

Thoughts on Industry data collection

Sven Kupschus

monitoring design and analysis

cefas, UK a formal position, no advice, but a presentation as a basis for discussion for future direction?

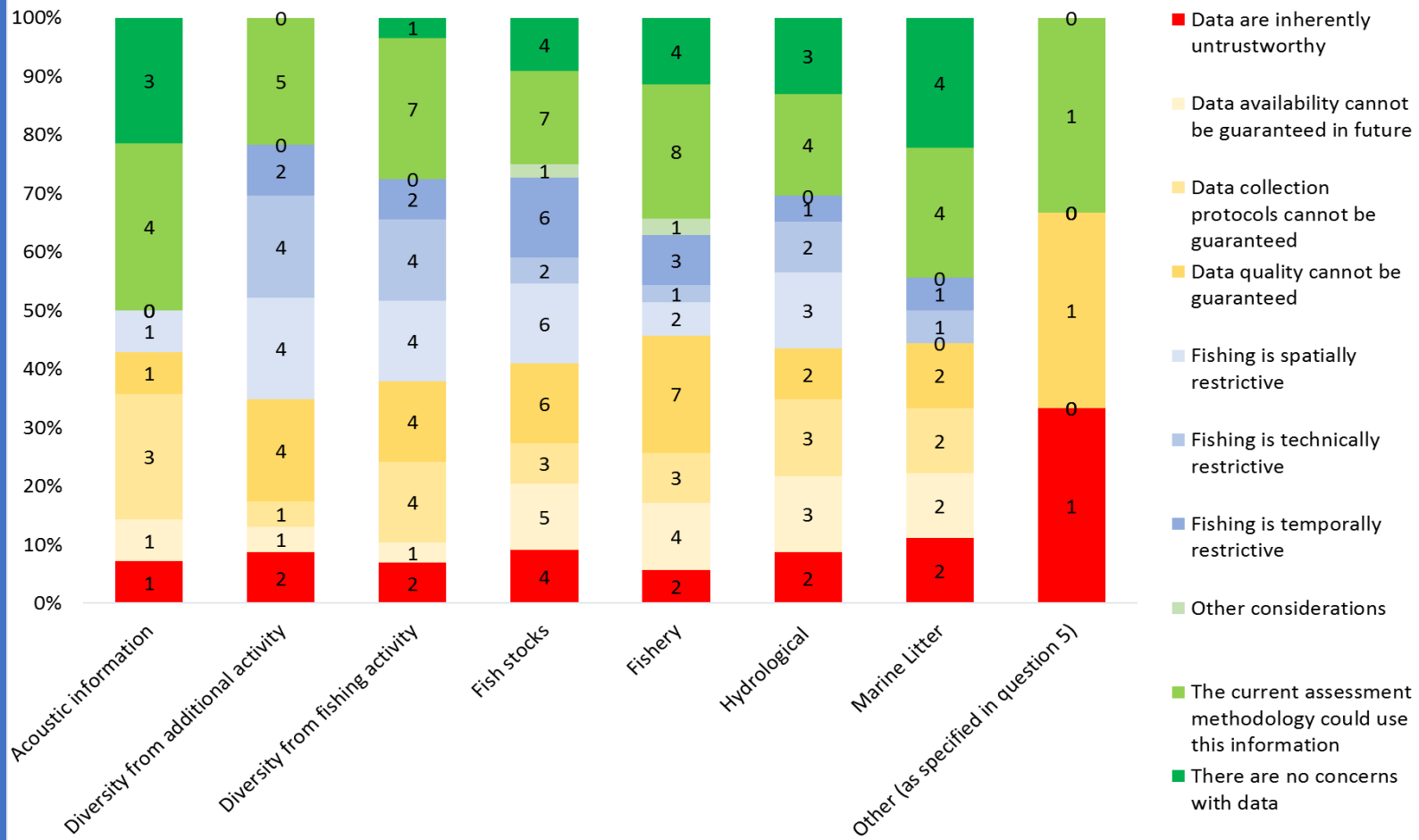


Figure 4 Data users considerations of 17 respondents that answered this section by data type. Red indicates a general mistrust of data, yellow shades are concerns of data quality and reliability, blue shades imply biases inherent in the use of fishing vessels relating to what the samples are representative of, green shades indicate no concerns, or minor concerns that could be addressed with some adjustment of the assessment methodology.

