



Surveillance Report
Pelagic Freezer Trawler Association
Atlanto-Scandian Herring Trawl Fishery

Certificate No.: MML-F-061

Intertek Moody Marine

August 2013

Authors:

J. Andrews, J. Nichols

Moody Marine Ltd.
Moody International Certification
Merlin House
Stanier Way
Wyvern Business Park
Derby. DE21 6BF
UK
Tel: +44 (0) 1332 544663
Fax: +44 (0) 1332 675020

1.0 GENERAL INFORMATION

Scope against which the surveillance is undertaken: MSC Principles and Criteria for Sustainable Fishing as applied to the PFA Atlanto-Scandian Herring Trawl Fishery

Species: *Clupea harengus*

Area: ICES Divisions IIa & IIb.

Method of capture: Pelagic Trawl

Date of Surveillance Visit:	4 th -5 th July 2013			
Initial Certification	Date: 07/07/2010		Certificate Ref: MML-F-061	
Surveillance stage	1 st	2 nd	3 rd	4 th
Surveillance team:	Lead Assessor: J. Andrews			
	Assessor(s): J. Nichols			
Company Name:	Pelagic Freezer-Trawler Association			
Address:	P O Box 72 2280 AB RIJSWIJK The Netherlands			
Contact 1	Gerard van Balsfoort			
Tel No:	+ 31 (0) 70 3369602			
Fax No:	+ 31 (0) 70 3993004			
E-mail address:	gbalsfoort@pelagicfish.eu			

1 THE CERTIFICATION / ASSESSMENT PROCESS

1.1 Background

This is the second annual “Surveillance Audit” for the MSC-certified PFA Atlanto-Scandian Herring Trawl Fishery. This fishery was certified according to Marine Stewardship Principles in July 2010 after an assessment of the fishery that commenced in 2009.

There were no conditions of certification for this fishery, and thus no client Action Plan for it.

1.2 Assessment process

The assessment process for this audit followed that set out in the MSC Fisheries Certification Methodology.

Notice of a surveillance audit scheduled for July 2013 was announced on the MSC website on 30th May 2013, with a supporting notice to stakeholders issued by the MSC on that date. Direct e-mail notification was also sent to the stakeholders that had previously been identified for this fishery in June 2013, inviting interested parties to contact the audit team.

The audit team visited IJmuiden on the 4th-5th July 2013. Separate meetings were held with the client and with IMARES, the Dutch Government’s fisheries science advisors.

The purpose of these meetings and the assessment was:-

1. To review any changes in the management of the fishery, including stock evaluation, regulations, and changes in key management or scientific staff
2. To evaluate the progress of the fishery against any Conditions of Certification raised during the Main Assessment

The assessment was carried out by interviewing the client and inspecting their records to determine compliance with MSC requirement. Where necessary, the assessment team retained records to demonstrate compliance. Further confirmation of compliance was provided by IMARES, who also provided the team with a comprehensive account of stock status and recent changes to the management regime for this fishery.

1.3 Audit frequency

The MSC Certification Requirements specify that after each certification, surveillance and re-certification the Conformity Assessment Body (CAB) shall determine the level at which subsequent surveillance of the fishery shall be undertaken.

The surveillance level required for this fishery has been calculated using the methodology set out in the MSC Certification Requirements. The fishery has a “surveillance score” of 0 (see Table 1).

Table 1: Calculation of surveillance score for this fishery.

Criteria	Surveillance Score	Score awarded
1. Default Assessment tree used		
Yes	0	0
No	2	
2. Number of conditions		
Zero conditions	0	0
Between 1-5 conditions	1	
More than 5 conditions	2	
3. Principle level scores		
≥85	0	0
≤85	2	
4. Conditions on outcome PIs?		
Yes	2	
No	0	0
TOTAL		0

The response to this score is set out in Table C4 of the Certification Requirements. Fisheries that score 2 or more have a “Normal” surveillance level, requiring annual assessments throughout the period of certification. Fisheries that score 1 or 0 have the option of “remote” or “reduced” surveillance.

A **Reduced** surveillance schedule is therefore appropriate for this fishery, with annual on-site surveillance audits. This requires on-site surveillance in Year 2 and Year 4 of fishery certification, with the surveillance comprising a review of new information in Year 1 and Year 3.

2 RESULTS, CONCLUSIONS & RECOMMENDATIONS

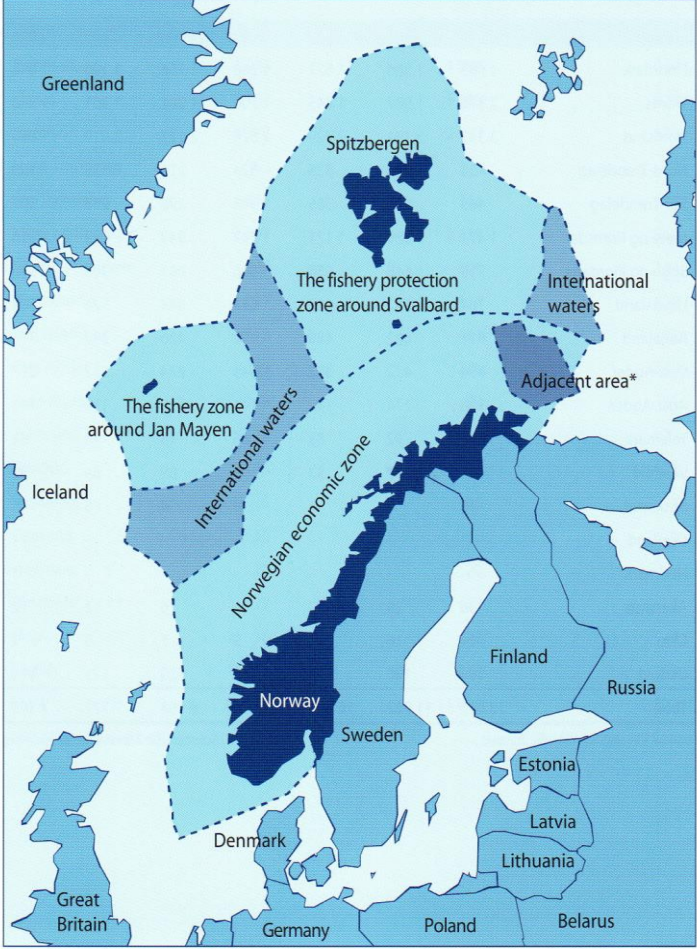
2.1 Results

During this second surveillance audit, the audit team assessed the status of the target stock and compliance with the management regime, as well as progress with the recommendations of certification. The results of the team's findings are set out in the tables below.

The assessment team also checked the current composition and performance of the fleet in the unit of certification. The vessels in the Unit of Certification are listed in Table 1 overleaf. The team obtained landings and discard data for each vessel, and confirmed the number of observer trips aboard each vessel. Summary data are shown in Table 1 for reasons of commercial confidentiality.

Table 1: Listing the vessels belonging to the PFA members with access to the PFA Atlanto-Scandian Herring Trawl Fishery certificate in 2012-13.

