



FISHERY ASSESSMENT REPORT

IFFO GLOBAL STANDARD FOR RESPONSIBLE SUPPLY OF FISHMEAL AND FISH OIL



FISHERY:	Blue Whiting (<i>Micromesistius poutassou</i>)
LOCATION:	Iceland (Subareas I-IX, XII, and XIV) (Combined Stock)
DATE OF REPORT:	7/10/11
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: Iceland Blue Whiting

CCM Code:

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1. Application Details and Summary of the Assessment Outcome			
Name: Icelandic Association of Fishmeal Manufacturers			
Address:			
Country: Iceland		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: Sam Peacock	Peer Reviewer: Mike Platt	Assessment Days: 1	Initial/Surveillance/Re-certification: Surveillance
Assessment Period	Oct 2011		
Scope Details			
1. Scope of Assessment:		IFFO RS standard	
2. Fishery		Blue Whiting (<i>Micromesistius poutassou</i>)	
3. Fishery Location		Iceland (Subareas I-IX, XII, and XIV) (Combined Stock)	
4. Fishery Method		Pelagic Trawl	
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 Assessor Review	
9. Recommendation		Maintain Fishery Approval	

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2. Quality of Information
Good – information obtained from ICES advice, Icelandic Governmental websites, and the original fishery assessment.
3. Compliance Level Achieved
HIGH
Recommendation
Approve Fishery
4. Guidance for On-site Assessment
Based on High Compliance Findings
Based on Medium Compliance Findings
Key Stakeholders of the Fishery
5. Assessment Determination
There have been no significant changes in the management or enforcement of this fishery. The management plan identified in the original assessment continues to form the basis of international management decisions. The 2010 ICES advice highlighted the discrepancy between a highly precautionary approach and strict adherence to the management plan, in that the plan implies fishing will continue even when SSB falls below B_{pa} . ICES has updated SSB estimates to show that biomass is currently above B_{pa} . However, if the decline in biomass continues as projected, this discrepancy may cause problems for the continuing approval of the fishery, as under the current management plan fishing will continue even if SSB falls below B_{lim} .
HIGH COMPLIANCE
A1, A2, A3, B1, B2, D1, D2, D3, E1, E2
MEDIUM COMPLIANCE
C1

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	Medium 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.	Rating
LOW	<p>Determination: Icelandic fisheries management continues to be supported by robust legal and administrative foundations.</p> <p>Iceland operates a structured, legal fisheries management system to ensure responsible fisheries, focusing on the sustainable utilization of the fish stocks and good treatment of the marine ecosystem. The 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 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>	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	Rating
LOW	<p>Determination: Recent research suggests that there is likely to be more than one Blue Whiting stock in the Northeast Atlantic; however, as at the time of the original assessment, this has yet to be confirmed and so the current stock unit represents best scientific advice.</p> <p>Research by ICES in 2009 suggested, based on genetic and growth rate analyses of the fishery , that there may be more than a single stock in the Northeast Atlantic. While more work is required to confirm the stock</p>	HIGH
MEDIUM		
HIGH		

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	<p>composition, the blue whiting populations in areas VIk and VIIj and further south are likely to be one stock, separate from the stock found in the Northeast Waters.</p> <p>However, ICES advice is that until this is clarified further, any TAC that is agreed upon should take into account the entire blue whiting population.</p>	
	a.iii .Management actions should be based on long-term conservation objectives	Rating
LOW	<p>Determination: <i>The stock is still managed using the internationally-agreed plan identified by the original assessment. This plan includes long-term objectives, and is considered by ICES to follow the precautionary approach.</i></p> <p>The long-term objectives of the international management plan for the fishery were agreed by Norway, the EU, the Faroe Islands, and Iceland, and endorsed by NEAFC in November 2008. The agreement includes the following:</p> <ul style="list-style-type: none"> • The Parties agree to implement a long term management plan for the fisheries on the Blue Whiting stock, which is consistent with the precautionary approach, aiming at ensuring harvest within safe biological limits and designed to provide for fisheries consistent with maximum sustainable yield, in accordance with advice from ICES. • As a priority, the long term plan shall ensure with high probability that the size of the stock is maintained above 1.5 million tonnes (B_{lim}). • The Parties shall aim to exploit the stock with a fishing mortality of 0.18 on relevant age groups as defined by ICES. <p>ICES evaluated this management plan in 2008 and found it to be adherent to the precautionary approach.</p>	HIGH
MEDIUM		
HIGH		

