

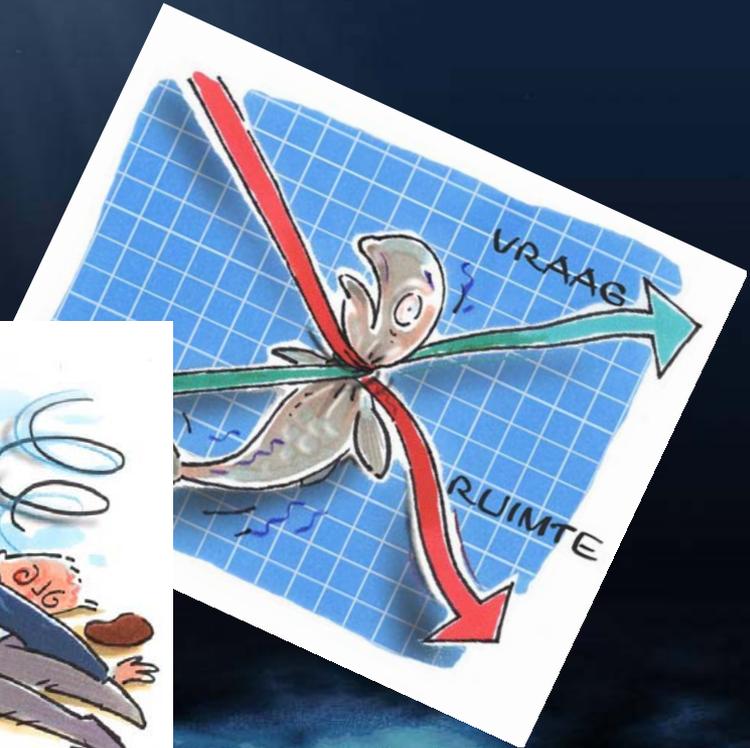
Pelagic RAC and long term management



Nantes 11-12 September 2008
Gerard van Balsfoort
Pelagic RAC

Or....how to arrive from
this situation....

....and this situation....



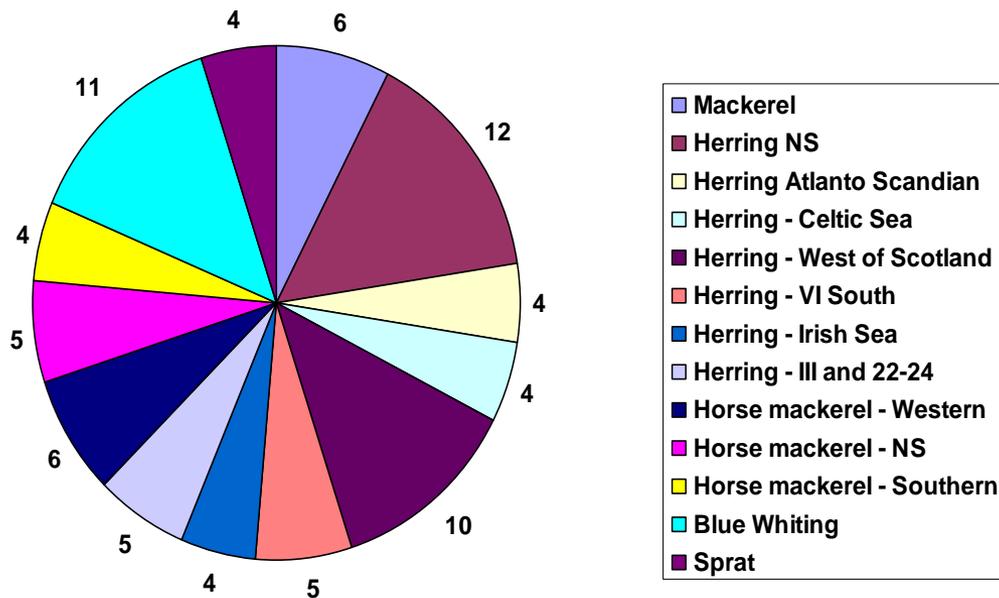
.....at this situation.....