Company	Vessel name	Registration	Flag state
<i>Dutch Members of PFA</i>			
Jaczon BV	Afrika	SCH-24	NL
	Johanna Maria	SCH-117	NL
	Zeeland	SCH-123	NL
	Wiron 5	SCH-22	NL
	Wiron 6	SCH-23	NL
Parlevliet & van der Plas BV	Annie Hillina	ROS-170	NL
	Dirk Diederik	KW-172	NL
	Annelies Ilena	KW-174	NL
W. van der Zwan BV	Alida	SCH-6	NL
	Franziska	SCH-54	PER
	Ariadne	SCH-303	NL
	Oceaan IV	SCH-333	NL
	W. van der Zwan	SCH-302	NL
Cornelis Vrolijk's Visserij Maatschappij BV	Carolien	SCH-81	NL
	Scombrus	SCH-27	NL
	Frank Bonefaas	SCH-72	NL
<i>UK Members of PFA</i>			
Interfish Ltd	Wiron 1*	PH-110	UK
	Wiron 2*	PH-220	UK
North Atlantic Fishing Company Ltd	Cornelis Vrolijk Fzn	H-171	UK
	Atlantic Princess	H-90	UK
<i>German Members of PFA</i>			
Doggerbank Seefischerei GmbH	Jan Maria	BX-791	D
	Maartje Theadora	ROS-171	D
	Dirk Dirk	ROS-784	FAR
	Helen Mary	ROS-785	D
<i>French Members of PFA</i>			
France Pélagique s.a.r.l	Sandettie	FC-716999	FR
	Prins Bernhard	FC-716900	FR
<i>Lithuanian Members of PFA</i>			
UAB Atlantic High Seas Fishing Company	Margiris	KL-749	LT

Item	Comments
1	Stock status Update
Observations	<p data-bbox="459 304 687 333">Management Unit</p> <p data-bbox="459 353 1382 472">Atlanto-Scandian herring also known as Norwegian Spring Spawning herring occurring in the North East Atlantic within the Exclusive Economic Zones (EEZ's) of Norway, Russia, Iceland, EU and Faroe Islands. Also within the Jan Mayen Fisheries Zone and Svalbard Fisheries Protection Zone and in International waters.</p> <div data-bbox="563 495 1262 1473"> <p data-bbox="563 495 842 521">The Norwegian Economic Zone</p>  <p>The map shows the Norwegian Economic Zone (NEZ) in the North East Atlantic. It includes the Norwegian coast, Spitzbergen, and Svalbard. Key fishing zones are highlighted: 'The fishery zone around Jan Mayen', 'The fishery protection zone around Svalbard', and 'International waters'. An 'Adjacent area*' is also shown in the Barents Sea. Surrounding countries and regions are labeled: Greenland, Iceland, Great Britain, Germany, Poland, Belarus, Denmark, Sweden, Finland, Estonia, Latvia, Lithuania, and Russia.</p> <p data-bbox="563 1496 1206 1547">* Adjacent area in the Barents Sea is covered by a temporary agreement between Norway and Russia.</p> </div> <p data-bbox="584 1581 1262 1610">Figure 1. Fishing Zones within the Norwegian Economic Zone.</p> <p data-bbox="459 1626 799 1655">Monitoring of Stock Status</p> <p data-bbox="459 1675 1382 1888">The total landings continued to decrease, from 1.46 million tonnes in 2010 to 993,000 tonnes in 2011. Figure 2 shows the total annual landings over the period 1985 to 2011. The main catches were taken by Norway (572,641t), Russia (144,428 t), Iceland (151,074 t), EU countries (68,786t), and Faroe Islands (53,271 t). (ICES, 2012a). Of the total EU landings Denmark took 26,740t, UK (Scotland) 14,045t and Germany 13,926t (ICES, 2012a). The geographical distribution of the catches of Norwegian spring spawning herring in 2011, from all areas, are shown in Figure 3</p> <p data-bbox="459 1921 1382 2033">The fishery occurs over a wide area extending throughout ICES areas IIa, IIb, IVa, Va, and Vb although 90% of the catches continue to be taken in IIa. The fishery in general follows the clockwise migration of the stock closely as it moves from the wintering and spawning grounds along the Norwegian coast to the summer feeding</p>

grounds in the Faroese, Icelandic, Jan Mayen, Svalbard, and international areas. The main fishery is in the first quarter of the year and is based on pre-spawning, spawning and immediately post spawning fish. During the summer catches are taken in Faroese and Icelandic waters and later in the Svalbard area and SW of Bear Island. In 2011 the fishery in the International zone, in the last quarter of the year was more pronounced.

Norway takes over 60% of the annual catch. Their catch is taken mainly by the offshore large purse seiners (50%), 40% by the smaller coastal purse seiners and the remainder by trawlers. In 2011 4,314t of the Norwegian catch was taken from the coastal area. This catch is recognised as a mix of Norwegian spring spawners, oceanic summer spawners and local fjord stocks. For practical reasons this catch is all allocated to the Norwegian spring spawning stock for management purposes

Comprehensive details of the fishery by each participating country, and charts of the distribution of the catches in each quarter of the year, are given in the ICES working group report (ICES, 2012a).

In recent years the Faroes has reported on problems with mackerel caught as by-catch in the directed herring fishery north of the Faroes. However, in 2010 and 2011 the fishery was directed towards herring and mackerel in the Faroese zone, and was thus a result of legal activity (ICES, 2012a).

In 2008 (ICES, 2008) the Working Group noted that an unaccounted mortality, caused by fishery operations and underreporting, exists. It is still not possible to assess the magnitude of this unaccounted mortality but in relation to the high catches of recent years, the relative importance is likely to be low. The Working Group has no comprehensive data to estimate possible discards of herring although it is noted that the practice is illegal in the Norwegian, Russian and Faroese fleets and for all fleets operating in the EEZs of these countries. Estimates of discarding in recent years, from sampling programmes by some EU countries, has confirmed that the levels appear to be very low (<2% by weight). Some discarding may occur through either slippage or gear damage which can happen for various operational reasons. Observations of fleet activity by coastguard vessels, areal monitoring and sampling on the Norwegian reference fleet suggest that this is not a frequent occurrence. The ICES assessment working group do not consider the levels of unaccounted mortality in this fishery to have a significant effect on the reliability of the assessment of the stock.

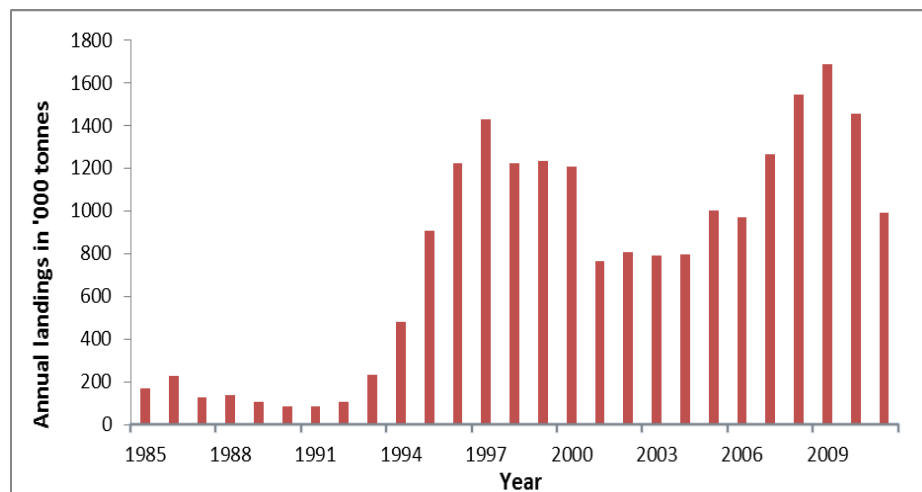


Figure 2 Annual landings of Norwegian spring spawning herring in thousands of tonnes over the period 1985 to 2011.