b. Stock Assessment Procedures and Management Advice

LEVEL OF COMPLIANCE	bi. Research in support of fisheries conservation and management should exist.	Rating
LOW	<p>Determination: <i>National and international research continues to be carried out on this stock.</i></p> <p>The Marine Research Institute of Iceland, a Government Agency, is responsible for research into fisheries conservation and is supported by the Icelandic Directorate. The MRI undertakes surveys which are used in fishery management both nationally and internationally by NEAFC.</p> <p>The Blue whiting stock is assessed using a Stochastic Multi-Species model (SMS) applied to data including commercial catch-at-age statistics and data from a broad international survey.</p> <p>ICES advice for this fishery continues to be based on three main survey indices: Norwegian spawning ground survey 1993–2003;, International ecosystem survey in the Nordic seas 2000–2011 (IESNS); International blue whiting spawning stock survey (IBWSS) 2004–2011.</p> <p>For more details of the research carried out on the Blue Whiting stock, please refer to the original assessment.</p>	HIGH
MEDIUM		
HIGH		
LEVEL OF COMPLIANCE	b.ii Best scientific evidence available should be taken into account when designing conservation and management measures	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 following best scientific evidence.</i></p> <p>The management plan agreed by Norway, the EU, the Faroe Islands and Iceland, and subsequently endorsed by NEAFC in 2008, uses i) a target fishing mortality ($F = 0.18$) if SSB is above B_{pa}, ii) a linear reduction to $F = 0.05$ if SSB is between B_{pa} and B_{lim}, and iii) $F = 0.05$ if SSB is below B_{lim}. ICES evaluated the plan in 2008 and concluded</p>	HIGH
MEDIUM		
HIGH		

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	<p>that it is in accordance with the precautionary approach.</p> <p>There have been no significant changes in the ICES advice for management of this fishery since the time of the original assessment.</p>	
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c. The Precautionary Approach

LEVEL OF COMPLIANCE	c.i The precautionary approach is applied in the formulation of management plans.	Rating								
LOW	<p>Determination: <i>The management plan used to determine quotas for this fishery has been reviewed by ICES as adhering to the precautionary approach; however, a fully precautionary approach would result in fishery closure when SSB is estimated to be below B_{pa}. The management plan represents a somewhat precautionary approach which also factors in catch stability aims.</i></p> <p>Advice for 2011</p> <table border="1"> <thead> <tr> <th>Management Objective (s)</th> <th>Landings in 2011</th> </tr> </thead> <tbody> <tr> <td>Transition to an MSY approach with caution at low stock size</td> <td>50 700 to 223 000 for transition to the MSY framework by 2011 and 2015, respectively</td> </tr> <tr> <td>Cautiously avoid impaired recruitment (Precautionary Approach)</td> <td>Zero landings</td> </tr> <tr> <td>Cautiously avoid impaired recruitment and achieve other objective(s) of a management plan (e.g., catch stability)</td> <td>40 100 tonnes</td> </tr> </tbody> </table> <p>Table 1 - ICES advice for three management objectives in 2011. From the ICES advice, October 2010.</p>	Management Objective (s)	Landings in 2011	Transition to an MSY approach with caution at low stock size	50 700 to 223 000 for transition to the MSY framework by 2011 and 2015, respectively	Cautiously avoid impaired recruitment (Precautionary Approach)	Zero landings	Cautiously avoid impaired recruitment and achieve other objective(s) of a management plan (e.g., catch stability)	40 100 tonnes	MEDIUM
Management Objective (s)		Landings in 2011								
Transition to an MSY approach with caution at low stock size		50 700 to 223 000 for transition to the MSY framework by 2011 and 2015, respectively								
Cautiously avoid impaired recruitment (Precautionary Approach)	Zero landings									
Cautiously avoid impaired recruitment and achieve other objective(s) of a management plan (e.g., catch stability)	40 100 tonnes									
MEDIUM										
HIGH										

