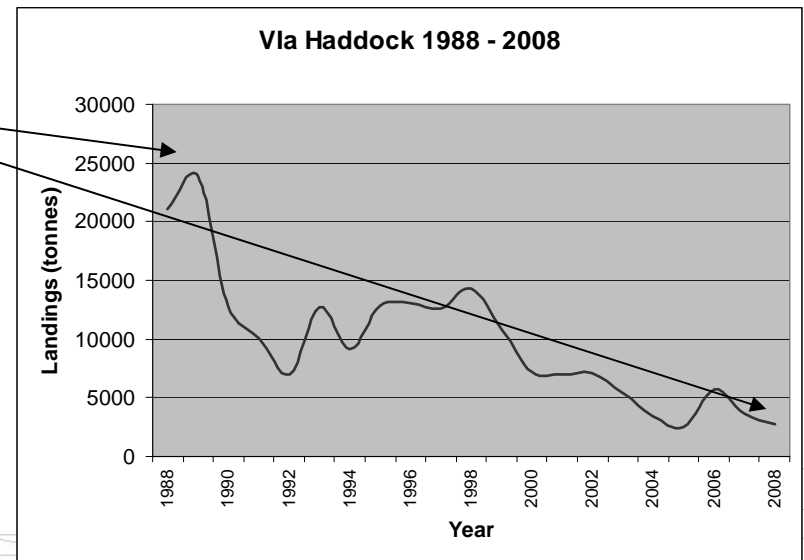
ICES Assessment:

2009 assessment, input data & advice



The Fishery - Landings

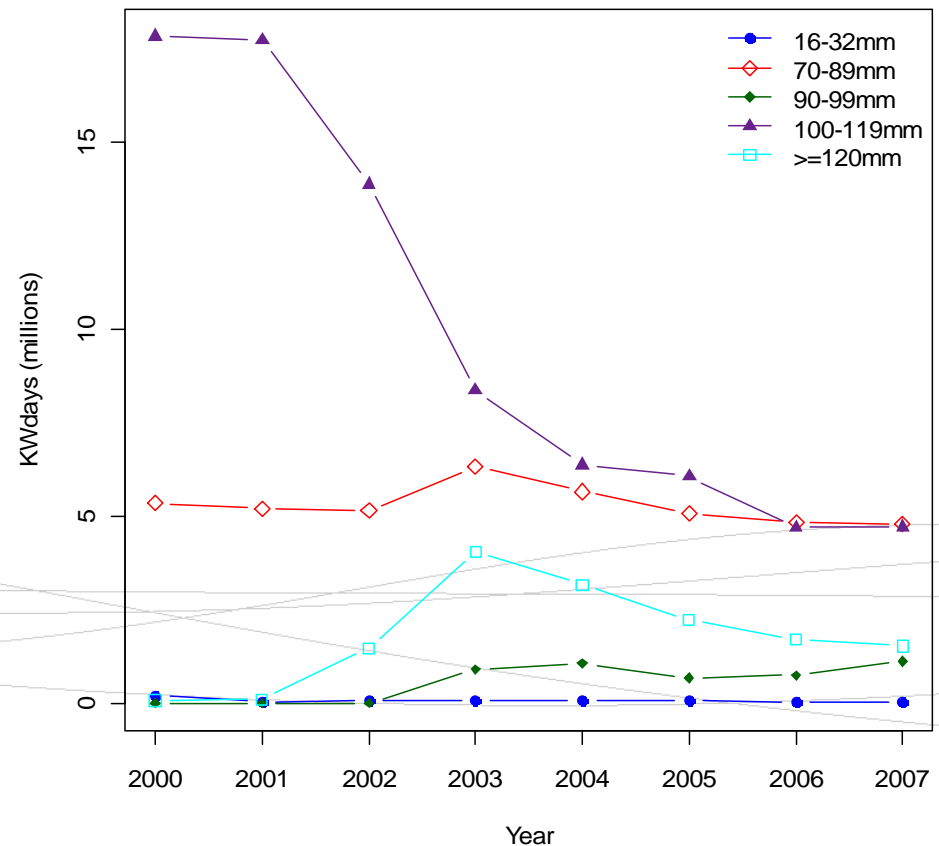
- Otter trawl fishery – NW Hebrides & Stanton Bank
- Landings fallen from peak ~25kt to ~3kt
- UK (64%); Ireland (32%); France (3%) and Norway (1%)
- TAC 2010 – 2673t (VIa/VIb)
- 2008 uptake – 45% of TAC (2734t from 6120t) [UK 37%; Ireland 88%; France 23%]