Differences in fishermen and scientist perspectives

- Pay bills, make it a career, pass it on to children.
 - Covering multiple stocks
 - Individual conditions
- Exploit 'sustainably' forever and precautionary for now.
 - Single stock
 - Covering multiple individuals / fleets



Differences in fishermen and scientist perspectives

- Bias problem, we need different data for better assessments
 - TACs are usually too low and stock can sustain more
 - We chuck these back dead so they are not in the assessment
 - There are more fish out there than scientist think
 - Quick wins / short projects
- Variance problem, we need more data for better assessments
 - Act precautionarily, no data no fishing
 - More surveys more precise recruitment forecasts
 - Long time series (5 years)

Differences in fishermen and scientist perspectives

- What formal expertise have fishermen ...?
 - Higher catch rates than survey
 - Different spatial distribution than survey
- What knowledge do scientists have on ...?
 - Assume no changes in the spatial distribution of the stock
 - Assume limited changes in the operation of the fishery
 - Assume environmental effects on recruitment and mortality rates are constant
 - Assume closed population

What this means for 'trust'

- No inherent reason for distrust or conflict of interest.
- Need more fluid communication, a better understanding of the expertise of each group, a common vocabulary.
- Simple and 'small' projects with clear objectives and a plan to achieve them.

What does policy want out of industry data collection?

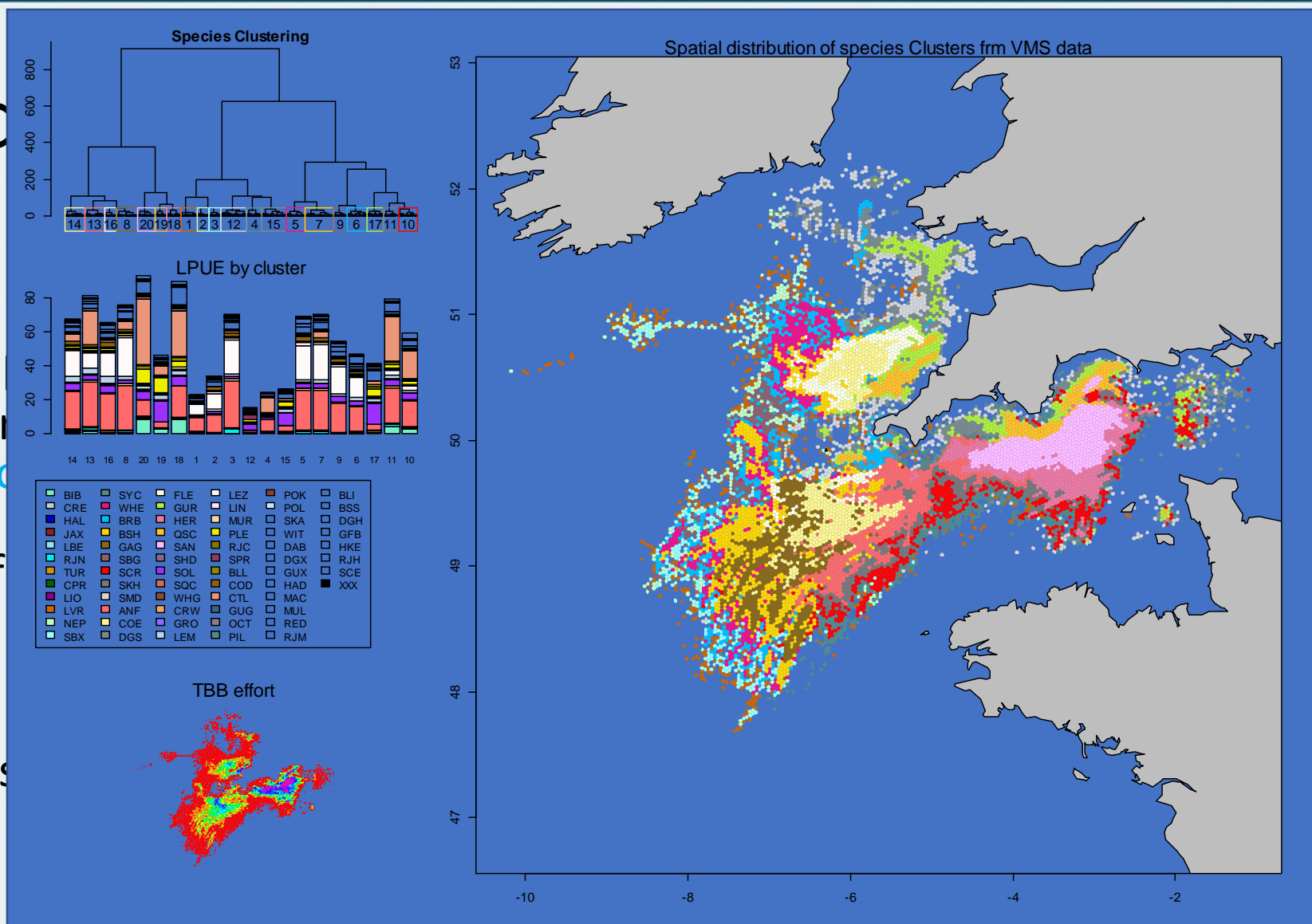
- More satisfied fishermen / less conflict at the December council
- Reduced risk of infraction or conflict with NGOs
- Reduced cost to public / citizen science data collection
- Increase in sustainably managed fisheries

These may be potential benefits, but if they drive the process it leads to unrealistic expectation, leads to potential conflict of interest and it is likely to erode rather than build trust.

