

# FISHERY ASSESSMENT REPORT

## IFFO GLOBAL STANDARD FOR RESPONSIBLE SUPPLY OF FISHMEAL AND FISH OIL



<b>FISHERY:</b>	Atlanto-Scandian (Norwegian spring-spawning) herring, <i>Clupea harengus</i> . FAROE ISLANDS
<b>LOCATION:</b>	Faroe Islands - Northeast Atlantic ICES Division Va, ICES Division Vb, ICES Sub Area IIa, ICES Sub Area IIb, ICES Sub Area IVa
<b>DATE OF REPORT:</b>	16 <sup>th</sup> October 2014
<b>ASSESSOR:</b>	Sam Peacock

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1. APPLICATION DETAILS AND SUMMARY OF THE ASSESSMENT OUTCOME			
Name:			
Address:			
Country:		Zip:	
Tel. No.		Fax. No.	
Email address:		Applicant Code	
Key Contact:		Title:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification Ltd.	
Assessor Name	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-certification
Sam Peacock	Dave Garforth	5	Initial
Assessment Period	October 2014		
Scope Details			
1. Scope of Assessment		IFFO Global Standard for Responsible Supply – Issue 1	
2. Fishery		Atlanto-scandian (Norwegian spring-spawning) herring ( <i>Clupea harengus</i> )	
3. Fishery Location		Faroe Islands - Northeast Atlantic ICES Division Va, ICES Division Vb, ICES Sub Area IIa, ICES Sub Area IIb, ICES Sub Area IVa	
4. Fishery Method		Purse Seine nets, Midwater pelagic trawls	
Outcome of Assessment			
5. Overall Fishery Compliance Rating		Medium	
6. Sub Components of Low Compliance		None	
7. Information deficiency		None	
8. Peer Review Evaluation		Agree with recommendation	
9. Recommendation		Approve fishery	

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<b>2. QUALITY OF INFORMATION</b>	
Good, primarily government and ICES reports	
<b>3. COMPLIANCE LEVEL ACHIEVED</b>	
Medium	
<b>Recommendation</b>	
<p>Approve fishery with the following observations:</p> <ul style="list-style-type: none"> <li>• <b>For 2014 fishery, States failed to agree catch quota sharing arrangements within the International Management Plan</b></li> <li>• <b>Resultant failure to adhere to scientific advice (although within the range)</b></li> <li>• <b>Faroese set a quota of 40,000t as against 21,634t as implied by the previous International Agreement</b></li> </ul> <p>Continued approval will be dependent upon adherence to this quota that has been set by Faroe assessed at subsequent audits and that the total TAC for the fishery remains within the range of scientific advice.</p>	
<b>4. GUIDANCE FOR ONSITE ASSESSMENT</b>	
<b>Based on HIGH compliance findings</b>	
<b>Based on MEDIUM compliance findings</b>	
<b>Based on LOW compliance findings</b>	
<b>5. ASSESSMENT DETERMINATION</b>	
<p>The Icelandic component of this fishery has previously been approved against the IFFO RS standard.</p> <p>In general, the fishery is well-managed at the Faroese national and international levels, with a robust management framework and control and enforcement mechanisms in place. The primary management implement is an international management plan which has been in place since 1999 and which describes the process by which the TAC should be set. However, due to a failure to reach an international agreement on the way this TAC is shared between the various participating states, there have been a number of years in which the final TAC has been higher than the level implied by the plan, and therefore higher than the level stated in the scientific advice. The total international quota for 2014 was set at 436,000t compared to ICES advice of 418,000t. However, as this TAC remains within the range of options provided by ICES (and is significantly below the level implied by an MSY-based approach, 512,000t), the assessment team considers it appropriate to award medium compliances rather than low. The discrepancy affects a number of sections within this assessment, as it not only means the level of fishing exceeds the scientific advice, but also that the precautionary principle is not fully adhered to (C1), and also that management measures are not always scientifically based (A3, B2). The</p>	

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status of the TAC in relation to scientific advise will be re-examined at next surveillance assessment.
<b>HIGH Compliance</b>
A1, A2, B1, D2, E1, E2
<b>MEDIUM Compliance</b>
A3, B2, C1, D1, D3
<b>LOW Compliance</b>

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SUMMARY OF LEVEL OF COMPLIANCE					
	The Management Framework and Procedures	Stock assessment procedures and management advice	Precautionary approach	Management measures	Implementation
legal and administrative basis	A1				
Fisheries management should be concerned with the whole stock unit	A2				
Management actions should be scientifically based	A3				
Research in support of fisheries conservation and management should exist		B1			
Best scientific evidence available should be taken into account when designing conservation and management measures		B2			
The precautionary approach is applied in the formulation of management plans			C1		
The level of fishing permitted should be set according to management advice given by research organisations				D1	
Where excess fishing capacity exist, mechanisms should be in established to reduced capacity				D2	
Management measures should ensure that fishing gear and fishing practices do not have a significant impact on non-target species and the physical environment				D3	
A framework for sanctions of violation of laws and regulations should be efficiently exists					E1
A management system for fisheries control and enforcement should be established					E2