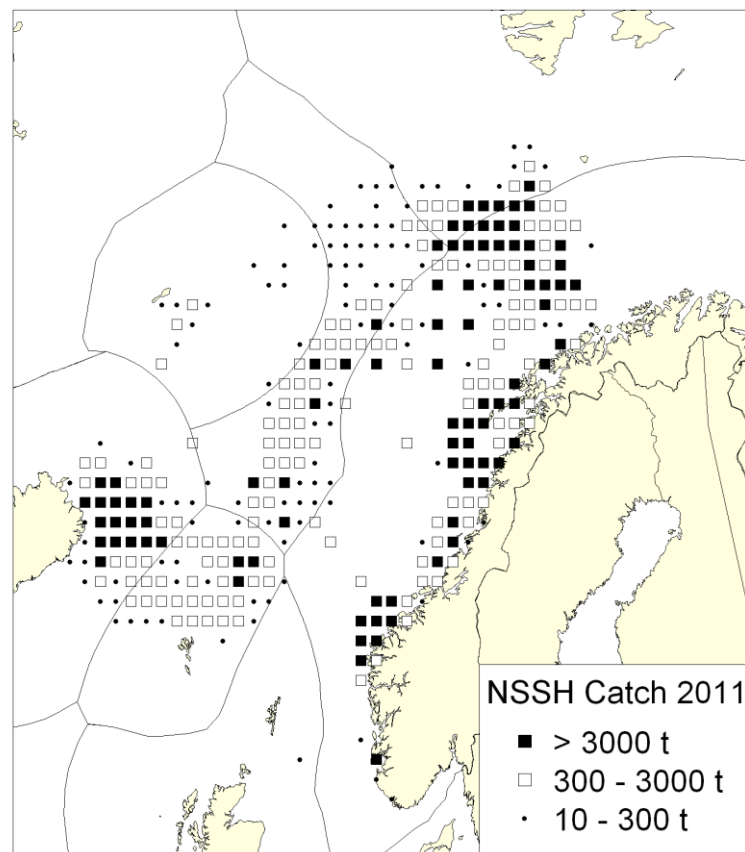


Figure 3. Total reported catches of Norwegian spring-spawning herring in 2011 by ICES rectangle. Grading of the symbols: black dots less than 300 t, open squares 300–3000 t, and black squares > 3000 t. (Source: ICES 2012a).

Stock assessment

The stock assessment relies heavily not only on the reliability of the catch data but also on adequate biological sampling of various parameters from the fishery, most importantly length and age composition of the catch and weight and maturity data. The international fishery is well sampled with 95% of the catch covered by the biological sampling programme in 2011. Only the Greenland catch, of 3,462t, was not sampled whilst all other countries achieved a 99-100% sampling level. This is a further improvement on the overall sampling coverage of 91% in 2010

The assessment is supported by a number of fishery independent surveys which provide indices of the abundance of various year classes in the stock. The assessment still uses three historical series from surveys which are no longer carried out. These data were used in the last benchmark assessment but the working group now consider that their influence on the assessment and the need to continue using them should be further investigated at the next benchmark assessment. In addition there is an Ecosystem survey in the Norwegian sea in July / August which is currently not used in the assessment.

The assessment is currently an age based analytical assessment. The assessment in 2012 was classed as an update assessment run according to the last benchmark assessment in 2008 using the VPA population model in the TASACS toolbox with the same model options as the benchmark (ICES, 2012a annex 4). The spawning stock biomass on 1 January 2011 was estimated at 7.055Mt which is below the predicted

value of 7.99Mt in the previous year's assessment and advice. SSB in 2012 was estimated at 6.136Mt whilst the predicted value from the previous assessment was 6.9Mt. This continues the steady downward trend in SSB since 2009 (Figure 4). SSB remains above Bpa and MSY trigger but is predicted to fall to 5.08Mt in 2013 and following the management plan it will fall to 4.3Mt in 2014 which is below Bpa / MSY B trigger (Figure 4). Even with no fishery in 2013 the SSB could be expected to fall below the MSY / B trigger level in 2014. In that situation article 3 of the management plan would need to be invoked in setting the TAC for the fishery in 2014, and future years, in order to ensure a rapid recovery of the SSB to above 5.0Mt. This would be achieved by a linear reduction in fishing mortality linked to the annual estimate of SSB.

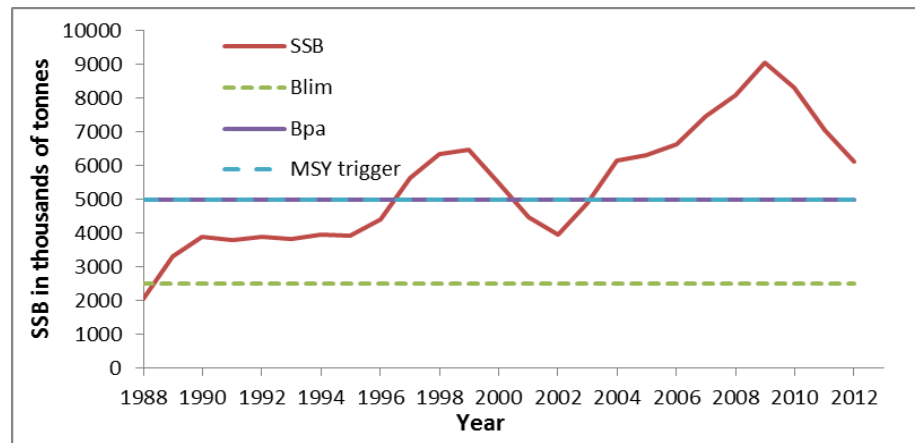


Figure 4 Spawning stock biomass of Norwegian spring spawning herring over the period 1988 to 2011. The precautionary biomass levels of Blim, Bpa and Bmsy trigger are also shown.

The most recent estimates of fishing mortality based on ages 5 to 14 in the stock have fluctuated between 0.13 and 0.17 since 2003 (Figure 5). The revised estimate of fishing mortality in 2010 (F0.175) is now well above Fpa and FMSY and was much higher than the target F defined in the management plan. Fishing mortality in 2011 is estimated at F 0.134 which is below Fpa and FMSY but above the management plan on which the ICES advice was based.