Food data

- Data collection necessary
- Some of the reasons
- There is activities
- How do

What would



Industry

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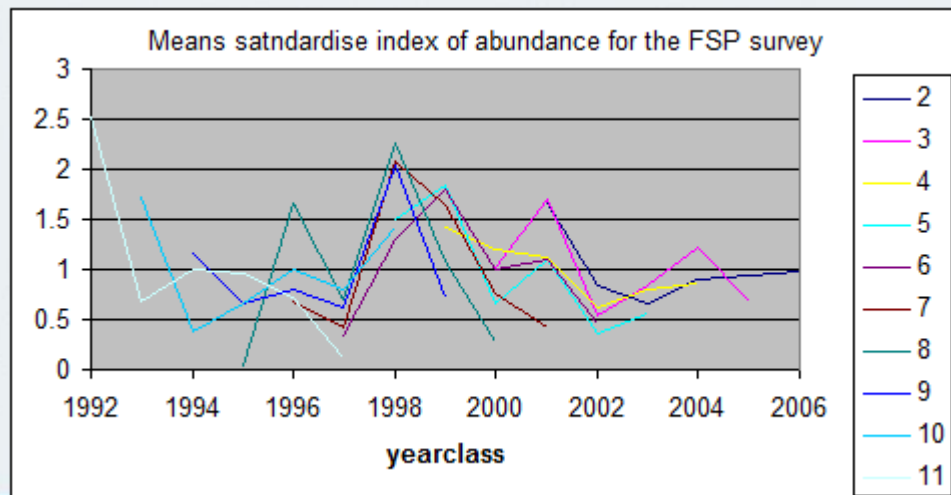
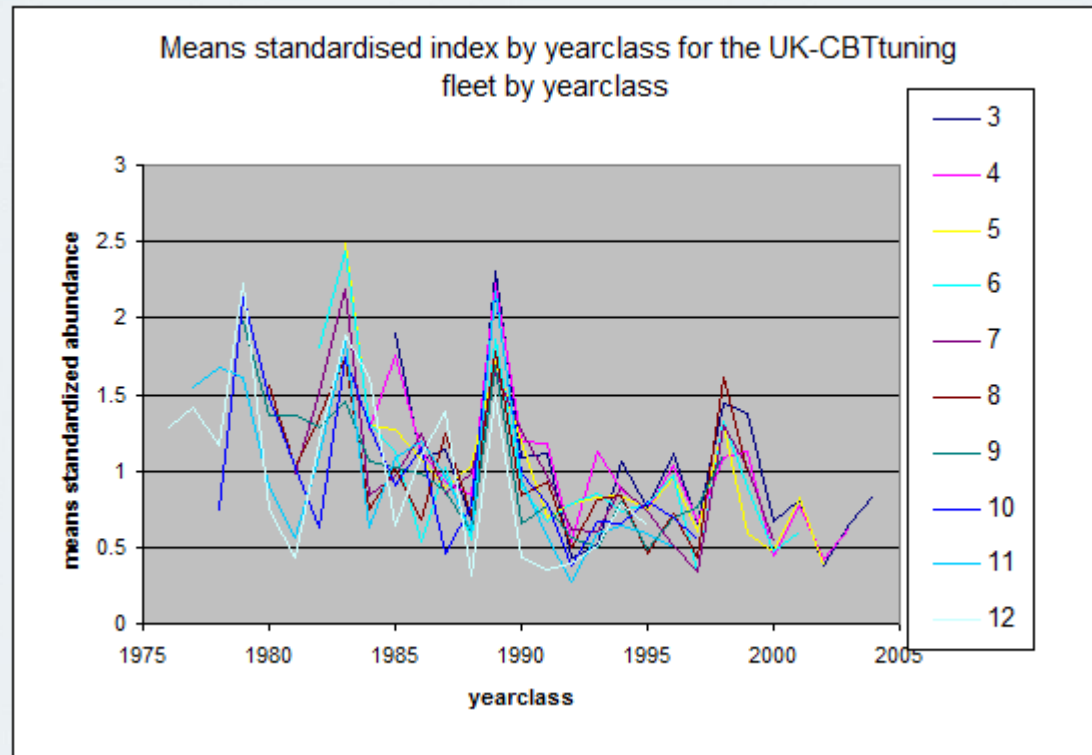
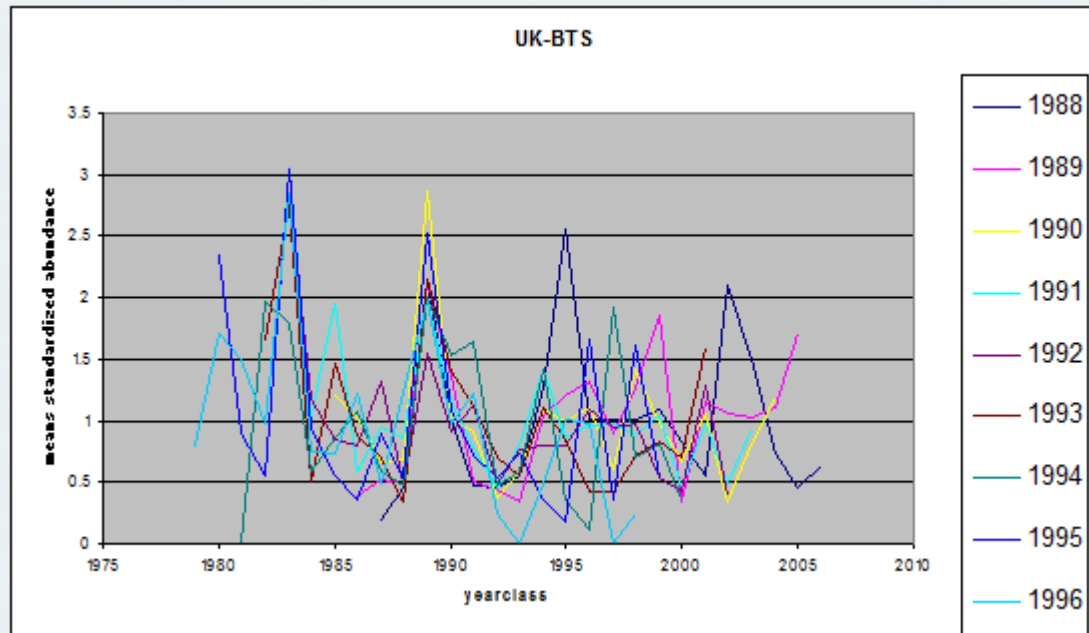
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do so?