.....by LTM agreements
such as

$$TAC_{y+1} = \left(\frac{1}{2} * FIX + \frac{1}{2} * f(\text{slope}) \right) * TAC_{\text{prev}}$$

3 years Pelagic RAC advice

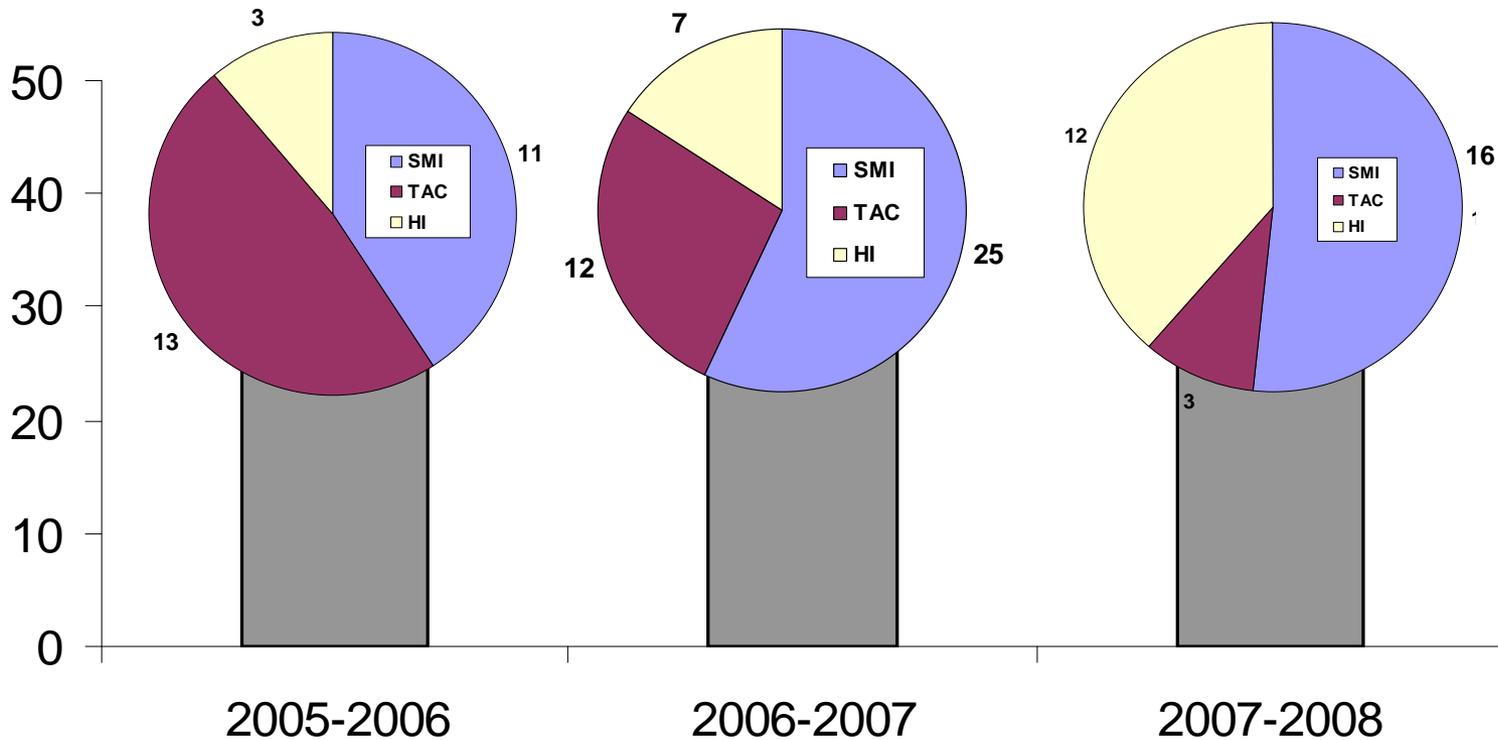