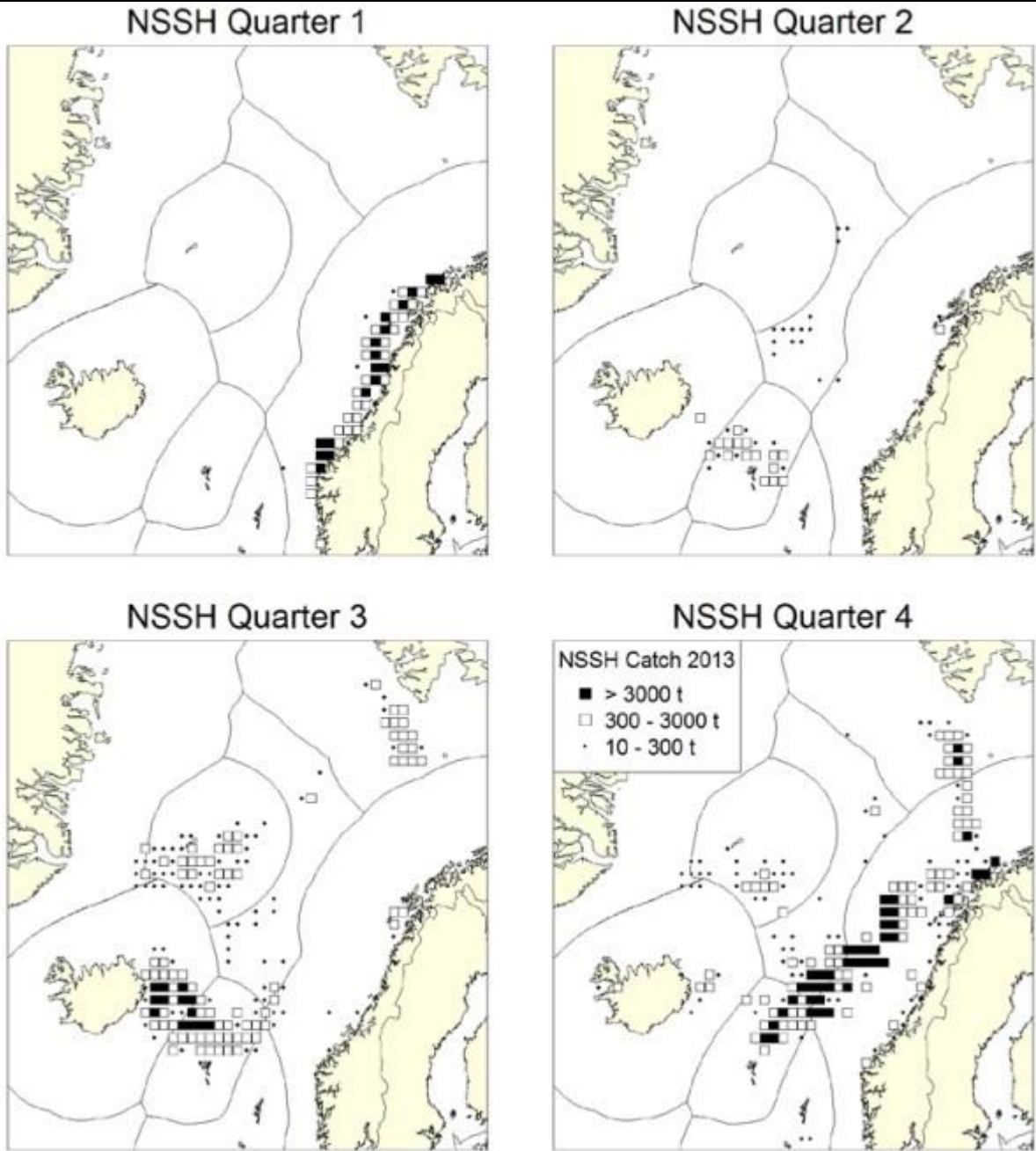
**KEY:**                      Low Compliance:                           Medium Compliance:                           High Compliance:                     

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6. RATIONALE OF THE ASSESSMENT OUTCOME	
A. THE MANAGEMENT FRAMEWORK AND PROCEDURE	
LEVEL OF COMPLIANCE	
<i>A1. The management of the fishery must include a legal and administrative basis for the implementation of measures and controls to support the conservation of the fishery.</i>	
<b>LOW</b>	An administrative framework that ensures an efficient management of the fishery for its conservation is not established.
<b>MEDIUM</b>	An administrative framework that ensures an efficient management of the fishery for its conservation is somehow established, but there is evidence of not being efficient to ensure the conservation of the stock.
<b>HIGH</b>	A legal and administrative framework that ensures an efficient management of the fishery for its conservation is established and works efficiently toward the conservation of the stock.
<p><b><i>Determination: Legal and administrative frameworks exist at the national and international levels, and are effectively applied in the management of the spring-spawning herring stock.</i></b></p> <p><b>Faroe Islands management</b></p> <p>The Faroe Islands are a self-governing nation under the sovereignty of the Kingdom of Denmark. They have exclusive competence to legislate and govern independently in a wide range of areas, including the conservation and management of living marine resources within the EEZ, protection of the marine environment, sub-surface resources, trade, fiscal and industrial relations, transport, communications, culture, education and research. Although Denmark is a member state of the European union, the Faroe Islands have chosen to remain outside the union, and as such negotiate their own trade and fisheries agreements with the EU and other countries.</p> <p>The primary governmental body with responsibility for the management of Faroese fisheries is the Ministry of Fisheries and Natural Resources. The framework for the regulation of commercial fisheries, in domestic, foreign and international waters, is the Commercial Fisheries Act of 1994 and its subsequent amendments. Based on this legislation, detailed regulations are implemented governing vessel and fishing licences, area closures, gear and data requirements and other technical regulations for commercial fisheries.</p> <p>The stated objective of Faroese fisheries management is <i>“to conserve and utilise marine fish stocks in order to ensure biological and economic sustainability and secure optimal socio-economic benefits from fisheries”</i>.</p> <p>Scientific management advice for the fishery is provided by both the North-Western Working Group (NWWG) of ICES, which utilises scientific data originating from the research programs of many regional EU and non-EU countries, and the Icelandic national fisheries scientific body, MRI.</p>	
R1-R3	