What does history say about time series and scientific to commercial gear comparisons?

My personal experiences:

- Historic log book comparison with assessment.
- Reverse the move from industry charter to research vessel.
- GOV commercial gear comparison North Sea, winter and summer trials and the effect of population density.
- Sole and plaice FSP in the western channel.
- Irish Sea Sole and the chain-mat versus open gear debate.



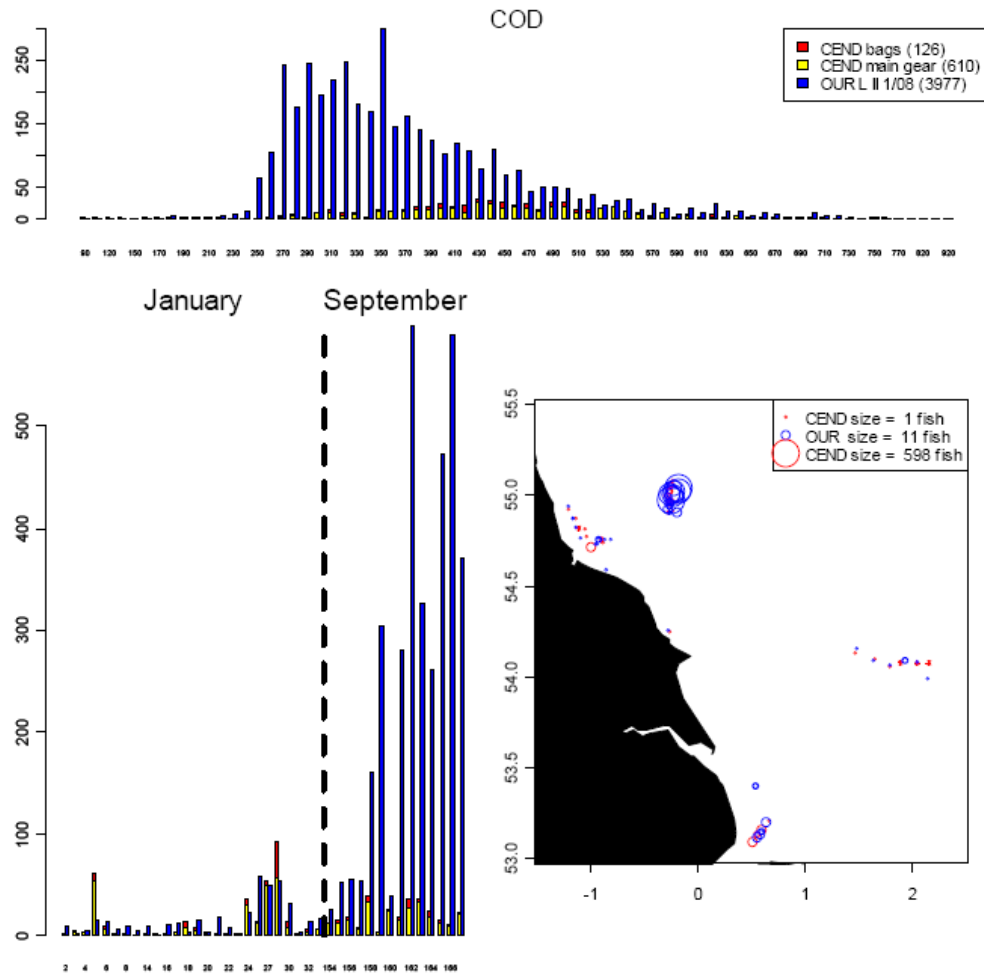


Figure 1. Cod length frequency, numbers per station and distribution of catches for both vessels in 2008. *Cefas Endeavour* catches are divided into those retained by the standard gear (yellow), and those caught by the escape bags (red). Maps of distributions show only those cod retained in the standard GOV gear.