Number of recommendations per stock



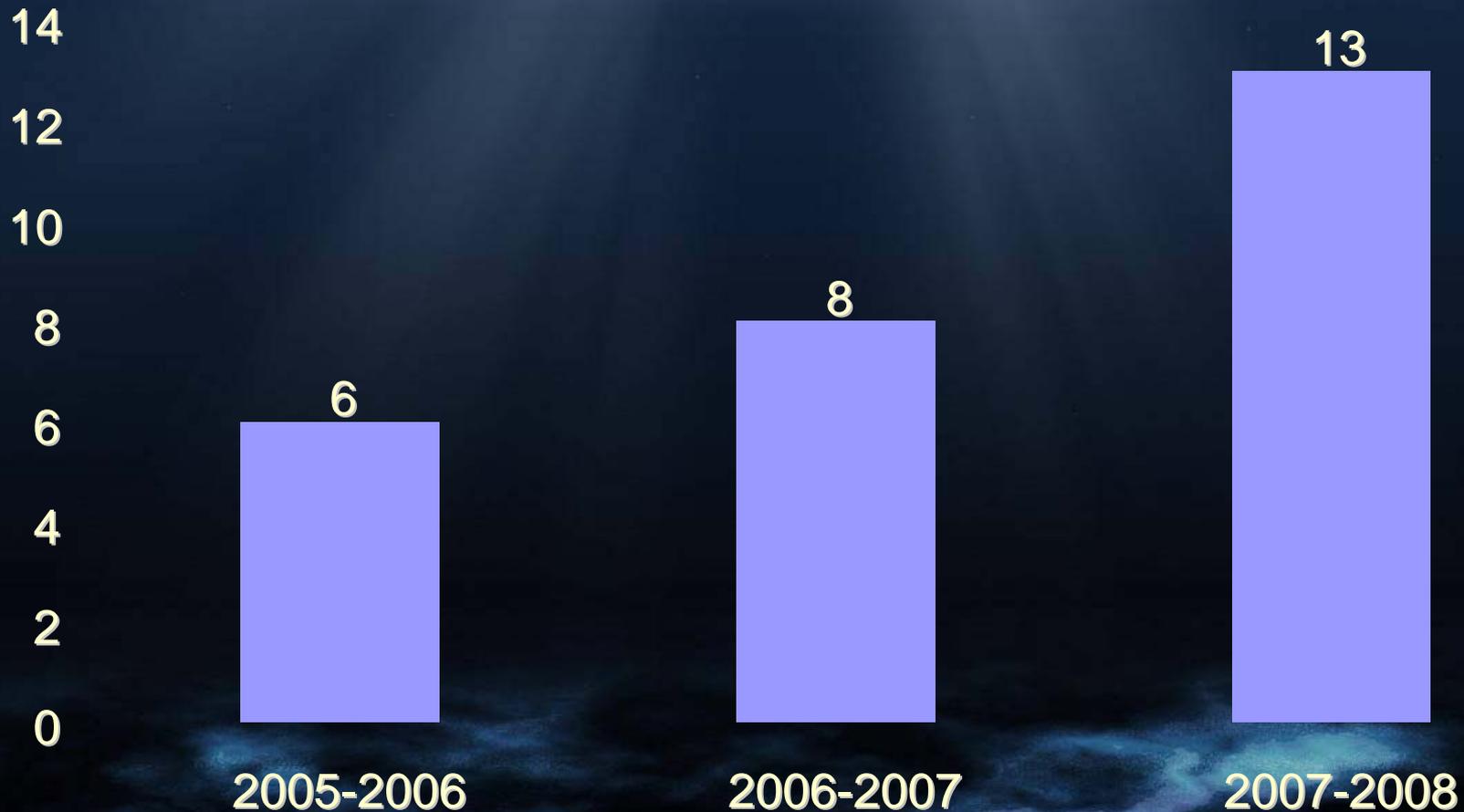
- 102 recommendations in total
- Of which 22 on horizontal issues and 80 stock-related recommendations
- Only once no consensus was reached

