

Working Group I meeting  
Chaired by Christian Olesen

30 June 2011, Leiden, The Netherlands

# Start of meeting

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- Approval of the agenda
- Approval of the minutes of 11 October 2010



# Communication with HAWG

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- PRAC communication to HAWG in March 2011:
- North Sea herring:
  - the  $\pm 15\%$  IAV rule
  - 50% flexibility on the herring quota in 3A
  - Norwegian catches of ASH in area IV (now 56,9 kt)
- Western Baltic Herring
  - Questioned the knowledge base for determining catch compositions
  - suggested that local stocks have re-established themselves in 3A
- Herring Via South
  - the advice does not reflect the reality on the fishing grounds



# Communication with HAWG

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- Response by HAWG:
  - WKHMP discussed the management plan for North Sea herring and found it working well in relation to the objectives of consistency with the precautionary approach and a rational exploitation pattern, but not in relation to achieving stable and high yield. The main weakness appears to be the 15% IAV limit on TAC change which leads to unnecessarily restricted TACs when the stock is improving.



# Communication with HAWG

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- Response by HAWG:
  - HAWG views unpredictable management decisions, e.g. the provision that 50% of the IIIa TAC can be taken in Subarea IV, as being difficult to handle. The provision of scientifically sound catch options in a complicated management area is impaired by these changes to the management regime.
  - The result of the analyses show that the herring caught from 70°N to 59°N in January-April without any doubts all belongs to the NSS herring stock



# Communication with HAWG

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- Response by HAWG:
  - The WKWATSUP reviewed the sampling for stock proportions in the mixed catches of herring. There was clearly a mismatch between sampling intensity and catch distribution.
  - it is not unlikely, that fishermen may target these while fishing in the IIIa area. The size of these local stocks is not assessed in the current assessment of herring in the IIIa area.
  - HAWG continues to try to improve estimation of the status of this stock



# Fishing opportunities for 2012

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- Presentation of ICES advice
  - Ms Manuela Azevedo
- Recommendations from Pelagic RAC



# Herring in IIIa (and 22-24) **CATCHES**

- Assumed catch in 2011 = 29 kt  
(Assuming a utilization in **2011** of the WBSS part of the TAC/bycatch ceiling of 100% (F-fleet), **50%** (C-fleet), and 45% (D-fleet))
- SSB(2011) = 97 kt (Below MSY biomass trigger)

Management Objective (s)	Landings in 2012
MSY Framework	42.7 kt
Fsq*0.5	37.1 kt
Fsq*0.59	43.6 kt
Fsq*0.7	50.2 kt





# Herring in IIIa (and 22-24) TACs

- TACs 2011:

22-24	IIIa	
Fleet F	Fleet C	Fleet D
15.9	30.0	6.7

- ICES advice 2012:

Management Objective (s)	22-24	IIIa	
	Fleet F	Fleet C	Fleet D
MSY Framework	20.9	26.4	3.4
Fsq*0.5	18.2	22.1	2.9
Fsq*0.59	21.4	24.1	3.1
Fsq*0.7	24.7	31.1	3.9

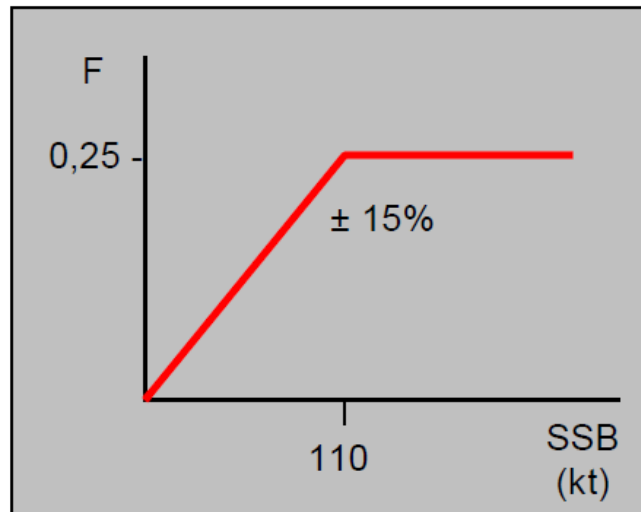
+31%

-12%



# Herring in IIIa (and 22-24) LTM plan

- PRAC recommended in 2010 that a LTM plan should be based on the following principles:



**Figure 1: Graphical representation of the HCR based on:**

- a target F of 0,25 for the adult herring (ages 3-6)
- a biomass trigger point ( $B_{\text{trig}}$ ) of 110 kT, under which F should be gradually reduced along a sloped line to zero at  $SSB=0$
- 15% limitation on IAV in TAC at all times

???????