LEVEL OF COMPLIANCE	
<i>A2. Fisheries management should be concerned with the whole stock unit over its entire area of distribution and take into account fishery removals and the biology of the species.</i>	
<b>LOW</b>	Fisheries management is not concerned with the whole stock unit over its entire area of distribution and do not take into account any of the matters listed in 'A1'.
<b>MEDIUM</b>	Fisheries management is concerned with matters listed in 'A1' but not entirely. Fisheries, in relation to 'A1' statement, should improve to ensure the long term conservation of the marine resource.
<b>HIGH</b>	Fisheries management should be concerned with the whole stock unit over its entire area of distribution and take into account: <ul style="list-style-type: none"> <li>• All fishery removals</li> <li>• The biology of the species</li> </ul>
<p><b><i>Determination: The management unit reflects the current scientific understanding of the biological stock. The stock assessment process includes consideration of all fishery landings; discard data are not available but discarding is considered minimal. ICES also take into account the biology of the species.</i></b></p> <p>The Norwegian spring-spawning herring stock is the largest herring stock in the world. It is widely distributed and highly migratory throughout large parts of the NE Atlantic during its lifespan. Juveniles of the stock have their nurseries in Division Ia, but by far the majority of the stock occurs in Divisions IIa,b Va,b and XIVa. As a wide-ranging stock the ICES stock assessment and advice applies to the population wherever it is found, and the management process reflects this approach. Spring-spawning herring have scale characteristics and a number of vertebrae indicative of the stock and as such despite the variable geographic distribution there is a consensus among scientists about the biological definition of the population. At the time of this assessment there is no recommendation from ICES that the stock assessment unit or management unit should be changed to better reflect the biological population.</p> <p>The annual ICES stock assessment includes consideration of fishery removals reported by all states participating in the targeted fishery: Denmark, Faroe Islands, Germany, Iceland, Ireland, The Netherlands, Norway, Russia, Greenland and Scotland. Discard data are not available to ICES but the level of discarding in the fishery is considered to be low, and ICES made an informed decision in 1994 to discontinue the practice of adding an estimated volume to total landings to account for this factor. The ICES working group responsible for conducting the stock assessment also considers the biology of the species, particularly the flexible and variable migratory patterns.</p>	



Total reported catches of Norwegian spring-spawning herring in 2012 by quarter and ICES rectangle. Grading of the symbols: black dots 10-300 t, open squares 300–3000 t, and black squares > 3000 t. From the ICES advice, September 2014 (R4).

R4-R7

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LEVEL OF COMPLIANCE	
<i>A3. Management actions should be based on long-term conservation objectives</i>	
<b>LOW</b>	Management actions are not based on long term management objectives.
<b>MEDIUM</b>	Management actions are based on long term management objectives. However the actions are not scientifically formulated.
<b>HIGH</b>	Management actions are based on long term management objectives, and actions are science based.
<p><b><i>Determination: The fishery is primarily managed according to a long-term international management plan first agreed in 1999. There have been years in which the signatory nations have not been able to agree to set the total quota in line with the plan, and the most recent estimate of SSB indicates that biomass has fallen below <math>B_{pa}</math>. As there is a management plan in place, but not fully adhered to, a medium compliance rating is appropriate.</i></b></p> <p>Management of the Norwegian spring-spawning herring stock is guided primarily by the international management plan agreed between the EU, Faroe Islands, Iceland, Norway, and Russia in 1999. The main components of the plan are as follows:</p> <ol style="list-style-type: none"> <li><i>Every effort shall be made to maintain a level of Spawning Stock Biomass (SSB) greater than the critical level (<math>B_{lim}</math>) of 2,500,000 t.</i></li> <li><i>For the year 2001 and subsequent years, the Parties agreed to restrict their fishing on the basis of a TAC consistent with a fishing mortality rate of less than 0.125 for appropriate age groups as defined by ICES, unless future scientific advice requires modification of this fishing mortality rate.</i></li> <li><i>Should the SSB fall below a reference point of 5,000,000 t (<math>B_{pa}</math>), the fishing mortality rate referred to under paragraph 2, shall be adapted in the light of scientific estimates of the conditions to ensure a safe and rapid recovery of the SSB to a level in excess of 5,000,000 t. The basis for such an adaptation should be at least a linear reduction in the fishing mortality rate from 0.125 at <math>B_{pa}</math> (5,000,000 t) to 0.05 at <math>B_{lim}</math> (2,500,000 t).</i></li> <li><i>The Parties shall, as appropriate, review and revise these management measures and strategies on the basis of any new advice provided by ICES.</i></li> </ol> <p>In general the total international TAC has matched that implied by the harvest control rules set out in this management plan. During 2003 – 2006 there was no international agreement on TAC, although the plan was adhered to by all signatories 2007-2013. There was again no international agreement on TAC for the 2013 or 2014 fisheries, an issue which is examined in more detail in section D1. The 2014 ICES advice indicates that SSB has fallen below <math>B_{pa}</math>, although this was predicted in the 2013 advice to occur even without any fishing in 2014.</p>	
M	
R4-R7	

B. STOCK ASSESSMENT PROCEDURES AND MANAGEMENT ADVICE	
LEVEL OF COMPLIANCE	
<i>B1. Research in support of fisheries conservation and management should exist.</i>	
<b>LOW</b>	Research to support the conservation and management of the stock, non-target species and physical environment does not exist
<b>MEDIUM</b>	Research to support the conservation and the management of the stock, non-target species and physical environment exists, however research programmes could be significantly improved to decrease scientific advice uncertainty.
<b>HIGH</b>	Research to support the conservation and the management of the stock, non-target species and physical environment exist, and existent research is considered most adequate for the long term conservation of the target, non-target and physical environment

***Determination: ICES carries out an annual stock assessment based on a number of fishery dependent and fishery independent data sources. The current level of scientific understanding of the stock has room for improvement but is generally considered to be adequate to enable the sustainable management of the fishery.***

H

Data on spring-spawning herring have been collected for over 100 years, and the results of stock assessments are available as far back as 1907. An annual stock assessment is now carried out by ICES and used to inform decisions made by fishery managers. The ICES assessments utilise a number of fishery-dependent and -independent data sources to provide a range of management recommendations to the nations prosecuting the fishery using an age-based analytical model.