3 years Pelagic RAC advice

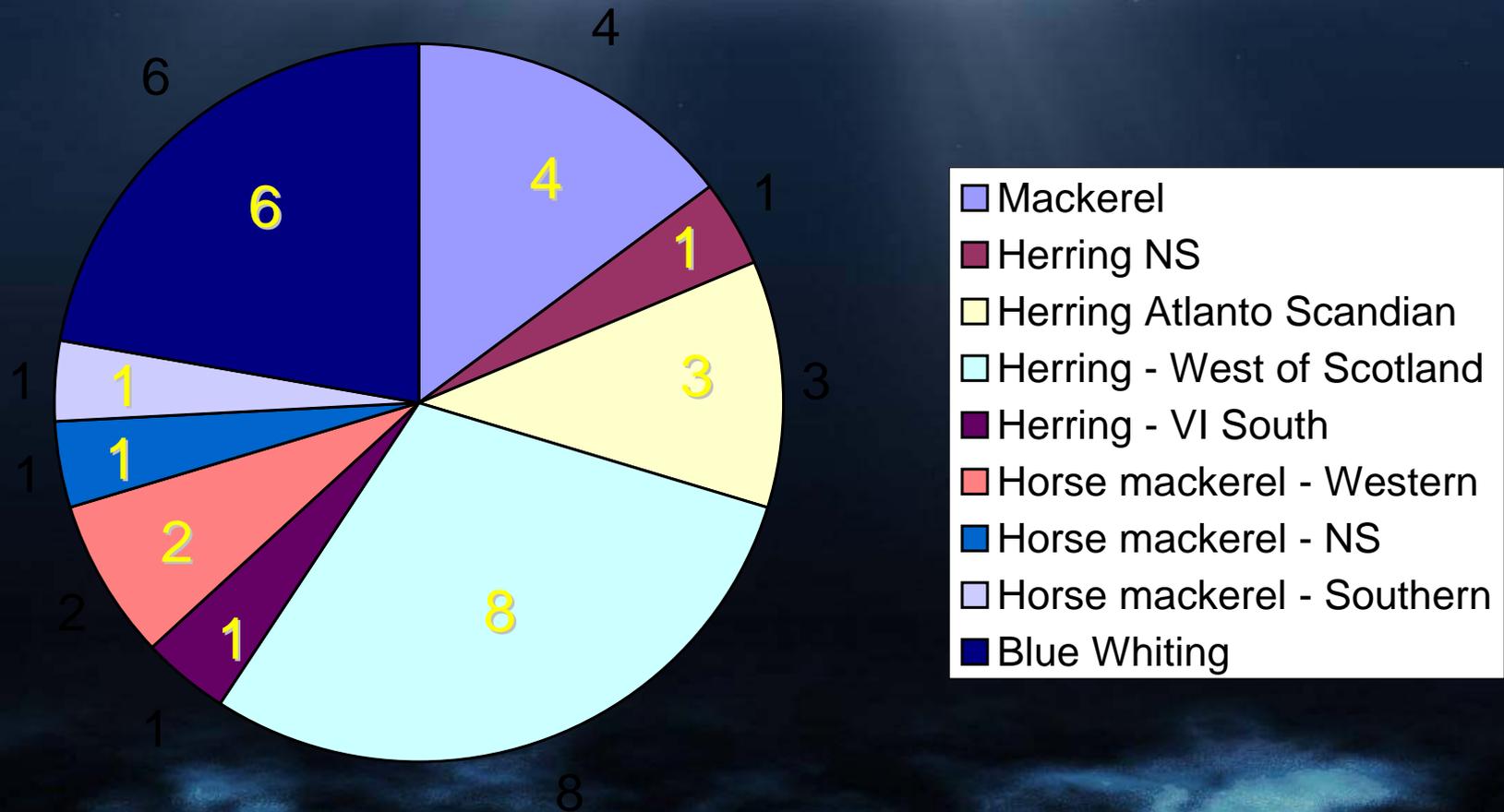
Number of recommendations per year



Number of recommendations on Long Term Management



LTM recommendations per stock



Example 1: NEA Mackerel



- Sector's wish to explore the possibility of LTM based on a fixed (constant) mackerel TAC
- +
• Request EC to ICES on evaluation management plan mackerel
- • 2 days stakeholder meeting april 2007 (ICES, national scientists, PRAC/industry)