In the 2010 advice, ICES estimated that poor recruitment had led to SSB falling below B_{pa} . The advice was therefore that to follow the precautionary approach, there should be zero landings (see table 1). However, ICES also advised that adhering to the management plan implied a TAC of 40,100t. The eventual TAC for 2011 was set at 40,000t, representing a significant reduction compared to the 2010 quota (548,000t), but not following a highly precautionary approach.

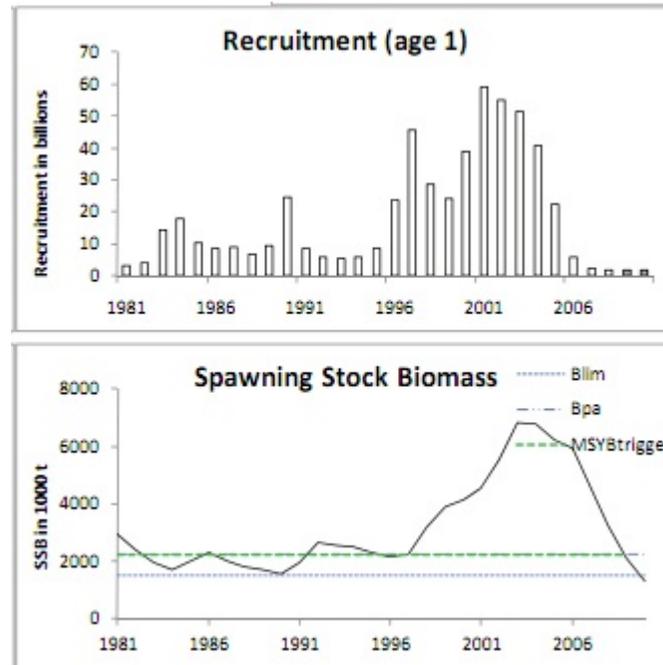


Fig 1 – Historical recruitment and SSB estimates for Blue Whiting, from the 2010 ICES advice. Note the poor recruitment since 2006, and the estimate of SSB being significantly below B_{pa} in 2011.

In the 2011 advice, ICES updated SSB estimates to reflect new data, stating that informative surveys of recruitment

	and juveniles are currently lacking for this stock. As a result year-class strength is poorly estimated before it appears in the catches. ICES currently estimates that SSB is above B_{pa} , but will fall below B_{pa} by 2013 if the management plan continues to be followed.	
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d. Management Measures

LEVEL OF COMPLIANCE	d.i The level of fishing permitted should be set according to management advice given by research organisations.	Rating
LOW	<p>Determination: <i>The total international TAC for 2011 was set according to the advice provided by ICES for adherence to the agreed management plan.</i></p> <p>ICES provided three recommendations for TACs for 2011 in its 2010 advice (see table 1). The recommendation for adherence to the management plan was 40,100t, and the eventual international TAC was set at 40,000t for 2011. In September 2011 ICES advised a maximum 2012 quota of 391,000t; however the actual quota will not be agreed by the relevant states until early 2012.</p>	HIGH
MEDIUM		
HIGH		

Outlook for 2011

Basis: $F(2010) = [\text{catch constraint}] = 0.51$; $SSB(2011) = 796$; $Catch(2010) = 548$ (Coastal States TAC + NEAFC allocation); $F_{2009} = 0.40$; $R(2011, 2012) = \text{lowest observed} = 1.759$ billion at age 1.