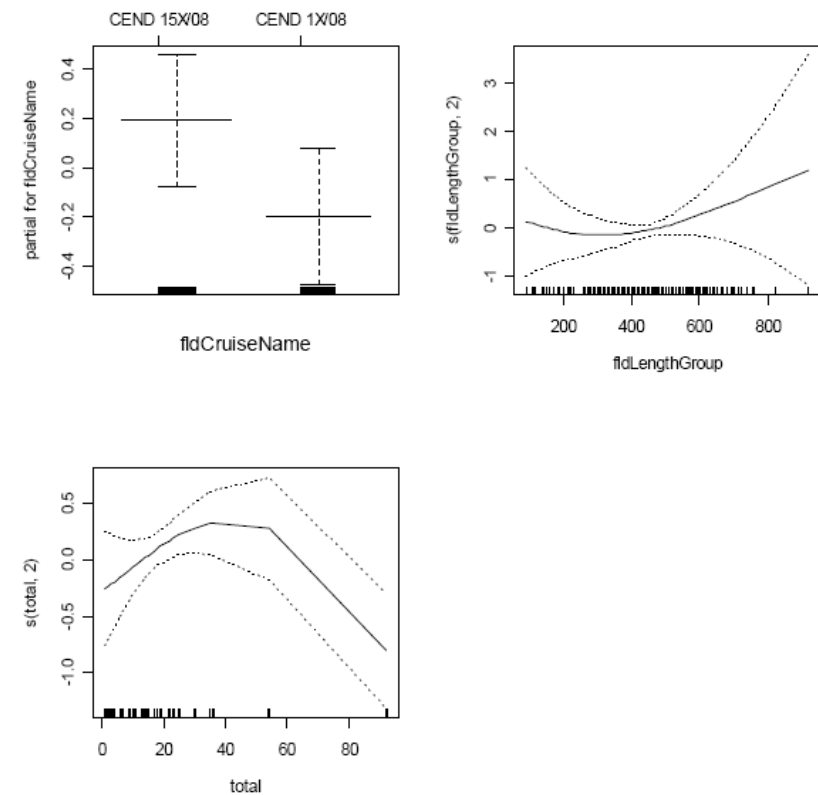
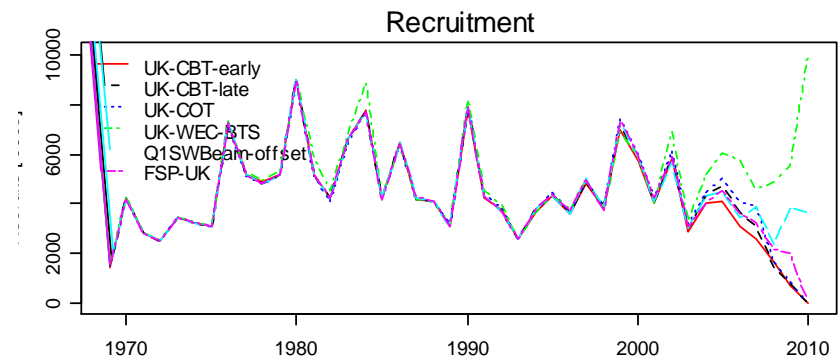