Input management plan

Industry priorities

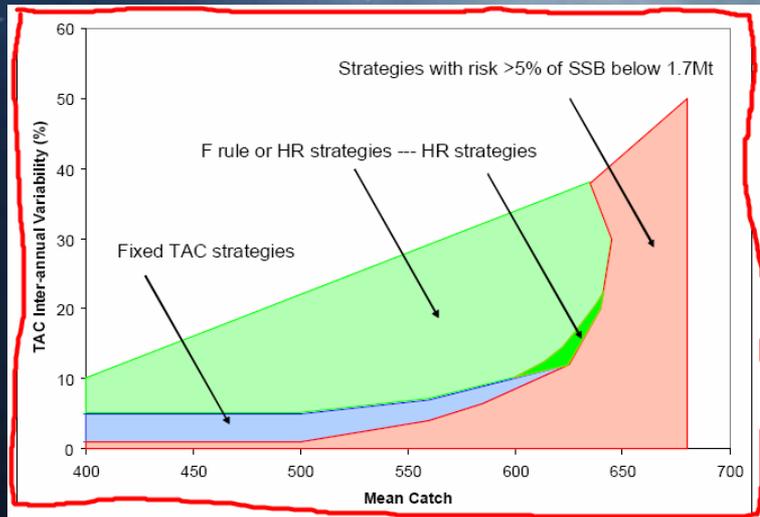
- TAC stability
- TAC level (550-600,000)
- Larger fish (=preserving age structure)

Stock

- Relatively long lived
- Relative stable recruitment
- Relatively data poor → updated by 3-yearly egg survey

Parameters

- $A = \text{yield/TAC}$
- $B = \text{TAC change to previous year}$
- $C = \text{SBB trigger point}$



situation

- Jointly managed stock (EU, NOR, FAR)
- EC and EU-industry share objective for reviewed/renewed LTM
- Inside framework ICES
- Follow-up for coastal states

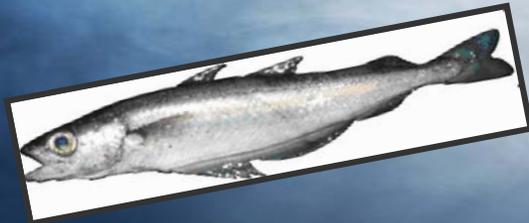
Table 1 Selected results of F-rule evaluations according to the criteria in the left column within the range of parameters that was explored. Shaded scenarios have a larger than 5% probability of SSB being below 1.7 Mt (weight units in '000 tonnes).

	HCR Parameters			Summary of Performance ¹						
	A Target F	B % limit to change in TAC	C Biomass Trigger	Mean Catch	Mean interannual variability in TAC (%)	Realised F	Mean Stock (SSB) Size	Risk of SSB < 1.7 Mt	prop. of age 7+ in catch	% time below Biomass Trigger
lowest IAV	0.12	10	2000	496	9.7	0.11	4122	0.1	0.55	0.1
10% constraint, F = 0.23	0.22	10	2000	604	12.3	0.19	3241	3.8	0.44	3.5
Highest catch IAV < 12.5%	0.24	10	2000	613	12.4	0.20	3214	3.8	0.43	3.7
Highest catch IAV < 15%	0.24	10	2100	609	12.8	0.20	3189	3.8	0.43	5.5
Highest catch IAV < 17.5%	0.22	15	2000	624	16.1	0.21	3078	4.2	0.42	3.7
Highest catch IAV < 20%	0.22	20	2000	631	19.4	0.22	2989	3.7	0.40	4.0
Highest catch IAV < 22.5%	0.22	20	2200	636	20.4	0.22	3021	3.3	0.40	8.2
Highest catch IAV < 25%	0.22	20	2500	638	23.5	0.22	2949	3.5	0.40	24.1
Highest catch risk < 5%	0.26	20	2700	650	26.9	0.23	2906	4.7	0.38	39.7
Upper limit current management plan	0.20	-	-	649	32.4	0.23	2828	4.3	0.37	-
Highest catch	0.3	20	2000	665	22.7	0.28	2615	21.7	0.33	16.9

Conclusion

- Initiative 'owned' by EC → participation P-RAC organized by EC

Example 2: Blue whiting



Situation

- Jointly owned stock (EU, NOR, ICE, FAR)
- No management for years → increasing overexploitation by non-EU vessels
- 2005: industry initiative for allocation key and LTM approach →
- End 2005: coastal agreement based on industry agreement (TAC and management rules)