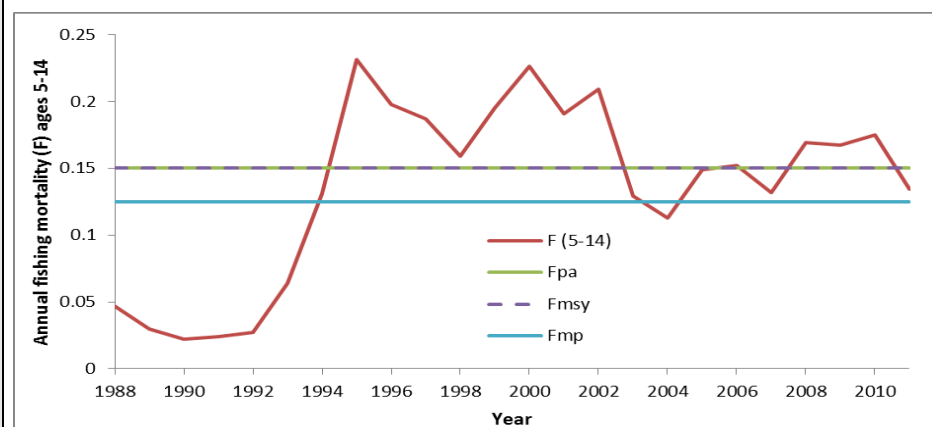


Figure 5. Annual fishing mortality (F) on Norwegian spring spawning herring, ages 5-14, over the period 1988 to 2011. Fpa and Fmsy F mp (management plan) levels are also shown.

The decline in SSB is attributable mainly to the low recruitment since 2005. In the past decade the productivity of the stock has been high and contained a number of good year classes in particular those in 1998, 1999, 2002 and 2004. Survey

information indicates that the year classes since 2004 have been small. The fishery is currently dominated by the year classes from 2002 to 2004 which comprised 60% of the catch by number and by weight in 2011. The effect of the strong 1999 year class is now beginning to disappear from the fishery.

For a number of reasons the assessment in recent years has tended to overestimate the spawning biomass and underestimate the fishing mortality by around 10%. The retrospective pattern is partly attributable to survey data although changes in the perception of SSB have been influenced by a change in the maturity at age data. These data were reviewed in 2010 following a recommendation of an ICES workshop (ICES, 2010.WKHERMAT) and the working group now uses a variable maturity ogive based on either strong or normal year classes. Although the TAC has been set according to the advice, which has been based firmly on the management plan, the realised fishing mortality has been above the F_{mp} level. This is because of the over estimation of SSB and subsequent under estimation of F in the assessment (ICES, 2012a)

In their advice in 2012 (ICES, 2012b) ICES considers the stock is still above B_{pa}, is being harvested sustainably and has full reproductive capacity. SSB is above the management plan and MSY targets (Figure 4). Fishing mortality in 2011 was slightly above the management plan target of F 0.125 but was below F_{pa} and F_{msy} (Figure 5). In the past decade, the productivity of the stock has been high and contains a number of good year classes. Figure 6 shows the annual recruitment over the period 1950 to 2011 as numbers of recruits aged '0' in the stock. In recent years, five above average year classes have been produced (1998, 1999, 2002, 2003 and 2004). The geometric mean prediction of the strength of the 2012 year class (82 billion age '0') is based on the period 1988 to 2008 and appears likely to be an overestimate..

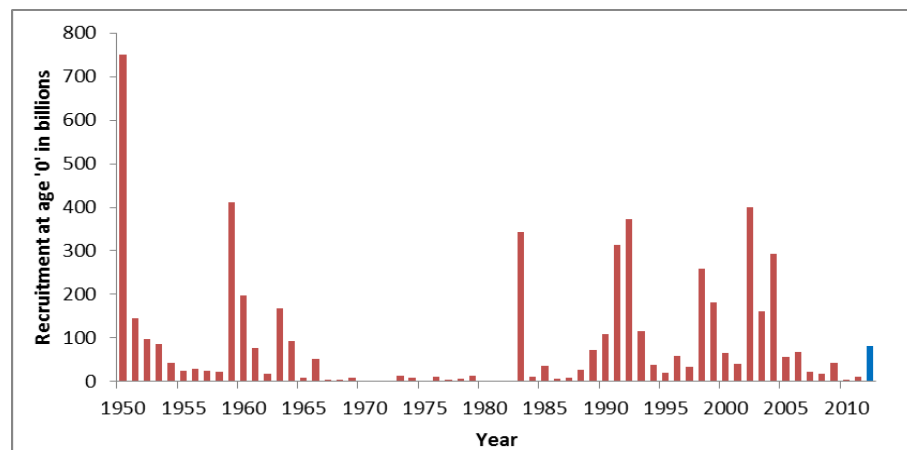


Figure 6. Annual recruitment of Norwegian spring spawning herring as billions of fish at age '0' over the period 1950 to 2011 with the geometric mean value (1988-2008) for 2012

The current age structure in the landings in 2009, 2010 and 2011 is shown in Figure 7. This clearly indicates a stock which continues to contain reasonable numbers of fish above the age of maturity (5+), indicative of full reproductive capacity and a sustainable fishery.

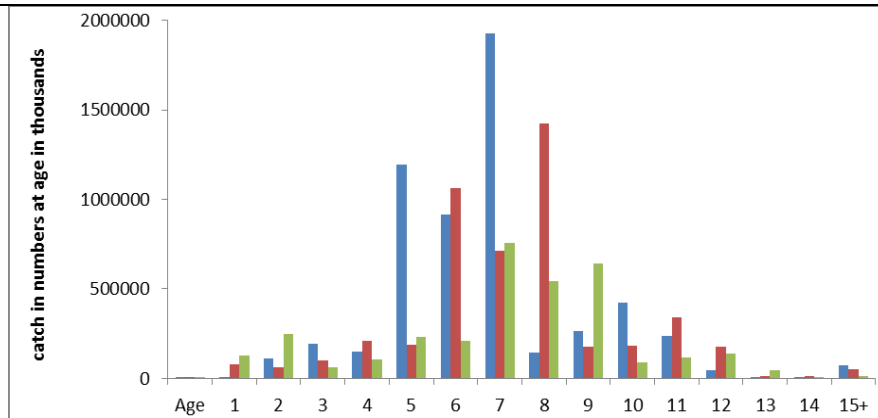


Figure 7. Catch in numbers at age, in thousands of fish, in 2009 (blue), 2010 (red) and 2011 (green). The influence of the big year classes in 2002 and 2004 and the above average year class in 2003 can be clearly seen.

In spite of the retrospective changes to SSB and F in recent years the assessment is considered to be robust. It is strongly supported by the International Ecosystem Survey in the Nordic Seas in May together with two other current surveys and three historical data series. This ecosystem survey is the most important survey in the assessment and is expected to remain the main source of fishery independent data for future assessments. The survey has been running since 1991 and provides separate indices of the abundance of age groups 1-2 and age groups 4-15+. The survey also provides valuable pelagic ecosystem data, not only on herring, but also for blue whiting, zooplankton and relevant hydrographic parameters. The assessment is considered to be very reliable and there is no uncertainty in the current perception of the continuing decline in spawning stock biomass. This is because the estimate of SSB is not dependent on the estimation of recent year classes but on year classes which have been in the fishery, and thus in the assessment, for a number of years.

Management Objectives

The fishery is regulated and carried out by the Coastal States. The TAC is set by the Coastal States and derived from the long term management plan agreed in 1999. The Coastal States also agree on the allocation of the TAC into national quotas. The Coastal States involved are the European Union, Faroe Islands, Iceland, Norway and the Russian Federation

The current share of the advised TAC between participating countries in this fishery was agreed and established in 2007. The agreement is based on an annual share of available quota of 61% to Norway, 14,51% to Iceland, 12.82% to the Russian Federation, 6.51% to the EU and 5.61% to the Faroe Islands.