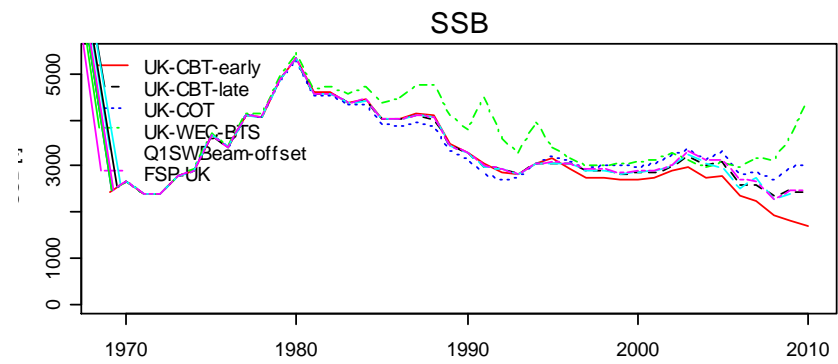
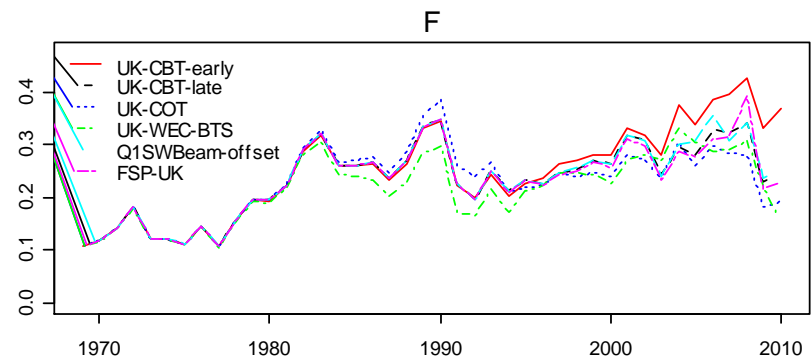
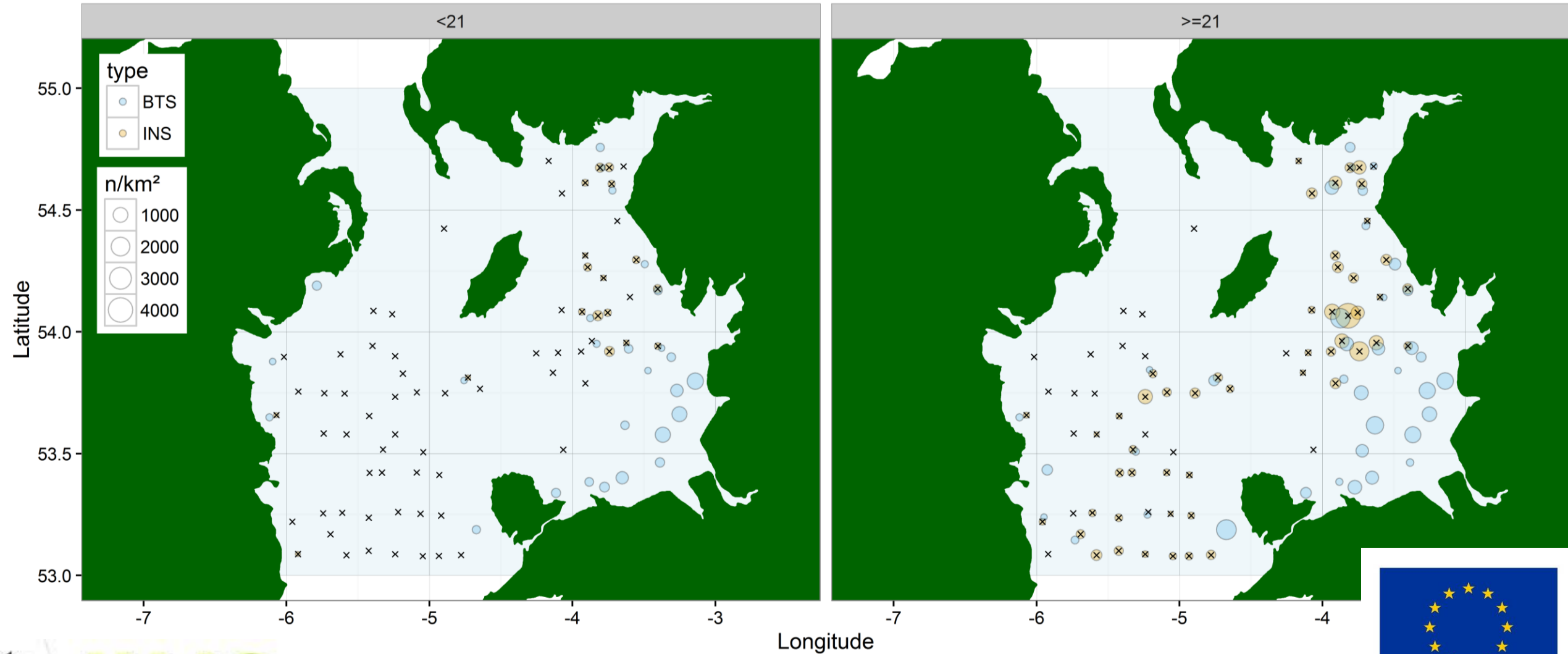