The Fishery - Effort

- Effort has fallen significantly since 2000
- Gear specific – OTB 100-119mm ~70% reduction
- Decommissioning, effort management and fleet displacement
- Relatively stable for other gears

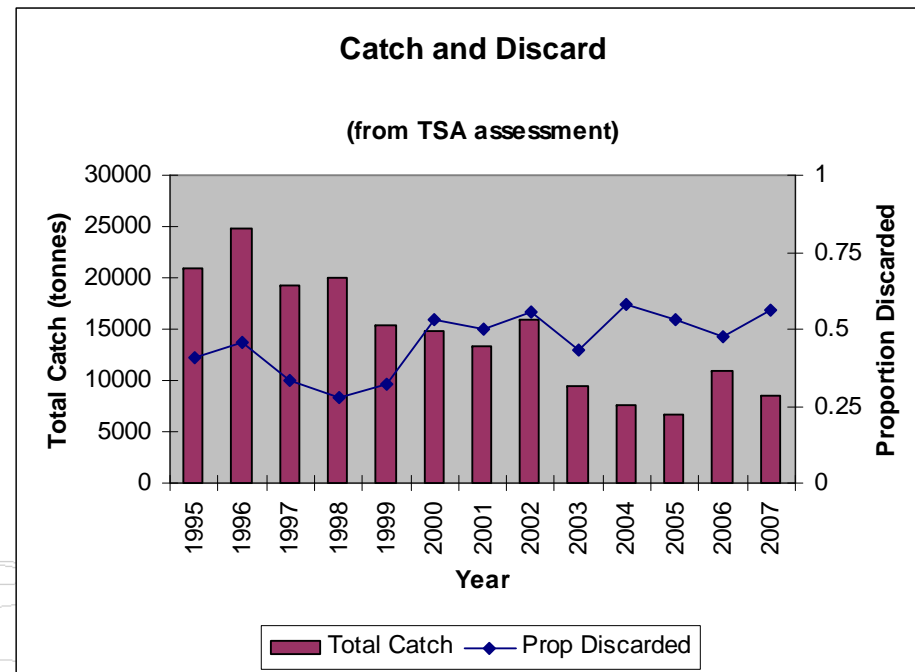
West of Scotland Dem Trawl and Danish Seine





The Fishery - Discards

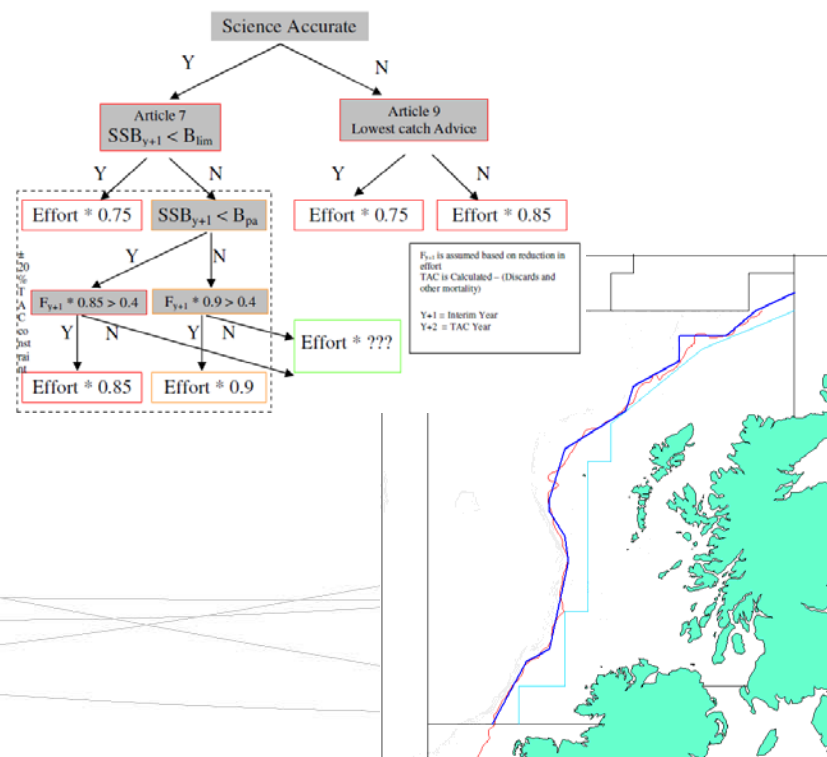
- Discarding has been problematic ~50% of catch discarded
- Mainly comprised of 1 & 2 yr fish
- Poor selectivity wrt to minimum size
- 2009 emergency measures should mitigate significantly
- Discarding patterns variable due to changes in fishery
- Uses Scottish and Irish discard data (low sample size [IRL])