The overarching management plan consists of the following elements:

- 1) 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.
- 2) 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.
- 3) Should the SSB fall below a reference point of 5 000 000 t (B_{pa}), the fishing mortality rate, referred 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 Bpa (5 000 000 t) to 0.05 Blim (2 500 000 t).

4) The Parties shall, as appropriate, review and revise these management measures and strategies on the basis of any new advice provided by ICES.

The target defined in the management plan is consistent with high long-term yield and has a low risk of depleting the production potential. The current long-term management plan is considered by ICES to be consistent with the precautionary approach.

Management Advice

ICES have agreed the following biomass (B) and fishing mortality (F) reference points for the stock:

	Type	Value
Management Plan	SSB	5.0 million tonnes
	Fishing mortality (F)	F 0.125
MSY Approach	MSY biomass trigger	5.0 million tonnes
	Fmsy	F 0.15
Precautionary Approach	Blim	2.5 million tonnes
	Bpa	5.0 million tonnes
	Flim	Not defined
	Fpa	F 0.15

The ICES advice for the fishery in 2012 was firmly based on the long term management plan. An F of 0.125 is predicted to generate landings of 833,000t in 2012 which would lead to an SSB of 5.85Mt at spawning time in 2013. This would be a reduction of 5% compared with the SSB in 2012 and would continue the downward trend since 2009.

The agreed TAC for 2012 was 833,000t, a reduction of 16% on the previous year.

The ICES advice for the fishery in 2013 again follows the long term management plan. This implies a TAC of 619, 000 tonnes in 2013 which is expected to lead to an SSB in 2014 of 4.3Mt. Other options were again listed for comparison including following the precautionary approach and Fmsy fishing mortality (F0.15). This would generate landings of 734,000 tonnes in 2013 and lead to an SSB of 4.2Mt in 2014. The agreed TAC for 2013 was 619,000 tonnes.

The 2007 agreement on the national shares of the agreed quota has worked satisfactorily up and until 2013. In January 2013 the Faroe Islands failed to attend the Coastal States meeting in London and had thus effectively withdrawn from the agreement without prior notification.

Under the Coastal States Agreement the Faroe Islands quota for 2013 was 31, 940t i.e. 5,61% of the total TAC. The Faroe Islands decided to set a national quota at 17 % of the total allowable catch of 619,000 tonnes (as advised by ICES) ie.105,230 tonnes in 2013 (Anon, 2013).

The agreed national shares of the TAC for 2012 and the Coastal States allocations for 2013 are given in the Table below.

Countries	% share	TAC 2012 (tonnes)	TAC 2013 (tonnes)
Norway	61	508,130	377,580
Iceland	14.51	120,868	89,817

Russian Federation	12.82	106,791	79,356	
EU	6.51	54,228	40,297	
Faroes	5.16	42,982	31,940	

The performance of the fishery against the agreed TAC, over the period 1987 to 2011, is shown in Figure 8. Over this period the official recorded landings have been compliant with the Annual TAC. The agreed TAC has also been mainly in line with the ICES advice with the major exceptions in 2005 and 2006.

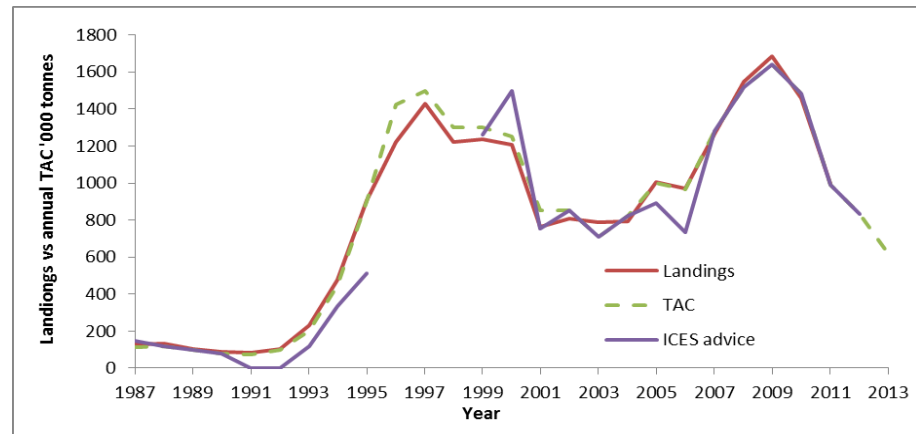


Figure 8. Annual landings, the annual TAC and ICES advice, in thousands of tonnes, for the Norwegian spring spawning herring, over the period 1987 to 2011 including the agreed TAC for 2012 and the ICES advice for 2013.

Management Issues

In December 2012 the annual Coastal States meeting that was held to agree a TAC for this fishery resulted in a disagreement on the TAC allocation key. The Faroe Islands Government has not signed the Coastal States agreement for 2013, and have instead made a declaration that they will take over 105,000t of Atlanto-Scandian herring in 2013. This is 73,000t above its allocation under the Coastal States agreement.

This situation has parallels with the actions taken by the Faroese and Icelandic governments with the North East Atlantic mackerel fishery a few years ago.

In March 2013 a harmonisation meeting was held between the Conformity Assessment Bodies for all of the MSC certified Atlanto-Scandian herring fisheries. This meeting considered the options for responding to the Faroes Government's declaration of a TAC outside the Coastal States agreement. The conclusion of that meeting was that this action was a "*controversial unilateral exemption to an international agreement*" (*sensu* MSC CR v1.2 at 27.4.4.1). Accordingly in June 2013 the Faroese Pelagic Organisation Atlanto-Scandian Herring Fishery was suspended from the MSC Scheme by the CAB Det Norske Veritas until this issue has been appropriately addressed. A notice about this suspension has been posted on the MSC website [here](#).

The Faroese Government's actions in 2012-13 do not have any implications for the PFA Atlanto-Scandian herring fishery at this surveillance audit. However the TAC set by the Faroes for 2013 will clearly affect the predicted levels of SSB in 2014 and, through the management plan, is likely to result in a much reduced total TAC for the 2014 fishery. Ultimately this could result in fishing mortality rising and / or the stock biomass falling, to a point that no longer meets the MSC Certification Requirements for all of the MSC certified Atlanto-Scandian herring fisheries.

	<p>The Assessment Team will keep this situation under review. If fishing mortality should rise unacceptably or if stock biomass should fall significantly, it may be necessary to carry out a harmonised and expedited audit for all of the MSC certified Atlanto-Scandian Herring Fisheries.</p> <p>On 1st August 2013 the CABs responsible for MSC certified Atlanto-Scandian herring fisheries agreed to conduct further harmonisation discussions in the light of the 2013 ICES advice on stock status.</p>
Conclusions	<p>In spite of some uncertainty in the assessment of this stock, related to the overestimation of SSB and the underestimation of fishing mortality, there is no doubt that the stock is currently in a good state. ICES considers the stock to be above the biomass precautionary level and being exploited within current fishing mortality targets. In spite of the recent succession of below average year classes the stock is still considered by ICES to have full reproductive capacity and being harvested sustainably.</p> <p>However whilst the current situation is satisfactory in relation to exploitation levels there are clear warning signs of potential problems in the immediate future particularly if below average recruitment persists. In part this is linked to the over estimation of SSB in the annual stock assessment and the consequential exploitation at fishing mortality rates above the management plan target. Of equal, maybe greater, concern are the warning signs in terms of over exploitation if national quotas are set outside currently agreed levels.</p>

Item	Comments
3	Conditions of Certification
Observations	There were no conditions of certification for this fishery.