*Fishery independent data*

Eight survey indices are available to ICES, of which three have not been conducted in recent years (and are used only for tuning) and five continue to be updated. The five active surveys are the Norwegian herring larvae survey on the Norwegian shelf (NHLS), two indices from the joint Russian-Norwegian Autumnal ecosystem trawl survey focussing on recruitment estimates, and two indices covering the adult stock from the International Ecosystem Survey in the Nordic Seas (IESNS) and International Ecosystem Survey in the Barents Sea (Eco-NoRu-Q3 (Aco)). Together these provide estimates of the size and geographical distribution of the stock, the age structure, and recruitment rates.

The number of herring larvae was estimated by the 2012 NHLS survey to be  $65.6 \times 10^{12}$ , which was slightly lower than 2011, while the estimated production of larvae was slightly higher. The weighted mean size of the larvae was 11.60 mm which was higher compared to the 2011 estimate of 10.90 mm. The 2011 Eco-NoRu-Q3 (Aco) survey estimated the total number of juvenile herring to be 1.6 billion individuals. The IESNS, which ICES considers to be the most important survey in relation to the assessment of the stock, achieved adequate geographical coverage in 2012. The survey found that the stock was dominated by 6-8 year-old herring, with a total biomass of 4.6 million tonnes, significantly lower than the 2011 estimate of 7.4 million tonnes (although this figure has fluctuated significantly over the history of the survey).

*Fishery dependent data*

Every state participating in the fishery provides, as a minimum, data on total landings by quarter and ICES statistical area. Many fleets provide additional sample data including age, weight, length, mean weight-at-age, and mean length-at-age.

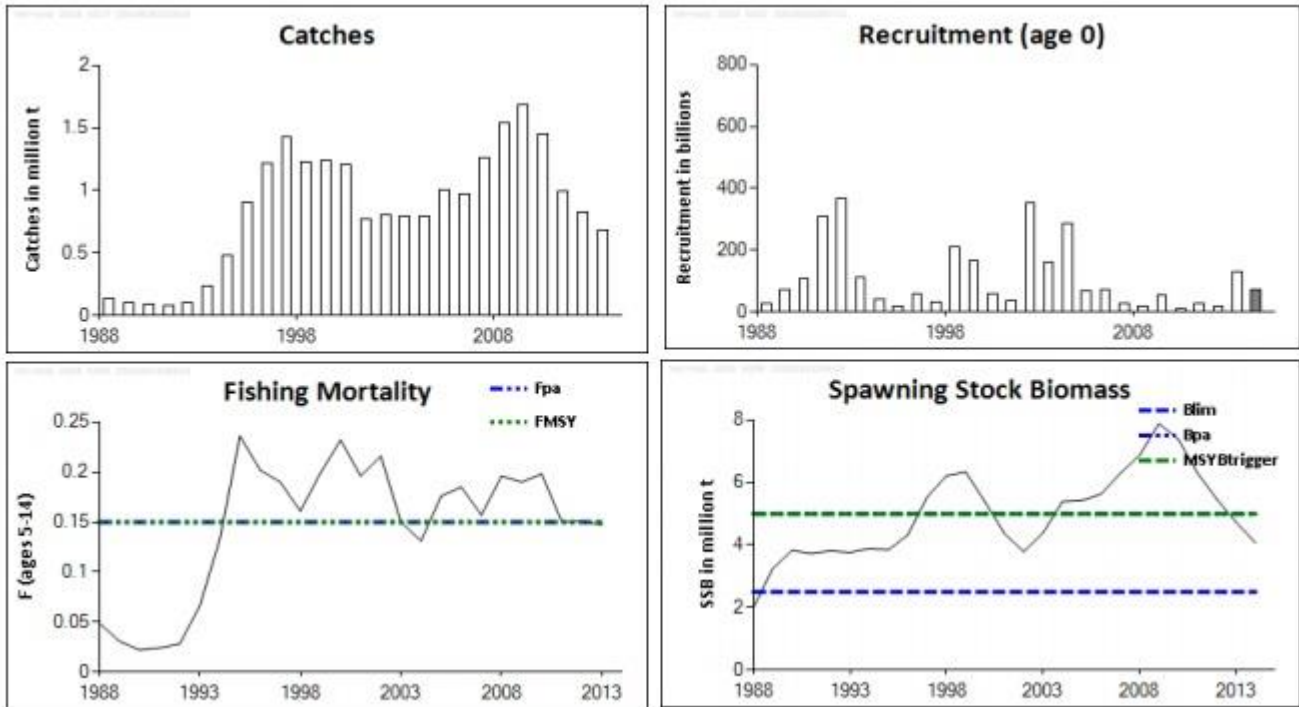
ICES states that while discarding is low, slippage is known to occur and is not included in the assessment. ICES data indicate that the frequency of slipping and the total quantities of fish slipped are low and, although the quantity remains unknown, are too small to have a significant effect on the reliability of the assessment. There have also been updates to historical estimates of SSB and fishing mortality, with the 2012 assessment

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indicating that the stock biomass has been lower than assumed by previous assessments and that TACs, based on the target fishing mortality, have resulted in fishing mortalities higher than intended.