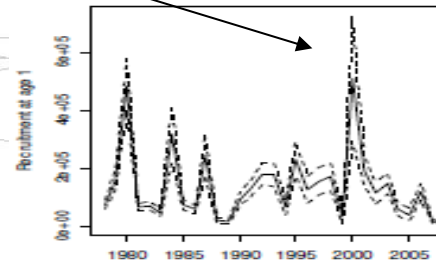
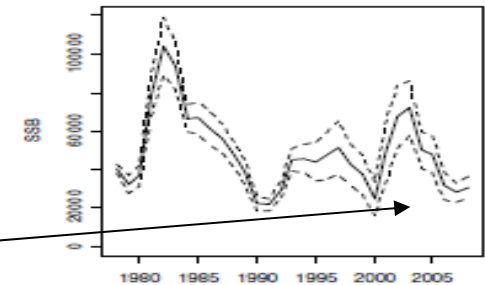
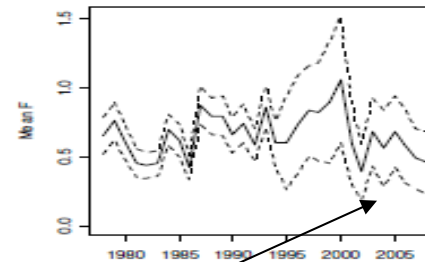
The Fishery - Regulations

- No 'Haddock' specific regulations (exp MLS/TAC)
- Impact by association with cod
- D@S
- LTMP for Cod
- 2009 emergency measures significant increase in selectivity
- CCS and closures
- All likely to have impacted significantly on haddock



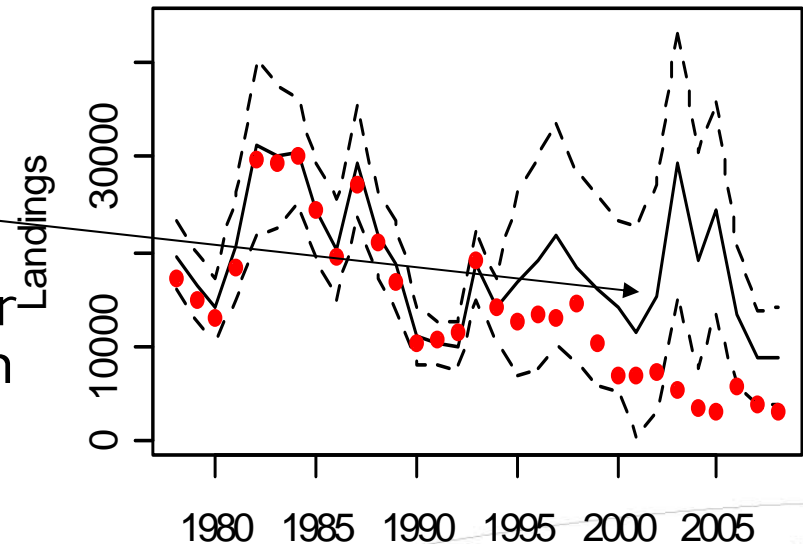
The assessment - basis

- Analytical Assessment – Time Series Analysis (TSA)
- Largely survey based (landings data from 1995+ excluded)
- 3 surveys available – 2 used (Sco Q1 & Q4)
- F estimate (0.46) has broad confidence intervals (0.2 – 0.7)
- Reasonable estimator of R and SSB
- Periodic peaks in recruitment
- Assessment models total *catches* and can not be used as the basis of TAC advice