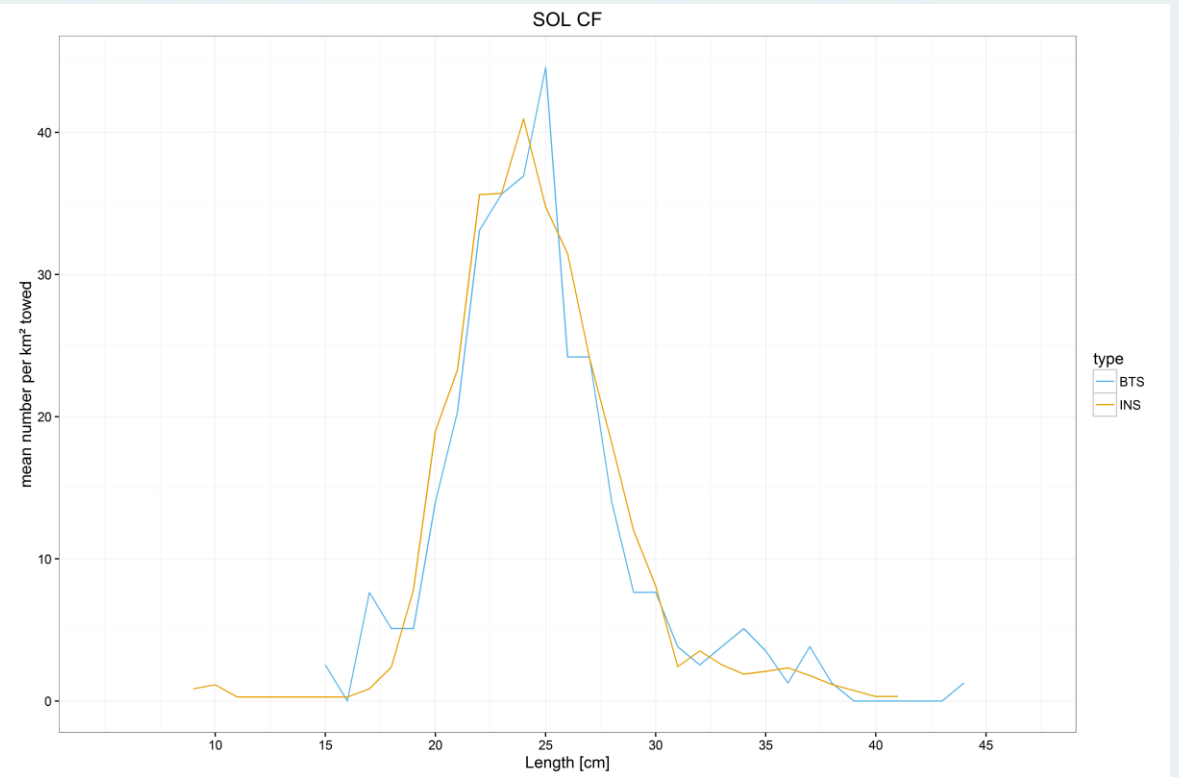
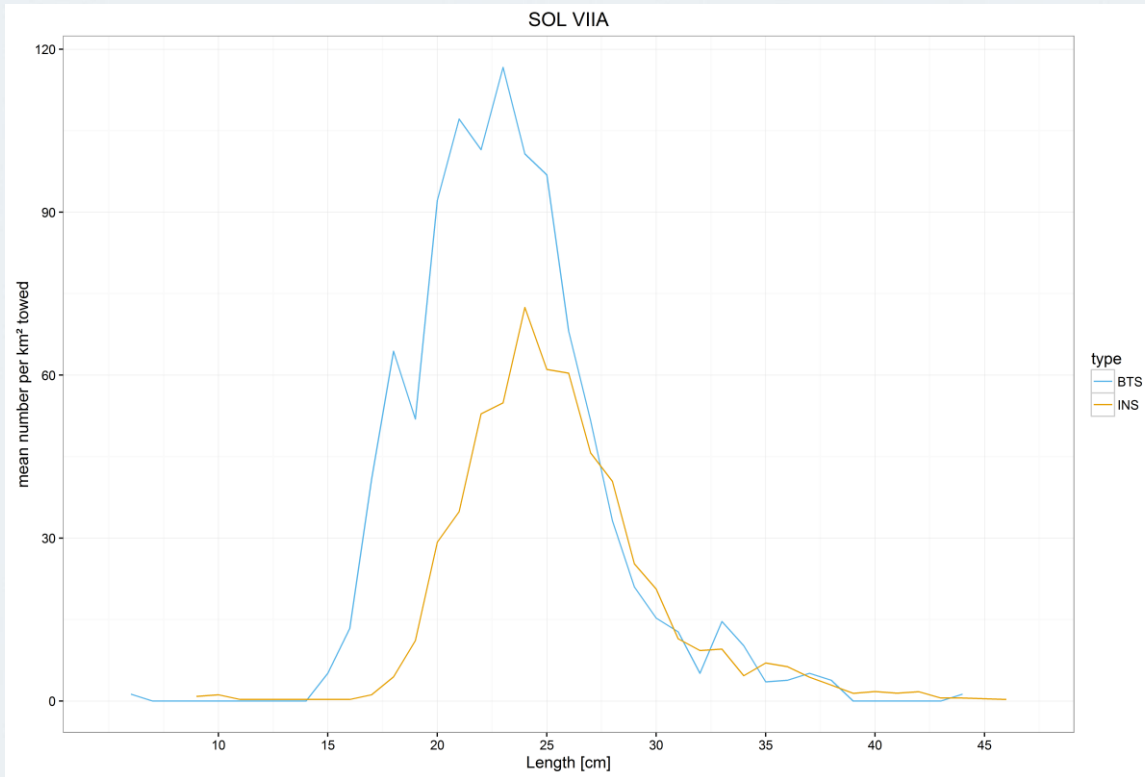