# Herring in IIIa (and 22-24) LTM plan

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## TAC setting procedures should include:

- a fixed split in the fishing opportunities for adult herring: with 50% for the IIIa area and 50% for the 22-24 area;
- a TAC for the F-fleet corresponding to the 50% allocation for the 22-24 area;
- a TAC for the C-fleet that corresponds to the 50% allocation for the IIIa area, with the subsequent addition of tons from the NSAS herring. The volume from the NSAS should be based on the average mix ratio over the past 3 years;
- a TAC for the D-fleet based on an overall  $F_{0-1}=0,075$ ;
- a year-to-year flexibility of  $\pm 10\%$  to bank or borrow quota.

## Implementation of the LTM plan should take into account:

- a transition from the current situation into the H...
- no further...
- no reduction...

**Transition no longer relevant**



# Herring in IIIa (and 22-24)

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- PRAC recommendation?



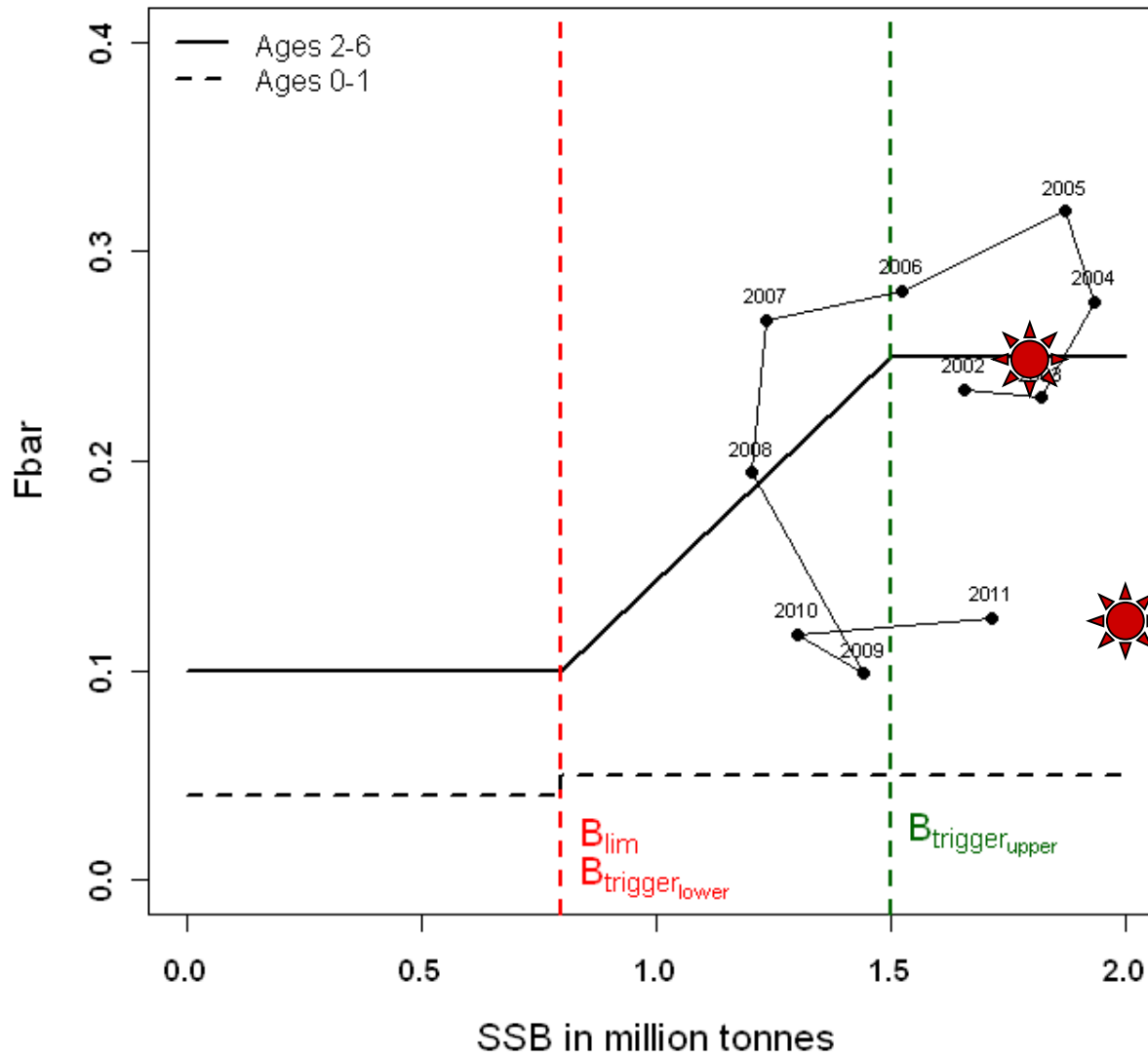
# North Sea herring advice

- TAC 2011 = 200 000 t
- Assumed catch in 2011 = 215 000 t (including 50% transfer from IIIa quota)
- SSB(2011) = 1 714 000 t (above Bpa, above Btrig)