Item	Comments
4	Certification Recommendations
Recommendations (original narrative)	<p>The assessment team made four recommendations in its initial certification of this fishery. These recommendations are not mandatory requirements of certification, but address some areas where the performance of the fishery against the MSC standard could be improved.</p> <p>The recommendations are:-</p> <ol style="list-style-type: none"> 1. In response to ICES current concerns about the status of redfish stocks, the PFA should try to keep the by-catches of redfish as low as possible in this fishery, and ideally should refrain from participation in the directed pelagic redfish fishery. 2. The score awarded for the performance indicators relating to effects on ETP species could be improved if the PFA adopted a formal and comprehensive strategy for managing impacts on all ETP species that is above national and international requirements for protecting these species; and also adopted a strategy for gathering quantitative information about these species. 3. The score awarded for Performance Indicators 1.2.2, 1.2.3 and 1.2.4 would be improved if the extent and effect of slippage was better understood. New enforcement measures, such as the use of CCTV on fishing vessels, may improve understanding of this issue and should be supported. 4. All bycatches of salmon in the Atlanto-Scandian herring fishery should be officially reported even if only one or a few fish are caught. NASCO and ICES can only evaluate the impact of high seas fisheries on the wild salmon stocks if this information becomes available.
Previous surveillance observations	<p>The first surveillance audit found that:-</p> <p><i>Progress with these recommendations was discussed with the client during the site visit, and is summarised below:-</i></p> <ol style="list-style-type: none"> 1. Redfish <i>The PFA fleet has not participated in the redfish fishery in the past 12 months.</i> 2. ETP species <i>Records of ETP species capture (including null records where no ETP species were caught) are submitted by all PFA vessels at the end of each fishing trip.</i> <p><i>The assessment team inspected records for all fishing trips for the Atlanto-Scandian Herring fishery by PFA vessels in the past 12 months. No ETP species interactions were reported.</i></p> <ol style="list-style-type: none"> 3. New monitoring measures <i>The PFA has been involved in discussions with the Dutch Government about the introduction of CCTV monitoring equipment. It is probable that trials will be carried out shortly as part of an EU pilot scheme to test this approach to monitoring.</i> 4. Salmon bycatch <i>There have been no reports of any salmon bycatch in the fishery since certification.</i> <p>Conclusion <i>Progress has been made in all of the areas considered by these recommendations.</i></p> <p>The second surveillance audit found that:-</p> <p><i>Progress with these recommendations was discussed with the client and IMARES</i></p>

Item	Comments
	<p>during the site visit, and is summarised below:-</p> <p>1. Redfish <i>The PFA fleet has not participated in the redfish fishery in the past 12 months. The assessment team note that the EU and Norway have agreed that there should be no directed redfish fishery during 2012, and that only bycatches of redfish should be landed.</i></p> <p><i>Some redfish have been caught and landed as a non-target retained species. Total landings of redfish during 2011 were 711kg.</i></p> <p>2. ETP species <i>Records of ETP species capture (including null records where no ETP species were caught) are submitted by all PFA vessels at the end of each fishing trip.</i></p> <p><i>The assessment team inspected records for all fishing trips for the Atlanto-Scandian Herring fishery by PFA vessels in the past 12 months. No ETP species interactions were reported.</i></p> <p>3. New monitoring measures <i>Discussions about the use of CCTV / Electronic Monitoring aboard fishing vessels are ongoing. IMARES are currently reviewing estimates of slippage (from nets and tanks) in the fishery in the light of current practice.</i></p> <p><i>Two vessels in the Dutch PFA fleet have been equipped with electronic equipment by IMARES to enable their acoustic data to be gathered and independently studied by scientists. This information is helping to inform and tune the stock assessments for various pelagic species.</i></p> <p>4. Salmon bycatch <i>There have been no reports of any salmon bycatch in the fishery since certification.</i></p>

Item	Comments
Observations (current audit)	<p>Progress with these recommendations was discussed with the client during the site visit, and is summarised below:-</p> <p>1. Redfish The PFA fleet has not participated in the redfish fishery in the past 12 months.</p> <p>2. ETP species Records of ETP species capture (including null records where no ETP species were caught) are submitted by all PFA vessels at the end of each fishing trip.</p> <p>The assessment team inspected bycatch records for 8 fishing trips for the Atlanto-Scandian Herring fishery by PFA vessels in the past 12 months. No ETP species interactions were reported.</p> <p>3. New monitoring measures The CCTV trials proposed at last year's surveillance audit were ultimately confined to demersal fishing vessels and were not extended to the PFA fleet.</p> <p>The client is due to be carrying out trials from July 2013 of new electronic and CCTV monitoring measures aboard two of its vessels as part of a pilot scheme to prepare for the EC discard ban due to be introduced on 1st January 2015. At the time of the site visit a Canadian company were working with the client to develop and install CCTV systems that would be capable of fully documenting discards. This system is understood by the supplier to be the first installed on a pelagic freezer-trawler vessel.</p> <p>4. Salmon bycatch There have been no reports of any salmon bycatch in the fishery since certification.</p>
Conclusion	<p>Progress has been made in all of the areas considered by these recommendations.</p>

Item 7	Any complaints against the certified operation; recorded, reviewed and actioned
	<p>The assessment team carried out a number of activities relevant to this aspect of the surveillance audit, detailed below.</p> <p>1. Enforcement issues Enforcement agencies in all of the PFA Member States were contacted during this surveillance for information about any complaints concerning the activities of PFA vessels in this unit of certification. No reports were made of any complaints.</p> <p>2. Observer coverage IMARES confirmed that the issues associated with observer activity in the fishery which were reported previously have now been addressed. A schedule of observer trips that will provide coverage of all pelagic fisheries has been agreed between scientists and the industry, and that schedule is being met.</p> <p>3. Allegations of discarding by PFA vessel “Jan Maria” Allegations about discarding and high-grading by the PFA vessel “Jan Maria” while prosecuting the North Sea herring fishery were made by Greenpeace earlier in 2013. These allegations have received extensive coverage in the media.</p> <p>During the site visit it was suggested that these allegations are also relevant to the mackerel fishery (see Annex 1).</p> <p>The assessment team consider that the response to these allegations will be very much dependent on the outcome of the official investigation into the Greenpeace allegations that is being carried out by the German authorities. It is therefore inappropriate to take any action in response to these allegations at this time.</p> <p>4. Hollandse Nieuwe The film “Hollandse Nieuwe” was shown on Netherlands television in June 2013. This film concentrates on the activities of a pair trawling team fishing for herring in the North Sea. Concerns were raised with the assessment team that this film seemed to show highgrading and discarding of herring by PFA vessels.</p> <p>During the site visit the assessment team examined the uncut video footage for the sequences in the <i>Hollandse Nieuwe</i> film that had given rise to concerns. This information showed no evidence of highgrading or discarding. The impression that this may have been taking place was simply due to the way that the film had been edited.</p>
Item 8	Any relevant changes to legislation or regulation.
	No significant changes to the legislation or regulation have arisen since the certification of the fishery.
Item 9	Any relevant changes to management regime.
	There have been no changes to the management regime that are relevant to this fishery since its certification.