Figure 6. Statistically modelled trends in escape rates of cod with seasonal effect (top left), length (top right) and the total catch in number of cod (bottom left). Higher values indicate a greater chance of retention in the main gear, lower values a greater chance of escape. Dashed lines give some indication of the uncertainty around the trend line.



SOL





What have gear trials done? My experiences

- Western channel sole selectivity trials.
 - Simple to do with few participants easy to collaborate.
 - No direct outcome, but developed management options which resulted in a seat at the table in EU discussions. New management plan with industry support.
- Environmental gear comparisons and CCTV trials for catch sampling scheme.
 - Mixing of objectives and incentivisation, question about objectives and scientific rigour, almost compromised management plan process.
 - Results only used for single target species, probably had much more environmental benefits than were demonstrated. Is considered a success but changed very little in the fishery or management.

What have survival studies done (theoretical)?

- Survival studies in response to the EU landings obligation but mixed objectives with quota incentives for high discard stocks.
 - Some fisheries are now exempt from landings obligation weakening its objectives to incentivise fishermen to catch fish they cannot land (under sized and over quota)
 - Short term gains in extra quota for historically discarded catches
 - Long-term benefits are much less clear from a scientific perspective

What have others concluded about industry data collection and the likelihood of successful cooperation (gains for industry)? (Stephen Mangi)

- *Industry initiative.* Managing expectation
- *Trust and understanding.* Clear simple well communicated objectives
- *Leadership.* Significant undertaking cannot be done on the side:
- *Incentives.* In kind, or long-term benefits OK, the real incentive is seeing the data being used and making a difference.
- *Feedback.* “the fishers need to hear and see that something is happening with their data”. Recognition of industry contribution.

What works for Sven where stock assessment and management exists?

- Consider the path for data into the assessment.
- Be clear and upfront about what can be achieved.
- Costs and benefits must be fairly balanced across the fishery / stock especially for longer term project.
- Projects should be fishery / stock specific, one size fits all data collection will not work (Not policy aspiration)
- Work on bias problems. They tend to have a much greater impact on stock perception.
- If incentives are needed beyond cost recovery, ask why?

Where no or very basic assessment and management exists Sven concludes the scope is greater.

- Remember this is a long-term commitment.
- Usually small stocks or highly specialised fisheries which makes them ideal for industry data collection
- By-catch choke species are the exception.