



FISHERY ASSESSMENT REPORT

IFFO GLOBAL STANDARD FOR RESPONSIBLE SUPPLY OF FISHMEAL AND FISH OIL



FISHERY:	Atlanto-Scandian (Norwegian Spring-spawning) Herring (<i>Clupea harengus</i>)
LOCATION:	Northeast Atlantic (ICES Division Va, ICES Division Vb, ICES Sub Area IIa, ICES Sub Area IIb, ICES Sub Area IVa)
DATE OF REPORT:	8th October 2012
ASSESSOR:	Sam Peacock

Global Trust Certification Ltd, Quay Side Business Centre, Dundalk, Co. Louth, Ireland Tel: 042 932 0912 Fax 042 938 6864

Issue No; 2; Issue Date; Nov 09

Report Ref: Atlanto Herring

CCM Code:

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1. Application Details and Summary of the Assessment Outcome			
Name: Icelandic Association of Fishmeal Manufacturers			
Address:			
Country:		Zip:	
Tel. No.		Fax. No.	
Email address:		Applicant Code	
Key Contact:		Title:	
Certification Body Details			
Name of Certification Body:			
Assessor Name:	Peer Reviewer:	Assessment Days:	Initial/Surveillance/Re-certification:
Sam Peacock	Mike Platt	1	Surveillance
Assessment Period	8 th October 2012		
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		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		HIGH	
6. Sub Components of Low Compliance		NONE	
7. Information deficiency		NONE	
8. Peer Review Evaluation		Agree with Recommendation	
9. Recommendation		Maintain fishery approval	

2. Quality of Information
Good – primarily ICES advice.

3. Compliance Level Achieved
HIGH
Recommendation
Maintain fishery approval.

4. Guidance for On-site Assessment
Based on High Compliance Findings
Based on Medium Compliance Findings
Key Stakeholders of the Fishery

5. Assessment Determination
<p>The initial assessment found this fishery highly compliant to the IFFO RS standard in every category. Since that time there have been no major changes to the management organisations, legislation, science or enforcement of the fishery. ICES continues to estimate that biomass is above B_{pa} in the most recent (Sep 2012) advice, and the 2012 TAC was set according to the previous (2011) ICES advice. The 2013 TAC for this stock has not yet been agreed.</p>
HIGH COMPLIANCE
A1, A2, A3, B1, B2, C1, D1, D2, D3, E1, E2
MEDIUM COMPLIANCE

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	High Compliance	Low Compliance	Low Compliance	Low Compliance	Low Compliance
Fisheries management should be concerned with the whole stock unit	High Compliance	Low Compliance	Low Compliance	Low Compliance	Low Compliance
Management actions should be scientifically based	High Compliance	Low Compliance	Low Compliance	Low Compliance	Low Compliance
Research in support of fisheries conservation and management should exist	Low Compliance	High Compliance	Low Compliance	Low Compliance	Low Compliance
Best scientific evidence available should be taken into account when designing conservation and management measures	Low Compliance	High Compliance	Low Compliance	Low Compliance	Low Compliance
The precautionary approach is applied in the formulation of management plans	Low Compliance	Low Compliance	High Compliance	Low Compliance	Low Compliance
The level of fishing permitted should be set according to management advice given by research organisations	Low Compliance	Low Compliance	Low Compliance	High Compliance	Low Compliance
Where excess fishing capacity exist, mechanisms should be in established to reduced capacity	Low Compliance	Low Compliance	Low Compliance	High Compliance	Low Compliance
Management measures should ensure that fishing gear and fishing practices do not have a significant impact on non-target species and the physical environment	Low Compliance	Low Compliance	Low Compliance	High Compliance	Low Compliance
A management system for fisheries control and enforcement should be established	Low Compliance	Low Compliance	Low Compliance	Low Compliance	High Compliance
A framework for sanctions of violation of laws and regulations should be efficiently exists	Low Compliance	Low Compliance	Low Compliance	Low Compliance	High Compliance

KEY: Low Compliance [Red Box] Medium Compliance [Yellow Box] High Compliance: [Green Box]