Item 10	Annual Catch Data (MSC Certification Requirements, Annex CG5)
	<p>The annual catch data for this fishery is set out below:-</p> <p>Total TAC for the most recent fishing year: 988,000t</p> <p>Unit of Certification share of the TAC: 64,319t</p> <p>Client share of the TAC: 18,171t</p> <p>Total green weight¹ catch in the past two years: 2011: 21,288t 2012: 17,931t</p>

¹ "Green weight" means the whole live weight of the fish or shellfish caught, prior to any processing (such as gutting) at sea. Where processed fish are landed, conversion factors may be used to calculate the greenweight.

Item 11	Overall Conclusions
	<ol style="list-style-type: none"> 1. The Atlanto-Scandian Herring stock is currently in a good state. It is classified by ICES as having full reproductive capacity and being harvested sustainably. 2. The declaration of a quota for this stock by the Faeroese Government which exceeds the allocation under the Coastal States Agreement may adversely affect the status of this stock during the period of certification for reasons beyond the client's control. The Assessment Team will keep this situation under review. 3. The client is making progress to address the issues identified in the four Recommendations of certification. 4. MSC Certification should continue with a reduced audit schedule.

Information Sources:

Meetings

1. Interview with Thomas Brunel, IMARES, 4th July 2013
2. Interview with Gerard van Balsfoort, Pelagic Freezer Trawler Association, IJmuiden, 4th July 2013
3. Interview with Christine Absil, Fisheries Advisor, North Sea Foundation, Utrecht, 5th July 2013.
4. Interview with Frederieke Vlek, Campaign Researcher, Greenpeace, Utrecht, 5th July 2013.

Reports etc

ICES 2008. Report of the Working Group on Widely Distributed Stocks (WGWIDE) 2-11 September 2008. ICES HQ. ICES CM 2008/ACOM:13:691pp.

ICES 2010. Report of the Workshop on estimation of maturity ogive in Norwegian spring-spawning herring. (WKHERMAT) 1-3 March 2010 Bergen, Norway. ICES CM 2010/ACOM:51. Ref. PGCCDBS.

ICES 2012a. Report of the Working Group on Widely Distributed Stocks (WGWIDE) 21-27 August 2012. Lowestoft, UK. ICES CM 2012/ACOM:15:931pp

ICES 2012b. Widely Distributed and Migratory Stocks. Herring in the Northeast Atlantic (Norwegian spring-spawning herring). Advice September 2012. ICES Advice Book 9, Section 9.4.5. Available from <http://www.ices.dk/committe/acom/comwork/report/2012/2012/her-noss.pdf>

Anon 2013. The Faroese fishery for Atlanto-Scandian herring in 2013.

<http://www.fisk.fo/Default.aspx?ID=2396&M=News&PID=6411&NewsID=5065>

Standards and Guidelines used:

- a) MSC Certification Requirements v1.3, 14 January 2013.

Annex 1: Written Stakeholder submissions to the surveillance audit and IMM responses to points raised.

Written Submission Received from Greenpeace & North Sea Foundation

The submission below was submitted during this surveillance audit. The submission makes reference to the North Sea Herring fishery. During the interview at the surveillance audit, Greenpeace and the North Sea Foundation indicated that these comments were also relevant to the North East Atlantic Mackerel Fishery and the Atlanto-Scandian Herring Fishery.

Input from Greenpeace Netherlands, underlined by North Sea Foundation (from here on referred to as: the NGOs)

MSC Assessment Report for Pelagic Freezer-Trawler Association North Sea Herring Fishery - Ref: 82008/v5 –

→ **http://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-east-atlantic/pfa-north-sea-herring/pfa-north-sea-herring-reassessment-documents/PFA_North_Sea_Herring_Public_Certification_Report.pdf**

Specific input for point 3.2.3: *Compliance and Enforcement*

The NGOs have special concern for the scoring at point 3.2.3. The PFA-company received a score of 100 for compliance and enforcement, according to the certifier Moody Marine. The criterion for GS100 is as follows:

A comprehensive monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules.

Sanctions to deal with non-compliance exist, are consistently applied and demonstrably provide effective deterrence.

There is a high degree of confidence that fishers comply with the management system under assessment, including, providing information of importance to the effective management of the fishery.

There is no evidence of systematic noncompliance.

According to the NGOs, this so-called high level of confidence for compliance is not justified in this context. The current signals², as explained by Greenpeace during the MSC assessment audit, point in the direction of a level of non-compliance. The NGOs question where the evidence for this scoring-criterion was derived from, especially when taking into accounts current signals¹. It should be stated that the only player who could proof this level of compliance is the fishery itself. The NGOs therefore emphasize that the burden of proof should be in the hands of the industry, in this case the PFA. It should be highlighted that this is also a starting point according to the MSC standard³. Furthermore, the only way this can be achieved and the only way a fishery could reach a scoring of GS100 for this criterion, is on an evidence base, in other words, by means of fully documented fisheries.

² Input of Greenpeace in the MSC assessment audit, under item 17 "any complaints against the certified operation; recorded reviewed and actioned" of the Surveillance report in the PFA North Sea Herring Fishery, June 13: http://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-east-atlantic/pfa-north-sea-herring/pfa-north-sea-herring-reassessment-documents/20130618_SR_revised_HER98.pdf

³ Handleiding voor een MSC-certificeringstraject van de Kopgroep Duurzame Noordzeevervisserij, bladzijde 3, <http://www.msc.org/documenten/ga-voor-certificering-handleidingen/praktijkhandleiding-visserijcertificering.pdf>

The Greenpeace complaint about the vessel Jan Maria¹ is still with the authorities and the matter is being investigated. This does not indicate the necessary evidence for a high level of confidence for compliance. For obvious reasons the certifier could not take into account the future conclusion from this research. However, since sufficient evidence from the part of the fishery itself is lacking, and the lack of evidence now allows for signals of non-compliance as indicated by Greenpeace, the score of 100 cannot be justified anymore.

The NGOs also want to go into the argumentation of the certifier concerning their allocation of scoring guidepost 100, see below:

There is a high degree of enforcement and control and in this fishery, which has increased recently in response to identification of substantial under-reporting, which recent changes and improvements in overall monitoring, control and surveillance have been designed to address. Enforcement includes use of satellite VMS, patrol vessels and aerial surveillance, checked against landings data and paper trails (such as the new catch certificates required by IUU regulations). All landings are weighed at designated points of landing, and 25% of landings are inspected by Fishery Officers.

There are currently numerous signals¹ that so-called high degree of enforcement and control is not justified. Taking into account the current situation, it is very likely that that enforcement measures mentioned here are not effective. What evidence did the certifier use and does this evidence sufficiently cover all PFA activities far out as sea, when enforcement measures were not in place?