While the 2014 ICES advice mentions these minor causes of uncertainty, it does not make any statements indicating significant problems in the data collection or stock assessment processes. The assessment team considers the level of research conducted on the stock to be more than adequate to enable sustainable management.



**Herring in Subareas I, II, and V, and in Divisions IVa and XIVa (Norwegian spring-spawning herring). Summary of stock assessment. From the ICES advice, September 2014 (R4).**

R4-R7

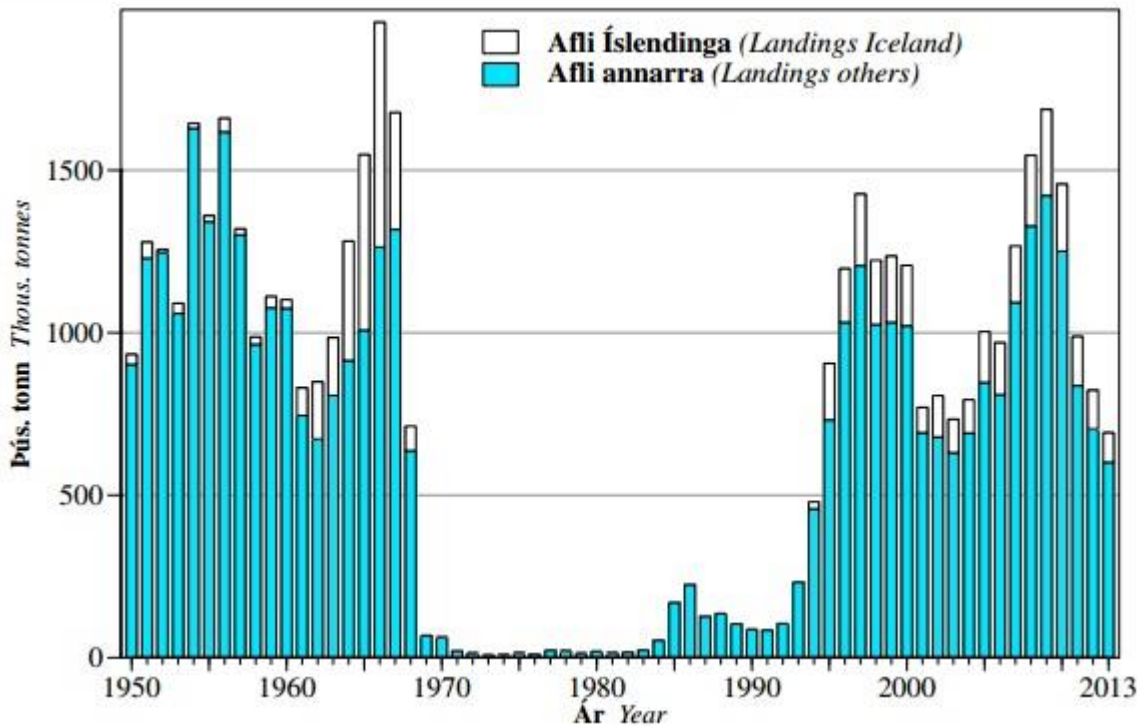
LEVEL OF COMPLIANCE	
<i>B2. Best scientific evidence available should be taken into account when designing conservation and management measures.</i>	
<b>LOW</b>	Scientific advice is not taken into account when designing conservation and management measures.
<b>MEDIUM</b>	Scientific advice is taken into account, when designing conservation and management measures. However some areas of discrepancy are identified that could have a significant impact in the long term conservation of the marine environment.
<b>HIGH</b>	Scientific advice is taken into account, when designing conservation and management measures, in a comprehensively manner.

**Determination: Scientific advice is provided by both ICES and the MRI to inform the management of the fishery. The Faroes also have a number of technical measures in place general to pelagic fisheries.**

M

International (and Icelandic national) management of the fishery is informed primarily by annual ICES stock assessment and advice, but also by the Marine Research Institute (MRI) of Iceland. The primary technical measure for the fishery is the setting of a total international TAC, which is then divided between nations involved during an annual negotiation. The division of the TAC between countries has been based on distribution of the stock, historical catches, contribution to scientific research and the nation’s dependency on fisheries. Additional agreements are in place to allow nations to take a certain percentage of their catch in each other’s EEZ. Each country retains control over the distribution of its share of the TAC within its fishing

fleet. In recent years there has been a failure to reach a universal agreement on international TAC sharing, and as such the final annual quota has totalled more than that advised by ICES. Although this issue is covered in detail in section D1, it does represent a failure to adhere to scientific advice. Additionally, the Faroe Islands have a number of technical measures in place, including a ban on discarding and mandatory logbooks.



Total landings of Spring-spawning herring, 1950 – 2011. From the 2013/14 MRI advice (R6).

R4-R7

**C. THE PRECAUTIONARY APPROACH**

**LEVEL OF COMPLIANCE**

C1. The precautionary approach is applied in the formulation of management plans.

<b>LOW</b>	The precautionary approach is not applied in the formulation of management plans.
<b>MEDIUM</b>	The precautionary approach is applied, however not all uncertainties are taken into account.
<b>HIGH</b>	The precautionary approach is applied, taking into account uncertainties relating to the dynamic of fish population (recruitment, mortality, growth and fecundity), and the impact of the fishing activities, such as discards and by-catch of non-target species as well as on the physical environment (Habitats).

**Determination:** The management plan described in section A3 has been assessed by ICES and found to be precautionary. SSB was estimated in October 2013 to be at  $B_{pa}$ , and is likely now below that level. Although this is due primarily to the failure to reach an international agreement on TAC, a situation reflected in the compliance ratings of sections B2 and D1, it is appropriate to also reflect it with a medium compliance in this section.