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6. Rationale of the Assessment Outcome

a. The Management Framework and Procedure

LEVEL OF COMPLIANCE		a.i. 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.	References	Rating
LOW		<p>Determination: <i>The initial fishery assessment found a robust legal and administrative framework in place to support Icelandic fisheries management. There have been no major changes since that time.</i></p> <p>Iceland operates a structured, legally mandated fisheries management system to ensure responsible fisheries, focusing on the sustainable utilization of the fish stocks and good treatment of the marine ecosystem. Fisheries management in Iceland is primarily based on extensive research on the fish stocks and the marine ecosystem, decisions made on the conduct of fisheries and allowable catches on the basis of scientific advice, and effective monitoring and enforcement of the fisheries and the total catch. These are the main pillars of the Icelandic fisheries management and are intended to ensure responsible fisheries and the sustainability of the ocean’s natural resources.</p> <p>For more details please refer to the original fishery assessment report.</p>	R2, R3	HIGH
MEDIUM				
HIGH				
		a.ii. 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	References	Rating
LOW		<p>Determination: <i>The definition of the stock has not been changed since the original assessment, nor has there been any significant change in the understanding of stock distribution or biology.</i></p> <p>Fisheries management for the Atlanto-Scandian herring stock is concerned with the stock unit over its entire area of distribution, and within the Icelandic jurisdiction and quota takes into account all fishery removals. Research and information on the biology and distribution of the species continues</p>	R2, R3	HIGH
MEDIUM				
HIGH				

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		to suggest that the stock unit used is appropriate. For more information, please refer to the original fishery assessment.			
		a.iii .Management actions should be based on long-term conservation objectives	References	Rating	
LOW		<p>Determination: <i>The fishery continues to be managed according to a long-term management plan with clearly defined objectives, considered by ICES to adhere to the precautionary approach.</i></p> <p>The fishery is jointly managed by Iceland, Norway, the European Community, the Faroe Islands, and Russia with the responsibility for waters outside national jurisdiction falling to the North East Atlantic Fisheries Commission (NEAFC). A long term management plan was agreed in 1999. ICES has evaluated the plan and concludes that it is in accordance with the precautionary approach. The plan includes the following elements:</p> <ul style="list-style-type: none"> • Every effort shall be made to maintain a level of Spawning Stock Biomass (SSB) greater than the critical level (B_{lim}) of 2,500,000 t. • For the year 2001 and subsequent years, the Parties agree 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. • Should the SSB fall below a reference point of 5,000,000t (B_{pa}), 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 B_{pa} (5,000,000t) to 0.05 at B_{lim} (2,500,000t). • The Parties shall, as appropriate, review and revise these management measures and strategies on the basis of any new advice provided by ICES. 	R1-R3	HIGH	
MEDIUM					
HIGH					

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b. Stock Assessment Procedures and Management Advice

LEVEL OF COMPLIANCE	bi. Research in support of fisheries conservation and management should exist.	References	Rating
LOW	<p>Determination: <i>Data collection and stock assessment activities continue to be carried out in support of the management of the fishery.</i></p>	R1-R3, R5	HIGH
MEDIUM	<p>ICES provides annual advice on the management of the fishery based on several fishery and non-fishery survey indices. Fishery independent data includes 8 survey indices of which 3 have not been continued in recent years; active surveys are 1 larval survey, 3 recruit surveys and 1 survey covering the adult stock. Catch at age data form the main fishery index. The International Ecosystem Survey in the Nordic Seas in May is the most important survey in the assessment and is expected to remain the main basis for future assessments.</p>		
HIGH	<p>ICES provides annual advice on the management of the fishery based on several fishery and non-fishery survey indices. Fishery independent data includes 8 survey indices of which 3 have not been continued in recent years; active surveys are 1 larval survey, 3 recruit surveys and 1 survey covering the adult stock. Catch at age data form the main fishery index. The International Ecosystem Survey in the Nordic Seas in May is the most important survey in the assessment and is expected to remain the main basis for future assessments.</p> <div data-bbox="584 632 1680 1177"> <p>The figure consists of four sub-charts arranged in a 2x2 grid:</p> <ul style="list-style-type: none"> Landings: A bar chart showing landings in 1000 t from 1988 to 2008. The y-axis ranges from 0 to 2000. Landings are low until the mid-1990s, then increase significantly, peaking around 1998 and remaining high through 2008. Recruitment (age 0): A bar chart showing recruitment in billions from 1988 to 2008. The y-axis ranges from 0 to 500. Recruitment is highly variable, with major peaks around 1993 and 2003. Fishing Mortality: A line graph showing fishing mortality (F weighted ages 5-14) from 1988 to 2008. The y-axis ranges from 0.00 to 0.25. A horizontal dashed line is drawn at approximately 0.15. The mortality fluctuates around this level, with a notable peak in the mid-1990s. Spawning Stock Biomass: A line graph showing SSB in 1000 t from 1988 to 2008. The y-axis ranges from 0 to 10000. A horizontal dashed line is drawn at approximately 5000. The SSB shows a general upward trend from the late 1980s, peaking around 2003 and then declining. </div> <p>Fig 1 - Herring in the Northeast Atlantic. Summary of stock assessment (the estimated shaded recruitment is the geometric mean 1988–2008). Top right: SSB and F over the years. From the 2012 ICES advice.</p>		