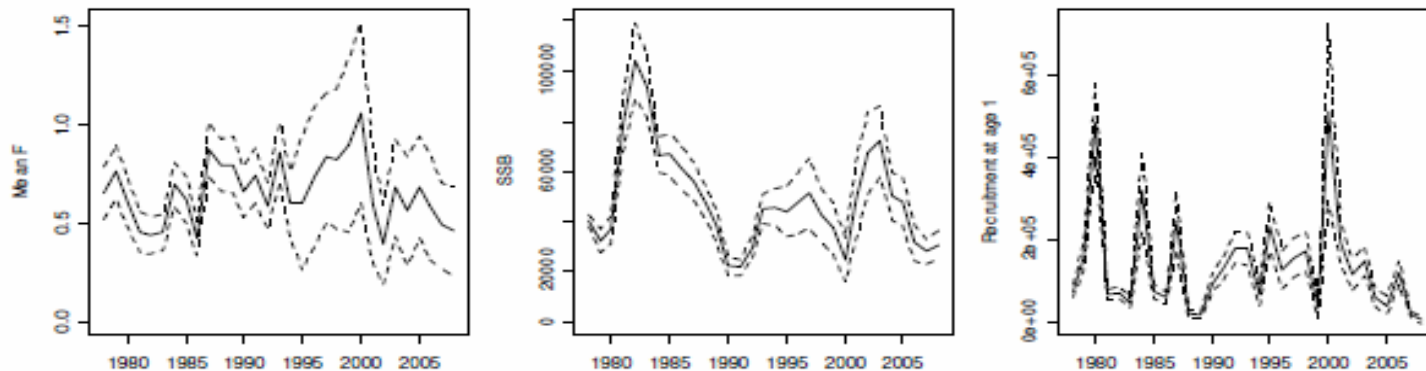


The assessment – commercial catch data

- Conflicting signals between survey and commercial catch@age
- TSA highlights significant unallocated removals
- Indications that mis-/under reporting has diminished in past few years
- Reintroduction of fishery dependent data should be addressed at benchmark
- Observer coverage required to monitor discarding



The assessment - 2009



- Most recent estimate of $F(2008)$ 0.46 ($<F_{pa}[0.5]$)
- 2009 estimate of SSB 20271t ($<B_{lim}[22000t]$)
- Recruitment in 2007 and 2008 very weak
- Combined – short term prognosis poor

The assessment – Advice 2010

Considering the options below ICES advises on the basis of exploitation boundaries in relation to precautionary limits that in the absence of fishing, the stock is expected to be rebuilt close to B_{pa} in the short term and that no fishing should take place in 2010 for haddock in VIa. ICES has recommended the development of a management plan, which is under development.

Rationale	Removals (2010)	Basis	F (2010)	SSB (2011)	%SSB change ¹⁾
Zero catch	0	$F=0$	0	29.9	94%
High long-term yield	4.1	$F_{(long\ term\ yield)}$	0.2	25.6	66%
Precautionary (F_{pa})	8.87	$F_{pa}=F_{sq} * 0.97$	0.5	20.7	34%
<i>Status quo</i>	2.1	$F_{sq} * 0.2$	0.12	27.7	80%
	4.1	$F_{sq} * 0.4$	0.24	25.6	66%
	5.9	$F_{sq} * 0.6$	0.36	23.8	55%
	7.6	$F_{sq} * 0.8$	0.48	22.0	43%
	9.1	$F_{sq} * 1.0$	0.6	20.5	33%
	10.5	$F_{sq} * 1.2$	0.72	19.0	23%

Summary

- TSA model in absence of commercial catch data gives wide confidence in F estimate
- Need to reevaluate commercial *catch* data for inclusion
- Discarding patterns variable and need at sea observation
- Refine commercial LPUE using VMS data

END OF PRESENTATION

Thank you



Marine Institute
Foras na Mara