The long-term international management plan described in section A3 has been assessed by ICES and found to be in line with the precautionary approach. Reference points for the stock were last updated in 2010; the target fishing mortality associated with the management plan ( $F = 0.125$ ) is more conservative than the precautionary approach ( $F = 0.15$ ). Due to a lack of international agreement on quota sharing, the 2013 and 2014 TACs exceeded the level implied by the management plan. As SSB is now estimated to have fallen below

the precautionary reference point, the removal of more fish than the management plan indicates is at odds with the precautionary approach.

Norwegian spring-spawning herring – reference points. From the ICES advice, 2014 (R4).

	Type	Value	Technical basis
Management plan	SSB <sub>MP</sub>	5.0 million t	Medium-term simulations conducted in 2001.
	F <sub>MP</sub>	0.125	Medium-term simulations conducted in 2001.
MSY Approach	MSY B <sub>trigger</sub>	5.0 million t	B <sub>pa</sub>
	F <sub>MSY</sub>	0.15	Stochastic equilibrium analysis using a Beverton–Holt stock–recruitment relationship with data from 1950 to 2009.
Precautionary Approach	B <sub>lim</sub>	2.5 million t	MBAL (accepted in 1998).
	B <sub>pa</sub>	5.0 million t	B <sub>lim</sub> * exp(0.4*1.645).
	F <sub>lim</sub>	Not defined.	-
	F <sub>pa</sub>	0.15	Based on medium-term simulations.

R4-R7

**D. MANAGEMENT MEASURES**

**LEVEL OF COMPLIANCE**

D1. The level of fishing permitted should be set according to management advice given by research organisations.

<b>LOW</b>	The level of fishing permitted is not set according to management advice given by research organisations.
<b>MEDIUM</b>	The level of fishing permitted is higher than management advice given by research organisations. However, the difference is not considered to have a significant impact of the sustainability of the stock
<b>HIGH</b>	The level of fishing permitted is set according to management advice given by research organisations.

**Determination: The total international TAC for 2013 was set above the level implied by the management plan and that advised by ICES due to a failure to reach an international agreement on quota shares. Based on the information available to the assessment team, a similar situation has occurred in the setting of the 2014 quotas, albeit to a lesser extent. As the difference is small, the 2014 TAC is considerably lower than in 2013, and the total remains within the range of recommendations made by ICES, the assessment team recommends awarding a medium compliance rating under this clause.**

M

Between 2007 and 2012, the total international TAC was set in line with the requirements of the management plan and the ICES advice. In the setting of the 2013 quotas, the Faroese government withdrew from negotiations and set a unilateral TAC approximately three times larger than the share implied by the historical distribution ratio (105,230t as opposed to 32,000t). As the other signatory states allocated quotas according to the historical ratio, this implied a total international quota for 2013 of 692,230t. This was above the ICES recommendation associated with following the management plan (619,000t), but below the ICES recommendation associated with following the precautionary approach or MSY-based management (both 734,000t).

The ICES recommendation for total international TAC in 2014, again based on the management plan, was 418,487t. According to the information available to the assessment team, the Faroese government once again set a unilateral quota, this time roughly double the amount implied by the previous international agreement (40,000t compared to 21,634t), leading to a total international TAC of 436,853t. However, this remains within the range of options provided by ICES in the advice for the 2014 fishing season, including being below the level implied by an MSY-based approach (512,000t).

The ICES advice for the 2015 season (published in September 2014, R2) reported that SSB is currently

estimated to be below the precautionary level, and so the TAC recommendation for 2015 is 283,000t. It was reported in the previous advice that any fishing in 2014 would lead to a fall in biomass below  $B_{pa}$ , although the international management plan (which has been assessed by ICES as adherent to the precautionary approach) does not require the cessation of fishing under these circumstances.

R1, R2, R3.

Rationale	Landings (2014)	Basis	$F_w(2014)$	SSB(2015)	% SSB change <sup>2)</sup>	% TAC change <sup>3)</sup>
Agreed management plan	419	F management plan	0.099	3541	-16	-32
MSY	512	$0.82 * F_{MSY}$	0.124	3457	-19	-17
Precautionary Approach	0	Even no fishing will bring SSB above $B_{pa}$	0.000	3914	-5	-100
Zero catch	0	$F=0$	0.000	3914	-5	-100
Other options	588	$F_{2012}$	0.144	3390	-22	-5
	112	$F_{management} \times 0.25$	0.025	3814	-8	-82
	211	$F_{management} \times 0.5$	0.049	3725	-11	-66
	454	$F_{management} \times 1.1$	0.109	3509	-17	-27
	513	$F_{management} \times 1.25$	0.124	3456	-19	-17
	519	Management plan target F	0.125	3451	-20	-16

Landings and stock biomass weights in thousand tonnes.

<sup>1)</sup>  $F_w$  = Fishing mortality weighted by population numbers (age groups 5–14).  $F_w > F_{MP}$  to account for expected catch in 2013.

<sup>2)</sup> SSB 2015 relative to SSB 2014.

<sup>3)</sup> Catch/landings 2014 relative to TAC 2013.