Rationale	Catch (2011)	Basis	F (2011)	SSB (2012)	%SSB change ¹	% TAC change ²
MSY framework	50.7	$F_{MSY} * SSB_{(2011)}$ MSY $B_{trigger}$	0.06	790	-1%	-91%
MSY transition	223	F_{pa}	0.32	621	-22%	-59%
Precautionary approach	0	$SSB(2012) < B_{pa}$	0.00	840	6%	-100%
Management plan	40.1	$F=0.05$ for $SSB(2011) < B_{lim}$	0.05	800	1%	-93%
Zero catch	0	$F=0$	0.00	840	6%	-100%
<i>Status quo</i>	32.2	$F_{2009} * 0.1$	0.04	808	2%	-94%
	78.0	$F_{2009} * 0.25$	0.10	763	-4%	-86%
	148	$F_{2009} * 0.50$	0.20	694	-13%	-73%
	211	$F_{2009} * 0.75$	0.30	633	-20%	-62%
	267	$F_{2009} * 1$	0.40	579	-27%	-51%

Weights in '000 tonnes.

¹⁾ SSB 2012 relative to SSB 2011

²⁾ Catch 2011 relative to TAC 2010.

Table 2 – outlook for 2011 under various quota rationales. From the 2010 ICES advice.

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.	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>	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.	Rating
LOW	<p>Determination: <i>The original assessment found sufficient measures in place to ensure that this fishery minimises its impact on non-target species and the environment. There have been no significant changes since that time.</i></p> <p>Iceland adopts various measures 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. Such measures include rules on the minimum mesh size and the use of small-fish sorting grids.</p> <p>Midwater or Pelagic trawls are the principal fishing gear used in blue whiting. These operate without touching the bottom and are frequently trawled at depths of a few hundred meters, where the minimum mesh size in the cod end is 40 mm. This pelagic gear is considered to have little direct effect on the habitat and seabed.</p> <p>Research in the Norwegian fishery reports little by-catch during the blue whiting spawning season, but does report some catches of juveniles as well as saithe and redfish when this fishery has continued later in the season. Overall ICES has stated that the Blue Whiting is a relatively clean fishery and that by-catch rates are minimal.</p>	HIGH
MEDIUM		
HIGH		

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		<p>Data on the effects of the fishery on ETP species is limited. However, a period of monitoring in the UK blue whiting fishery was undertaken and did not record any dolphin by-catch. Under Icelandic legislation all fishing vessels are to keep a Fishery Log-book. Birds and Mammals that are caught in fishing gear must be reported in this Log-book. The Fishery Log-book is returned to the Directory of Fisheries once a month. The Directory of Fisheries then sends the reports to the Marine Research Institute where the information is used in their scientific work. The onsite audit verified this level of documentation.</p> <p>For more information on management measures, please refer to the original assessment report.</p>	
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e. Implementation

LEVEL OF COMPLIANCE	e.i There should be a framework for sanctions of violation of Laws and regulations.	Rating
LOW	<p>Determination: <i>The original 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</p>	HIGH
MEDIUM		
HIGH		

	may be revoked as well as a charge having to be paid for the illegal catch.	
LEVEL OF COMPLIANCE	e.ii A management system for fisheries control and enforcement should be established.	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.</p> <p>There are also strict requirements for the keeping of e- logbooks on-board all fishing vessels and they must be made available for fishery 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>	HIGH
MEDIUM		
HIGH		

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References

ICES advice on Northeastern Atlantic Blue Whiting, 2010:

<http://www.ices.dk/committe/acom/comwork/report/2010/2010/whb-comb.pdf>

ICES advice on Northeastern Atlantic Blue Whiting, 2011:

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

IFFO fishery assessment report, Blue Whiting, 2nd June 2010 (Global Trust Certification):

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

Icelandic Ministry of Fisheries and Agriculture: <http://www.fisheries.is/management/government-policy/responsible-fisheries/nr/62>

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