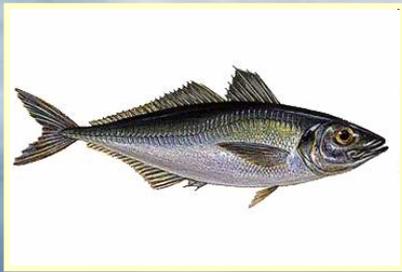
Example 2: Blue whiting



- Since then no real participation P-RAC in process for reviewing / renewing LTM blue whiting
- Coastal states have taken over by yearly agreements and organization scientific WG on blue whiting LTM

Conclusion

'Ownership' LTM approach is handed over from stakeholders (industry) to coastal states administrations



Example 3: Western Horse mackerel

Dear Mr Fotiadis,

Please find attached a management plan for Western horse mackerel for your consideration and with the request to ask ICES to evaluate this plan.

Management Plan for Western Horse Mackerel

Pelagic RAC

July 2007

This plan was discussed and agreed upon by the Executive Committee of the Pelagic RAC on 13 July 2007 for submission to the European Commission. The plan was developed in cooperation with an *ad hoc* group of scientists. It provides for an exploitation regime that is considered consistent with fishing at F_{MSY} and is presented as a means by which to manage the western horse mackerel stock.

This plan is divided into general provisions (Section 1) and a specific harvest control rule (Section 2). The normal harvest control rule may be adjusted in periods of elevated productivity (Section 3).



ICES CM 2007/O:20

A new scientific initiative with the Pelagic RAC to develop a management plan for western horse mackerel

Maurice Clarke¹, Gerard van Balsefoort², Atkije Coers³, Andrew Campbell¹, Maurice Clarke⁴, Egan¹, Marc Ghuglia⁵, Ingvild Harkes³, Ciarán Kelly¹, Sean O' Donoghue⁶, Christel Peseux⁷, Andrew Tait⁹ and Andres Uriarte¹⁰.

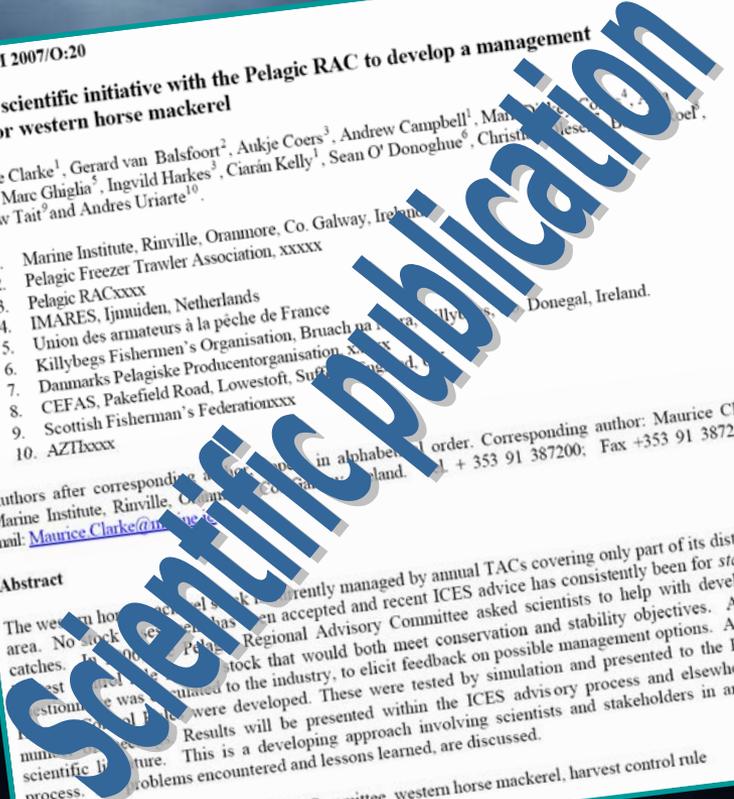
1. Marine Institute, Rinville, Oranmore, Co. Galway, Ireland.
2. Pelagic Freezer Trawler Association, xxxxx
3. Pelagic RACxxxx
4. IMARES, IJmuiden, Netherlands
5. Union des armateurs à la pêche de France
6. Killybegs Fishermen's Organisation, Bruach na h-Àrda, Donegal, Ireland.
7. Danmarks Pelagiske Producentorganisation, xxxxx
8. CEFAS, Pakefield Road, Lowestoft, Suffolk, UK
9. Scottish Fisherman's Federationxxxx
10. AZTxxxx