**Norwegian spring-spawning herring landings recommendations for 2014, and their scientific basis. From the Oct 2013 ICES advice (R5).**

Year	ICES advice	Predicted catch corresp. to advice	Agreed TAC	ICES catch
1987	TAC	150	115	127
1988	TAC	120–150	120	135
1989	TAC	100	100	104
1990	TAC	80	80	86
1991	No fishing from a biological point of view	0	76	85
1992	No fishing from a biological point of view	0	98	104
1993	No increase in F	119	200	232
1994	Gradual increase in F towards $F_{0.1}$ ; TAC suggested	334	450	479
1995	No increase in F	513	None <sup>1</sup>	906
1996	Keep SSB above 2.5 million t	-	None <sup>2</sup>	1220 <sup>b</sup>
1997	Keep SSB above 2.5 million t	-	1500	1427 <sup>b</sup>
1998	Do not exceed the harvest control rule	-	1300	1223
1999	Do not exceed the harvest control rule	1263	1300	1235
2000	Do not exceed the harvest control rule	Max 1500	1250	1207
2001	Do not exceed the harvest control rule	753	850	766 <sup>b</sup>
2002	Do not exceed the harvest control rule	853	850	808 <sup>b</sup>
2003	Do not exceed the harvest control rule	710	711 <sup>a</sup>	790 <sup>b</sup>
2004	Do not exceed the harvest control rule	825	825 <sup>a</sup>	794
2005	Do not exceed the harvest control rule	890	1000 <sup>a</sup>	1003
2006	Do not exceed the harvest control rule	732	967 <sup>a</sup>	969
2007	Do not exceed the harvest control rule	1280	1280	1267
2008	Do not exceed the harvest control rule	1518	1518	1546
2009	Do not exceed the harvest control rule	1643	1642	1687
2010	Do not exceed the harvest control rule	1483	1483	1457
2011	See scenarios	988–1170	988	993
2012	Follow the management plan	833	833	826
2013	Follow the management plan	619	692 <sup>c</sup>	685
2014	Follow the management plan	418	436 <sup>c</sup>	
2015	Follow the management plan	283		

Weights in thousand tonnes.

<sup>1</sup>Autonomous TACs totaling 900 000 t.

<sup>2</sup>Autonomous TACs totaling 1 425 000 t were set by April 1996.

<sup>a</sup>There was no agreement on the TAC, the number is the sum of autonomous quotas from the individual Parties.

<sup>b</sup>Revised in 2010.

<sup>c</sup>Sum of the national quotas.

**Herring in Subareas I, II, and V, and in Divisions IVa and XIVa (Norwegian spring-spawning herring). ICES advice, management, and catches. From the September 2014 ICES advice (R4).**

R4-R7

LEVEL OF COMPLIANCE		
<i>D2. Where excess fishing capacity exist, mechanisms should be in established to reduced capacity to allow for the recovery of the stock to sustainable levels.</i>		
<b>LOW</b>	Mechanisms to allow for recovery of the stock to sustainable levels are not established.	
<b>MEDIUM</b>	Mechanisms to allow for recovery of the stock to sustainable levels are somehow established. However there is no evidence of the efficiency of the methods used.	
<b>HIGH</b>	Mechanisms are established to reduce capacity to allow for the recovery of the stock to sustainable levels and there are evidences of recovery.	
<p><b><i>Determination: The primary mechanism restricting fishing effort is the TAC. Faroese landings represent a small component of total international landings, and leaving aside the international disagreements TAC sharing, there is no indication that that there is excess Faroese fishing capacity applied to the stock.</i></b></p> <p>Since 1997, Faroese fisheries policy has limited the size of the fishing fleet (in terms of number of vessels) to the 1996 level, although increasing capacity of individual vessels has meant that the effective fleet size has increased. However, fishing effort across the entire herring stock is primarily limited by annual quotas, which are set as described in sections A3, B1 and D1. The adherence by Faroese vessels to this quota, along with their comparatively small quantities of fishery removals, indicates strongly that there is not an excess quantity of Faroese fishing capacity applied to the herring stock.</p> <p>R4-R7</p>		H

LEVEL OF COMPLIANCE		
<i>D3. Management measures should ensure that fishing gear and fishing practices do not have a significant impact on non-target species and the physical environment.</i>		
<b>LOW</b>	There are no management measures to prevent the impact of the fishing methods and fishing practices on non-target species and the physical environment.	
<b>MEDIUM</b>	There are management measures to prevent the impact of the fishing methods and fishing practices on non-target species and the physical environment. However it is not science based.	
<b>HIGH</b>	There are management measures to prevent the impact of the fishing methods and fishing practices on non-target species and the physical environment. Measures are based on scientific information.	
<p><b><i>Determination: Although there is currently no evidence that the fishery definitely has a significant impact on non-target species or the environment, the limited quantity of information available on many potential impacts creates sufficient uncertainty for the assessment team to consider a medium compliance rating appropriate.</i></b></p> <p><b>Non-target species / bycatch</b></p> <p>With a handful of minor exceptions, discarding is banned in Faroese fisheries and so all bycatch is landed, and therefore recorded by government officials; however it is unclear whether bycatch of non-target species is reported to ICES or, if it is, the extent to which this is factored into management advice and decisions. ICES reports that there is little quantitative information on the non-target bycatches in Atlantic herring fisheries in general, but these are thought to be small. In recent years increasing amounts of bycatch of mackerel have been reported in the traditional fishing grounds, pointing to a change in the distribution of mackerel.</p> <p><b>PET species</b></p> <p>Faroese legislation states that all fishing vessels must keep a Fishery Log-book. Birds and Mammals that are caught in fishing gear are to be reported and recorded in the Fishery Log-book. This Fishery Log-book is returned once a month, and then sent on to the ICES where the information is used in their scientific work. ICES does not currently consider the impact of the fishery on PET species to be significant.</p>		M



**Ecosystem considerations**

Juveniles and adults of this stock are an important component of the ecosystems in the Barents Sea, the Norwegian Sea, and the Norwegian coast. Herring has an important role as food resource to large fish, seabirds, and marine mammals, but also as a consumer of zooplankton in the Norwegian Sea and capelin larvae in the Barents Sea. A large SSB is expected to have positive effects on its predators, but the effects on other pelagic fish stocks feeding in the Norwegian Sea such as blue whiting and mackerel may be negative due to competition for food.