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LEVEL OF COMPLIANCE		b.ii Best scientific evidence available should be taken into account when designing conservation and management measures	References	Rating
LOW		<p>Determination: <i>Fishery management continues to follow the long-term management plan identified in the original assessment. The plan has been independently verified by ICES as adherent to the precautionary approach and based on best scientific evidence.</i></p> <p>The current target fishing mortality of 0.125 is in the range of fishing mortalities (0.1-0.2) that would lead to MSY and a low risk of the stock falling below B_{lim}. The estimate of FMSY is 0.15. The existing management plan is hence in conformity with the ICES MSY framework.</p> <p>For more information, including a detailed explanation of the scientific basis of the management plan, please refer to the original fishery assessment.</p>	R2, R3	HIGH
MEDIUM				
HIGH				

c. The Precautionary Approach

LEVEL OF COMPLIANCE		c.i The precautionary approach is applied in the formulation of management plans.	References	Rating
LOW		<p>Determination: <i>The management plan has been reviewed by ICES as adhering to the precautionary approach. The management plan continues to form the basis for management decisions.</i></p> <p>The international management plan was reviewed by ICES in 2007 and found to adhere to the precautionary principal. For 2012, the precautionary approach recommended a total TAC (across all member states) of 989,000t, whereas following the management plan would lead to a TAC of 833,000t. The eventual TAC for 2012 was set to follow the management plan, representing a catch significantly more conservative than the precautionary figure (see table 1 below).</p> <p>The fourth graph in figure 1 shows the spawning stock biomass for the fishery, and illustrates how the</p>	R1-R3	HIGH
MEDIUM				
HIGH				

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	<p>SSB currently remains considerably above B_{pa}.</p> <p>Infection caused by <i>Ichthyophonus</i> has recently been observed in Icelandic summer spawning herring; however, during the surveys there were no indications of high prevalence of <i>Ichthyophonus</i> in the Atlanto-Scandian Herring stock.</p> <p>Table 1 - TACs and F-values implied by following each rationale for determining 2012 fishing effort. Adapted from the ICES advice, 2011.</p> <table border="1"> <thead> <tr> <th>Rationale</th> <th>Implied Landings (2012)</th> <th>Implied F (2012)</th> </tr> </thead> <tbody> <tr> <td>Management plan</td> <td>833,000t</td> <td>0.125</td> </tr> <tr> <td>MSY</td> <td>989,000t</td> <td>0.15</td> </tr> <tr> <td>Precautionary approach</td> <td>989,000t</td> <td>0.15</td> </tr> </tbody> </table>	Rationale	Implied Landings (2012)	Implied F (2012)	Management plan	833,000t	0.125	MSY	989,000t	0.15	Precautionary approach	989,000t	0.15	
Rationale	Implied Landings (2012)	Implied F (2012)												
Management plan	833,000t	0.125												
MSY	989,000t	0.15												
Precautionary approach	989,000t	0.15												

d. Management Measures

LEVEL OF COMPLIANCE	d.i The level of fishing permitted should be set according to management advice given by research organisations.	References	Rating
LOW	<p>Determination: <i>The total international TAC for 2012 was set according to the management plan, as advised by ICES, and therefore adheres to scientific advice.</i></p> <p>Since 2007, the total TAC for all nations participating in the fishery has been set according to the ICES advice. The 2012 TAC was set at 833,000t, which represents an adherence to the management plan, and is considerably lower than TAC recommendations derived from a precautionary or MSY approach. The 2012 ICES advice considered the SSB in 2012, though declining, to be above B_{pa}. The advice recommended a maximum TAC in 2013 of 619,000t; the TAC for 2013 has not yet been agreed.</p>	R1-R5	HIGH
MEDIUM			
HIGH			

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Table 2 – Herring in the Northeast Atlantic (Norwegian spring-spawning herring). ICES advice, management, and catches. From the ICES advice, 2012.

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 ¹	906
1996	Keep SSB above 2.5 million t	-	None ²	1220 ⁴
1997	Keep SSB above 2.5 million t	-	1500	1427 ⁴
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 ⁴
2002	Do not exceed the harvest control rule	853	850	808 ⁴
2003	Do not exceed the harvest control rule	710	711 ³	790 ⁴
2004	Do not exceed the harvest control rule	825	825 ³	794
2005	Do not exceed the harvest control rule	890	1000 ³	1003
2006	Do not exceed the harvest control rule	732	967 ³	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	
2013	Follow the management plan	619		

Weights in thousand tonnes.

¹Autonomous TACs totaling 900 000 t.

²Autonomous TACs totaling 1 425 000 t were set by April 1996.

³There was no agreement on the TAC, the number is the sum of autonomous quotas from the individual Parties.

⁴Revised in 2010.