Management Objective (s)	Landings in 2012	SSB in 2012
LTM plan (which invokes the 15% limit on TAC change)	230 000 t	2 013 000 t
The EU–Norway Harvest Control Rule as implemented within the management plan (no restriction on TAC change); this is also the option for FMSY and Fpa	478 000 t	1 845 000 t



# North Sea herring management plan



MSY/LTM  
plan without  
15% restriction

LTM plan with  
15% restriction



# ICES advice on LTM plan (1)

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- The management plan appears to perform well in relation to the objectives of providing sustainable fisheries and stable yield in conformity with the precautionary approach.
- The current fishing mortality target (F2-6) of 0.25 is consistent with the MSY approach under the current low recruitment regime.
- There is no basis to further adjustments of the harvest control rule to account for recruitment variability or trends.
- Rather than within year revisions of the TAC, ICES considers that it is better to have a management plan that is able to be responsive to large changes in the biology of the stock or assessment uncertainty.
- ICES would favour a collaborative iterative process between scientists, managers and stakeholders in case the management plan is revisited in 2011.



WKHERMP	ACOM advice
<i>ToR-1</i>	
The LTMP is <b>precautionary</b>	The LTMP is <b>precautionary</b>
The LTMP leads to a <b>rational exploitation pattern</b> , if interpreted as allowing F(0-1) not more than necessary as unavoidable by-catch in industrial fisheries'. (included because the ToR reads <i>its objectives</i> referring to the LTMP, where this is specifically mentioned).	Not included on the basis that (a) it is not mentioned as objective in the EU-Norway request and (b) the term 'rational exploitation pattern' is multi-interpretable.
The management plan appears to operate well [...], but not in relation to achieving stable and <b>high yield</b> . The main weakness appears to be the 15% IAV limit on TAC change which leads to <b>unnecessarily restricted TACs</b> when the stock is improving. <b>Suggests that further work</b> on the management plan be <b>carried out [...]</b> to develop mechanisms that avoid the unwanted side-effects of the present plan.	The change in the perception of the stock for 2010 is a type of situation that was not part of the evaluations so far. <b>Only by testing the HCR</b> within a Management Strategy Evaluation <b>will it be possible to judge</b> the implications of this kind of uncertainty on the trade-off between high and stable yield.
The LTMP <b>does not deliver stable yield</b> .	The LTMP <b>delivers stable yield</b> .
Not included on the basis that it is not mentioned in the objectives of the LTMP, nor in the EU-Norway request in this ToR.	The LTMP is consistent with the <b>MSY approach</b> .
Not included on the basis that it is not mentioned in the objectives of the LTMP, nor in the EU-Norway request in this ToR.	The evaluation was done in a single species framework and thus <b>did not consider multispecies</b> interactions and the role of herring in the North Sea ecosystem.
<i>ToR-2</i>	
<b>F<sub>PA</sub></b> was tested before and there is no basis for assuming any change and so it is considered <b>appropriate</b> . It has no function in the LTMP.	F <sub>PA</sub> =0,25 is appropriate
<b>B<sub>PA</sub></b> was <b>never tested</b> and so there is no basis for determining whether its value should be considered appropriate. It has no function in the LTMP. Because it is used for classification of the stock, it is however relevant to determine its appropriate value by further investigation.	Bpa =1.3 mln tonnes is appropriate
<i>ToR-3</i>	
F(2-6) is consistent with MSY	F(2-6) = 0,25 is consistent with MSY
F(0-1) was never tested in relation to MSY	F(0-1) < 0,05 is consistent with MSY
<i>ToR-4</i>	
No adjustments to the HCR are needed in relation to low recruitment levels.	No adjustments to the HCR are needed in relation to low recruitment levels.
<i>ToR-5</i>	
WKHERMP <b>suggests that further work on the management plan be carried out</b> in 2011, prior to the December decisions by the EU and Norway, to develop mechanisms that avoid the unwanted side-effects of the present plan.	<b>In case clients consider it necessary</b> to revisit the management plan in 2011 ICES would favour a collaborative iterative process between scientists, managers and stakeholders.