Authors after corresponding authors in alphabetical order. Corresponding author: Maurice Clarke, Marine Institute, Rinville, Oranmore, Co. Galway, Ireland. Tel: +353 91 387200; Fax +353 91 387201; E-mail: Maurice.Clarke@marine.ie

Abstract

The western horse mackerel stock is currently managed by annual TACs covering only part of its distribution area. No stock assessment has been accepted and recent ICES advice has consistently been for *status quo* catches. In order to develop a Pelagic Regional Advisory Committee asked scientists to help with developing a stock assessment and management plan that would both meet conservation and stability objectives. An initial questionnaire was distributed to the industry, to elicit feedback on possible management options. A series of management options were developed. These were tested by simulation and presented to the RAC at a meeting. Results will be presented within the ICES advisory process and elsewhere in the scientific literature. This is a developing approach involving scientists and stakeholders in an iterative process. Problems encountered and lessons learned, are discussed.

Keywords: Pelagic Regional Advisory Committee, western horse mackerel, harvest control rule



process

- Sep 06: Invitation P-RAC → group of scientists formed
- Nov 06: presentation of 3 HCR scenario's to P-RAC
- Dec 06: questionnaire to industry (priorities)
- Feb 07: science/P-RAC workshop (round table)
- Apr 07: science/P-RAC focus group
- May 07: presentation to P-RAC
- Jun 07: decision on HCR by P-RAC working group
- Jul 07: adoption HCR by Excom P-RAC
- Aug 07: EC presents to ICES for review
- Oct 07: ACFM considers plan precautionary for 3 years
- Oct 07: ACFM advises 3 year-TAC
- Nov 07: P-RAC recommends 3-years TAC according to ACFM
- Dec 07: Council decides on one-year TAC (level as advised by P-RAC)

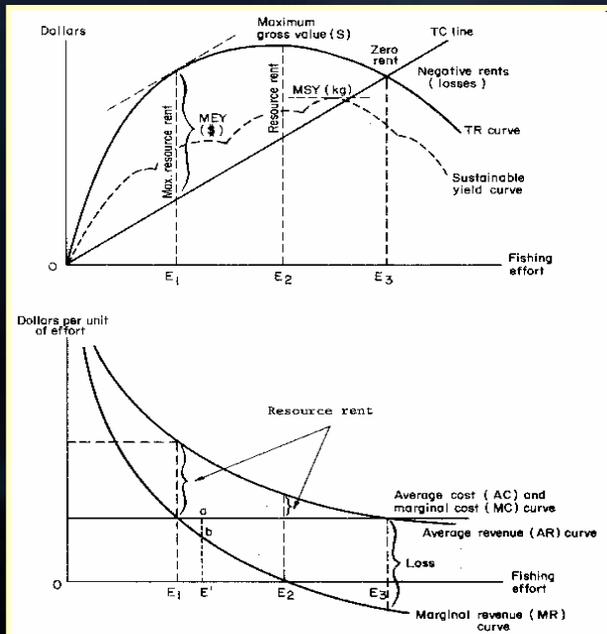
Rationale LTM western horse mackerel

- This stock lacks full scientific assessment → the TAC will be set for 3 years and based on the trend of the recent 3 tri-annual egg surveys
- The TAC will be fixed for a period of 3 years
- Set of additional provisions
- The TAC will be set according to the following rule:

$$TAC_{y-y+2} = 1.07 \left[\frac{TAC_{ref}}{2} + \frac{TAC_{y-3}sl}{2} \right]$$

Where TAC_{ref} =150,000 t and sl is a function of the slope of the 3 recent egg surveys

Conclusions (lessons?)