LEVEL OF COMPLIANCE	d.ii Where excess fishing capacity exist, mechanisms should be in established to reduced capacity to allow for the recovery of the stock to sustainable levels.	References	Rating
LOW	<p>Determination: <i>The capacity-reducing mechanisms identified in the original assessment continue to be functional and effective.</i></p> <p>Iceland operates a vessel registration, licensing and permit system which is necessary to obtain quota within the Individual transfer quota system. The Marine Policy focuses on economic utilisation of stocks. The system acts to create disincentives for allowing excess capacity in fisheries. Other technical measures, including season, permanent and temporary closures act to manage effort and capacity within the permitted fleet.</p>	R2, R3	HIGH
MEDIUM			
HIGH			
LEVEL OF COMPLIANCE	d.iii Management measures should ensure that fishing gear and fishing practices do not have a significant impact on non-target species and the physical environment.	References	Rating
LOW	<p>Determination: <i>There are management measures in place to prevent the impact of the fishing methods and fishing practices on non-target species and the physical environment. There have been no significant changes since the original assessment, either in measures or scientific recommendations.</i></p> <p>There are various technical measures in place to ensure the protection of small fish and vulnerable habitats, such as regulations on the type of fishing gear allowed in different areas and the closing of fishing grounds. There are also rules for the minimum mesh size and the use of small-fish sorting grids to allow juvenile herring and non-target species escapement.</p> <p>Within the Icelandic EEZ the Directorate of Fisheries operates an observer program and a reporting system for fishermen allowing temporary closure of areas if the inter-mixture of saithe, itself a quota species managed by Iceland, falls outside of allowable by-catch limits. The temporary closure system is used extensively throughout Iceland for the majority of quota species.</p> <p>For more detailed information please refer to the original assessment.</p>	R2, R3	HIGH
MEDIUM			
HIGH			

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e. Implementation

LEVEL OF COMPLIANCE		e.i There should be a framework for sanctions of violation of Laws and regulations.	References	Rating
LOW		<p>Determination: <i>The initial fishery assessment identified an efficient framework of sanctions for violations of laws and regulations. There have been no major changes since that time.</i></p> <p>The legal and administrative framework consists of laws and regulations that specify and allow the Ministry through the services of the Directorate to prosecute and charge fines through the Courts of Iceland for infringement of fishery regulations.</p> <p>Breaches of the law and regulations on fisheries management are subject to fines or revoking of the fishing permit, irrespective of whether such conduct is by intent or negligence. Major or repeated intentional offenses are subject to up to six years imprisonment. If the catch of a vessel exceeds the allowable catch, the relevant company or individual must obtain an additional catch quota for the relevant species. If this is not done within a certain timeframe, the fishing permit may be revoked as well as a charge having to be paid for the illegal catch.</p>	R2, R3	HIGH
MEDIUM				
HIGH				
LEVEL OF COMPLIANCE		e.ii A management system for fisheries control and enforcement should be established.	References	Rating
LOW		<p>Determination: <i>The original assessment concluded that an effective management system was in place. There have been no significant changes since that time.</i></p> <p>All commercial fisheries are subject to authorization by the Directorate of Fisheries. The Iceland Coast Guard, which falls under the auspices of the Ministry of Justice, monitors the fisheries of vessels operating in Icelandic waters, as well as monitoring closed areas. There are also strict requirements for the keeping of e- logbooks on-board all fishing vessels and they must be made available for fishery</p>	R2, R3	HIGH
MEDIUM				
HIGH				

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		<p>inspectors.</p> <p>The Icelandic Directorate of Fisheries is responsible for monitoring and inspecting vessels both at sea, through an observer programme and ashore, through a network of official landing sites where all catches are registered by officials who report to a central database. Thus 60 ports of landings in Iceland send electronic data daily to the Directorate. A total of approximately 50.000 landings are registered in the system every year.</p> <p>All vessels must be registered, licensed and the Directorate issues fishing permits and allocates catch quotas.</p>		
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References

R1 - ICES Norwegian Spring-Spawning herring advice September 2011:

<http://www.ices.dk/committe/acom/comwork/report/2011/2011/her-noss.pdf>

R2 - Iceland Atlanto-Scandian herring initial assessment, 2010:

<http://www.iffonet.net/downloads/IFFO%20RS/Whole%20Fish/Iceland%20-%20Atlantic%20Herring.pdf>

R3 - Iceland Atlanto-Scandian herring surveillance assessment, 2011:

<http://www.iffonet.net/downloads/IFFO%20RS/Whole%20Fish/Atlanto-Scandian%20Herring%20-%20Iceland-%20Annual%20Assessment.pdf>

R4 - EU TACs 2012:

http://ec.europa.eu/fisheries/documentation/publications/poster_tac2012_en.pdf

R5 – ICES Norwegian Spring-Spawning herring advice September 2012:

<http://www.ices.dk/committe/acom/comwork/report/2012/2012/her-noss.pdf>

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