# Considerations by WKHERMP

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- The management plan appears to operate well in relation to the objectives of consistency with the precautionary approach and a rational exploitation pattern, **but not in relation to achieving stable and high yield.**
- The main weakness appears to be the 15% IAV limit on TAC change which **leads to unnecessarily restricted TACs** when the stock is improving.
- WKHERMP **suggests that further work on the management plan be carried out in 2011**, prior to the December decisions by the EU and Norway, to develop mechanisms that avoid the unwanted side-effects of the present plan.



# Considerations by WKHERMP

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- A scientific **analysis of Bpa should be carried out**. Although it is no longer used for management considerations nor part of the management plan, Bpa is widely used in the classification of the stock status thus it is important to the industry.
- WKHERMP found no substantive changes to the biology or ecology of herring to suggest that the simulations from WKHMP 2008 were no longer applicable (**recruitment, growth**, maturity, migrations)



# North Sea herring recruitment

	R(2008)	R(2010)	R(2011)
2002	31388390	32100605	34766000
2003	18557070	18624711	20060000
2004	22560060	23855772	26095000
2005	17505090	16406534	16577000
2006	27777000	23687684	22114000
2007	11920000	30374327	30340000
2008		16408903	26079000
2009		29750666	38290000
2010		26718801	38849000
2011			28718000
<b>Average</b>	<b>21617935</b>	<b>24214223</b>	<b>28188800</b>
<b>Δ compared to 2008 evaluation</b>		<b>+12%</b>	<b>+30%</b>



# North Sea herring

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- PRAC recommendation?



# West of Scotland herring advice

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- TAC 2011 = 22 481 t
- SSB 2011 = 81 000 t
- ICES advises on the basis of the Management Plan

Management Objective (s)	Landings in 2012
ICES advises on the basis of the management Plan	<b>No more than 22 900 t</b>
ICES advises on the basis of the MSY approach	no more than 22 900 t



# West of Scotland herring

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- PRAC recommendation?



# VlaSouth and VIIC,d herring advice

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- TAC 2011 = 4 471 t
- SSB 2011 = no assessment
- ICES advises on the basis of precautionary approach

Management Objective (s)	Landings in 2012
ICES advises on the basis of the precautionary approach	Landings should be reduced



# VlaSouth and VIIC,d herring

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- PRAC recommendation?





# Celtic Sea herring advice

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- TAC 2011 = 13 200 t
- SSB (2011/2012) = 118 400 t
- ICES advises on the basis of the MSY approach

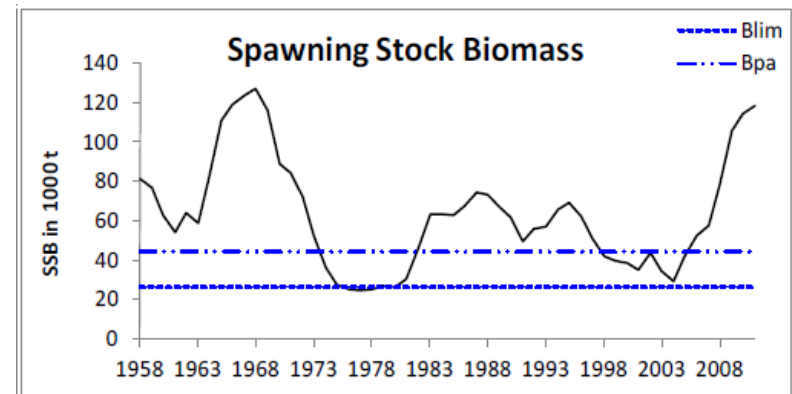
Management Objective (s)	Landings in 2012
ICES advises on the basis of the MSY approach	26 900 t
Proposed Rebuilding Plan	21 100 t
<b>Proposed</b> Long Term Management plan	17 200 t



# Celtic Sea herring rebuilding plan

- *Rebuilding plan for this stock (ICES advice):*

7. *When the SSB is deemed to have recovered to a size equal to or greater than  $B_{pa}$  in three consecutive years, the rebuilding plan will be superseded by a long-term management plan.*