- Autonomous EU-stock
- Plan developed by an ad hoc group outside ICES paradigm
- Starting point: industry's priorities :
 - → 'language' industry translated into science
 - → show and discuss consequences of choices (trade off's)
- Essential: active and open discussion / collaboration between science and stakeholders
- Large input (and costs) by scientists involved in pelagics / horse mackerel
- 'Ownership' development process and LTM plan with P-RAC

**Participatory Modelling: Developing a Long-Term Management Plan
for Western Horse Mackerel within the Pelagic RAC**

Troels Jacob Hegland and Douglas C. Wilson
Innovative Fisheries Management - an Aalborg University Research Centre

Main conclusion SAFMAMS report

This project may be inspiration for other RACs, but be aware of the specific conditions of the P-RAC

- Homogeneity (few players, same fisheries)
- Stocks in better shape
- Larger institutional capacity of (industry) stakeholders

(See: <http://www.ifm.dk/safmams/Publications.htm>)

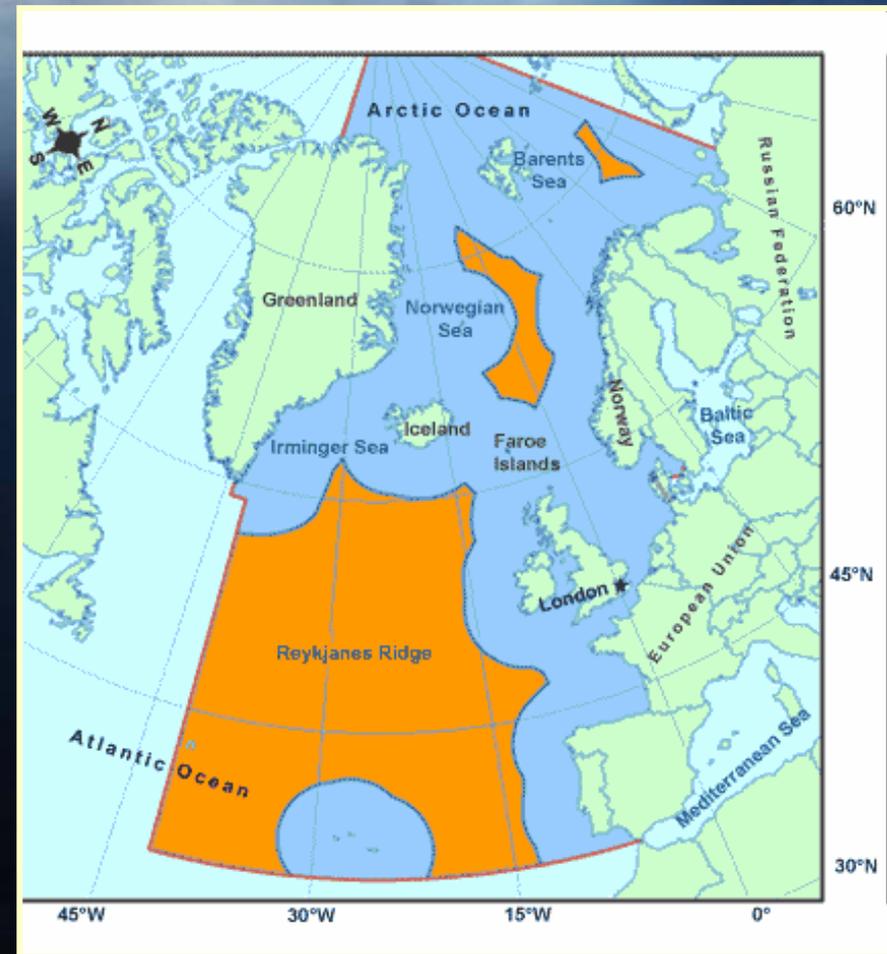
Challenges P-RAC on LTM



- Management plans for Blue whiting, Mackerel and West of Scotland herring
- Improve knowledge of stocks by input from fisheries
- Direct sourcing of science / ICES by P-RAC
- Necessity to intensify collaboration with stakeholders of third countries

Inclusion 3rd countries in P-RAC processes

- Major stocks of P-RAC are shared stocks (Blue whiting, Atlanto Scandian herring, NEA mackerel)
- Management plans are being developed between coastal states, but P-RAC access to process is only unilateral.
- P-RAC continues in actively pursuing collaboration with Norway (and possibly also with other third countries)



Thank you

Acknowledgements:

- secretariat and members P-RAC
- scientific community
- European Commission