Information on the impact of the herring fishery on the ecosystem is limited. Unintended effects of the fishery on the ecosystem are considered by ICES to probably be small or absent. Since herring is a major source of food for some populations of other species, overfishing of the herring stock could affect these populations.

**Physical environment**

Direct effects on habitat and seafloor are typically minimal for pelagic gears, although occasional contact is known to occur and, in these cases, can potentially cause damage to fragile ecosystems (e.g. corals).

R4-R7

**E. IMPLEMENTATION**

**LEVEL OF COMPLIANCE**

*E1. There should be a framework for sanctions of violation of Laws and regulations.*

<b>LOW</b>	A framework for sanctions of violation of Laws and regulations do not efficiently exist.
<b>MEDIUM</b>	A framework for sanctions of violation of Laws and regulations do exist but do not work efficiently.
<b>HIGH</b>	A framework for sanctions of violation of Laws and regulations exists and is proven to be efficient.

***Determination: A framework of sanctions for violations is in place and appears to be effective.***

The Commercial Fisheries Act of 1994 includes provisions for penalties to be applied in the event of transgression. These include fines, confiscation and the withdrawal of fishing licences. Fines can be applied to violation of any of the major regulations including fishing days/quotas, capacity, closed areas, minimum fish size, the ban on discards and others. Confiscation only follows violations of gear regulations, catch quotas, or bycatch regulations. Historically, confiscation of all catches and gear in cases of discarding or fishing in closed areas was mandatory, although this may have been revised since the initial version of the Act. Although the Faroese Fisheries Inspection does utilise warnings and can implement on-the-spot fines or confiscations with the vessel owner’s consent, in practice reports are generally filed with the police and prosecutions occur through the court system. The Fisheries Inspection is permitted to withdraw fishing licenses temporarily while such proceedings are underway.

R8, R9

LEVEL OF COMPLIANCE	
<i>E2. A management system for fisheries control and enforcement should be established.</i>	
<b>LOW</b>	A management system for fisheries control and enforcement is not established.
<b>MEDIUM</b>	A management system for fisheries control and enforcement is established but do not work efficiently.
<b>HIGH</b>	A management system for fisheries control and enforcement is established and work efficiently.
<p><b>Determination: A management system for fisheries control and enforcement is in place and appears to function effectively.</b></p> <p>The harvesting licence is an operating licence issued to an individual vessel. The fishing licence specifies the details of fishing activities (catch &amp; area limitations and gear requirements) in which the vessel is permitted to participate, as well as outlining requirements for reporting of catch data and information on landings or transhipments. Additionally, all vessels larger than 15 GT must maintain a daily log of their activities in an authorised catch logbook which is issued for this purpose, recording data for each set or haul, and they must also have satellite vessel monitoring systems (VMS) in both national and international waters.</p> <p>The Faroese Fisheries Inspection is responsible for monitoring and inspecting catches and landings of individual vessels and the weighing-in of catches. This includes both onboard inspection, monitoring of transhipments and inspection of landings in port. Faroese inspection and rescue vessels, in cooperation with Danish naval patrol vessels, provide for a constant patrol presence in Faroese waters. They also contribute to fisheries inspection in international waters of the North Atlantic at regular intervals in collaboration with the inspection services of other nations in the region.</p> <p>Internationally, the NEAFC has comprehensive port state measures to tackle IUU fishing under the NEAFC Control Scheme, monitoring IUU activity in the zones of Contracting Parties, as well as in international waters. Vessels listed on the NEAFC IUU list (“blacklist”) are not permitted to call at ports, receive services and supplies or change crew members in any port of the member countries of NEAFC.</p> <p>NEAFC and NAFO (Northwest Atlantic Fisheries Organization) have agreed to recognize and implement each other’s blacklists, creating a trans-North Atlantic system for monitoring and outlawing IUU-listed vessels, with the aim of achieving a global network of cooperation with other regional fisheries management organisations around the world.</p> <p>R8, R9</p>	

## 7. KEY STAKEHOLDERS

### 8. REFERENCES

R1 – Faroe Islands Ministry of Fisheries: <http://www.fisk.fo/>

R2 – Faroe Islands Ministry of Fisheries and Natural Resources; “Faroe Islands Fisheries and Aquaculture: Responsible Management for a Sustainable Future”:  
[http://www.mfa.fo/Admin/Public/DWSDownload.aspx?File=%2fFiles%2fFiler%2ffylgiskjoel+til+tidndi%2ffinal\\_070408.pdf](http://www.mfa.fo/Admin/Public/DWSDownload.aspx?File=%2fFiles%2fFiler%2ffylgiskjoel+til+tidndi%2ffinal_070408.pdf)

R3 – Myfish report on the Faroe Islands’ fisheries governance system: Objectives setting and implementation:  
[http://myfishproject.eu/images/MYFISH/Myfish\\_Faroe%20Islands%20Case%20Study.pdf](http://myfishproject.eu/images/MYFISH/Myfish_Faroe%20Islands%20Case%20Study.pdf)

R4 – ICES advice, Norwegian spring-spawning herring, September 2014:  
<http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2014/2014/her-noss.pdf>

R5 – ICES advice, Norwegian spring-spawning herring, October 2013:  
<http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2013/2013/her-noss.pdf>

R6 – MRI herring advice, 2013/14: <http://www.hafro.is/Astand/2014/english/23-herring-14.pdf>

R7 – Faroe Islands unilateral quota set at 105,000t: <http://www.thefishsite.com/fishnews/19840/disappointment-with-faroe-islands-unilateral-mackerel-quota>

R8 – Gezelius, S.G. & Raakjær, J. Making Fisheries Management Work: Implementation of Policies for Sustainable Fishing. Springer, 2008.

R9 – Faroese Fisheries Inspection: <http://www.fve.fo/>

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