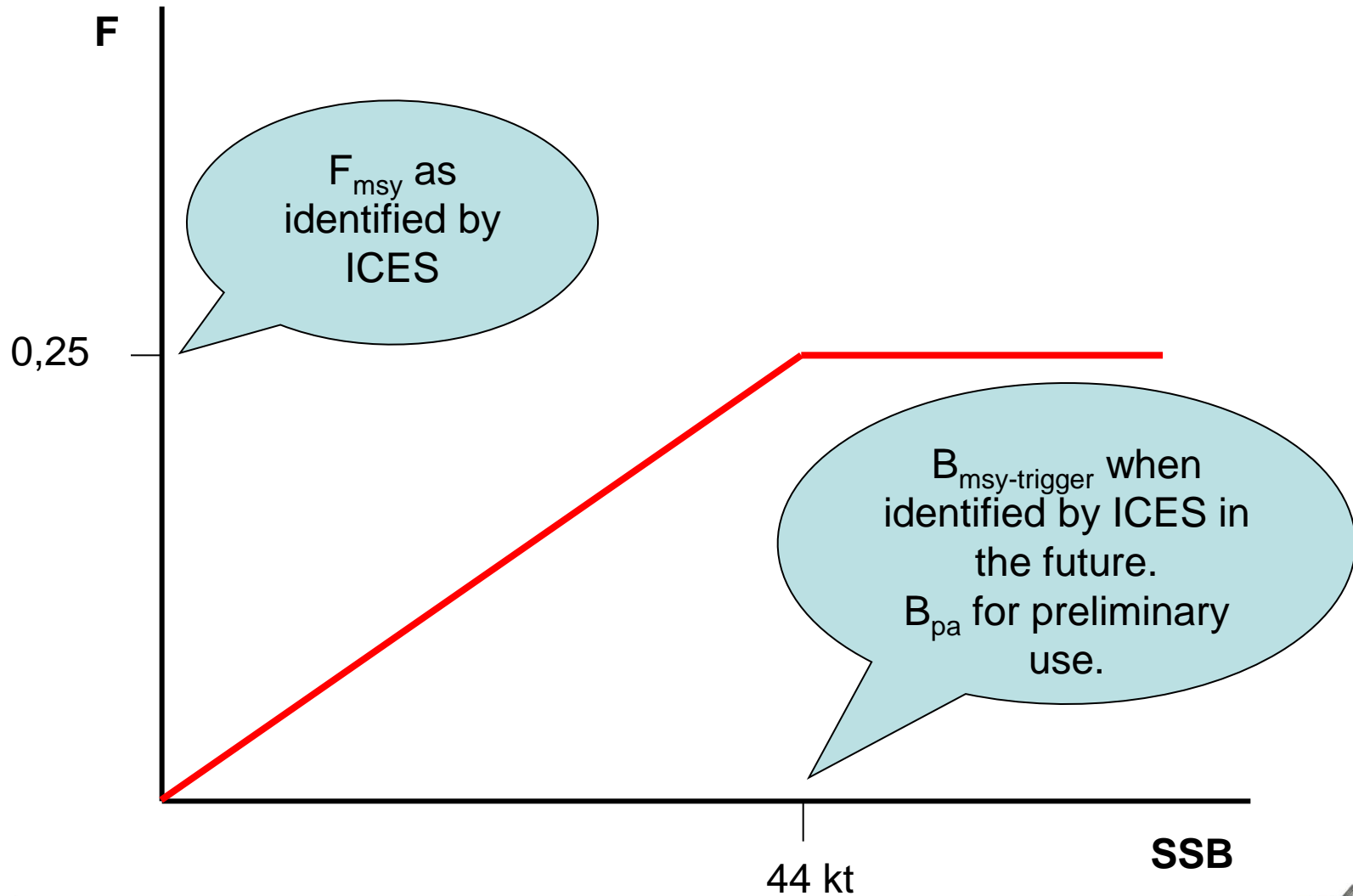
## Reference points

	Type	Value	Technical basis
MSY Approach	MSY $B_{trigger}$	Not defined	
	$F_{MSY}$	0.25	Stochastic simulations on segmented regression stock recruit relationship.
Precautionary approach	$B_{lim}$	26 000 t	The lowest stock observed
	$B_{pa}$	44 000 t	Low probability of low recruitment
	$F_{lim}$	Not defined	
	$F_{pa}$	Not defined	

*(Unchanged since 2010)*



# Celtic Sea herring LTM plan?



# Celtic Sea herring

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- PRAC recommendation?



# Irish Sea herring advice

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- TAC 2011 = 5 280 t
- SSB 2011 = no assessment
- ICES advises on the basis of precautionary considerations

Management Objective (s)	Landings in 2012
ICES advises on the basis of precautionary considerations	Landings should not increase



# Irish Sea herring

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- PRAC recommendation?





End of Working Group I meeting

Thank you