Agreements have been reached between the EC and the Norwegian Government to address concerns about IUU fishing. Enforcement, management and compliance information is now being shared between organisations to create a comprehensive monitoring, control and surveillance system.

Non-compliance is dealt with by the relevant national authorities through their criminal justice systems, and using agreed and tested procedures. Much improved levels of compliance suggest that this system is effective.

Compliance with management measures is reported through the EC 'scoreboard' and the Norwegian Government's "Black List". None of the vessels in the proposed unit of certification, nor any of the other vessels in the client's fleet are on these lists which provides a high degree of confidence that fishers are complying with the management system.

It could be the case, seen the content of the Greenpeace complaint¹, that the agreement between the EC and the Norwegian Government is not effective. What evidence did the certifier use to come to the end-conclusion of a high confidence of compliance, even more since this text is referring to a suggestion of a much improved level of compliance?

The conclusion of the certifier with regards to the 'scoreboard' and 'Blacklist' should be based on evidence that the Management measures from the EU and Norway are effective. This is exactly what is currently questioned and under investigation by the authorities¹ and it should be noted that the complaint concerns infringements occurring far out at sea, not under the watchful eye of the EU and Norwegian controllers. Additionally there is no evidence that these measures are in fact effective.

The assessment team interviewed the Dutch General Inspection Service, which is responsible for inspecting the ports where the PFA fleet lands its herring catch. Compliance by this fleet with the relevant regulations is reported to be excellent. The team has also contacted enforcement services in the other PFA Member States, who report good compliance with regulations by PFA vessels in this fishery.

The certifier concludes here, on the basis of reports of the Dutch General Inspection Service and enforcement services in other countries, that compliance is respectively excellent and good. The Greenpeace-complaint¹ is however not taken into account here and again it should be noted that the accused infringements happen far at sea, away from the watchful eye of these enforcement services. Due to the nature of potential discards or highgrading (mostly the result of a decision of the skipper), it is very likely that these will happen during times when there is not a watchful eye of an observer or enforcement officer. To compare: one will not pass a red traffic light when a police officer is watching.

The client fleet has set out a formal commitment to support all monitoring of the fishery in its policy document, as well as international agreements such as the FAO code of conduct for responsible fisheries. The PFA collaborates with IMARES to provide catch samples which assist directly with the management of the fishery.

Although it has been noted that the TAC for the North Sea Herring fishery has been regularly exceeded by the fishery as a whole, evidence on quota uptake has been provided by the PFA that demonstrates compliance with the management system by their fleet.

It does not become clear how official documents, signed by the fishery itself, provide evidence for a high confidence of compliance. Furthermore, it is exactly the documents from the PFA that are questioned and under investigation¹. The complaint includes signals that the PFA works with an unofficial log. It is therefore questioned how these documents can be used as evidence that there is a high confidence for compliance.

It should also be noted here that in the case of the Jan Maria vessel, discards were not even reported to authorities by the fishery. In the log, where the fishery is supposed to register the discards, was not even a column present to register those discards, while this is mandatory since 2011. While at the same time scientific observer trips have concluded that there is in fact a discard-percentage of around 3% in the PFA herring Fishery⁴. The fact that logbooks do not allow for the provision of legally required information is another argument why the 100 score cannot be upheld. In addition, discard data are based on observer coverage of approximately 10%. This means that 90% of the trips are not monitored. It is fairly general knowledge, that on observed trips, the 'best' behaviour is observed.

Furthermore, the PFA-policy states that high-grading is strictly forbidden and that this is strictly monitored. Given the current signals that point in the direction of high-grading¹, in combination with IMARES reports on pelagic fisheries stating that "Discard rates depend on different factors, among which the market price"⁵ (which is high-grading), should the PFA-policy and accompanying official documents not be questioned rather than being used as a trustworthy source?

New information can be added to this: On the 3rd of July the Dutch secretary of State for fisheries announced to commission a study to investigate the extent to which highgrading is occurring on the Dutch vessels of the PFA. This is a clear indication that current signals are in fact taken seriously by the Dutch government.

Score: 100

The fishery meets all of the SG80 requirements and most of the SG100 requirements.

Based on the above argumentation it should become clear that the SG100 is not justified for the PFA North Sea herring fishery. Only if the industry can prove that their level of compliance is high, by means of fully documented fisheries, the SG100 should be allocated to this fishery.

⁴ Van Helmond and Overzee, 2009

⁵ Discard sampling of the Dutch pelagic freezer fishery in 2010, Stichting DLO, Centre for Fishery Research (CVO). - 11.010.

IMM Response to written submission.

To:
Christine Absil, North Sea Foundation, Utrecht.
Frederieke Vlek, Greenpeace, Amsterdam.

Date: 1st August 2013
Our Ref: 82052 / 82109
Your Ref:

By E-Mail

Dear Christine & Frederieke

Many thanks for the opportunity to meet with you during our site visit to discuss your concerns about the activities of the Pelagic Freezer Trawler Association fleet with respect to ongoing MSC certification of their North Sea herring, Atlanto-Scandian herring and North East Atlantic mackerel fisheries in European waters.

In addition to the comments made at the meeting, you also submitted a written response to us. We have responded below to the key issues set out in your correspondence and raised during our discussions. Your comments and this response will be appended to our surveillance reports for the PFA Mackerel and Atlanto-Scandian Herring Fisheries that are due to be published on the MSC website shortly.

1. Scoring of PI3.2.3 in light of current "signals"

Your letter refers to the complaint against the PFA which has been submitted to the German authorities by Greenpeace. It is suggested that we should re-score this PI because of this.

We remain of the view that it is inappropriate to re-score this PI until the German authorities have completed their investigations. If the allegations are substantiated, then it may be appropriate to re-score this PI, and possibly others; however if the allegations are found to be groundless then no action would be required.

We note that your comments on the North Sea Herring report criticise us for not taking account of the Greenpeace complaint at the time the scoring commentary was written. We should point out that the report was written in 2010, and the Greenpeace complaint was not submitted until 2013.

2. Confidence in enforcement and control

Further to our comments above, it would not be appropriate to review our scoring of the degree of confidence in the enforcement and control of the fishery until the Greenpeace allegations have been fully investigated by the German authorities. At present the verifiable and official information available to the assessment team supports the scoring of this PI.

3. Reporting of discards

We note the allegation that the Jan Maria failed to declare discards in its official log, and again it would be inappropriate for us to prejudice the view of the German authorities on this issue.

Intertek Moody Marine
10a Victory Park
Victory Road
Derby
DE24 8ZF
UNITED KINGDOM



4. Highgrading

We note that you cite the report of van Helmond and Overzee (2009) as evidence of highgrading in the PFA fleet. We are familiar with this report and note that it covers fishing activity in the period 2003-07, before highgrading was made illegal. In many respects, therefore, this report illustrates what would today be a worst case scenario, rather than "best behaviour".

We have tried in vain to find the quotation you cite from the 2010 CVO discarding report. The only similar quote that we have found states that:-

"Discard rates of target species, herring, horse mackerel and blue whiting are highly dependent on season, quota limits, market prices and fish size and quality."

Again, this report refers to the period prior to the high-grading ban, so the relevance of these observations to the present-day fishery is not clear.

5. Hollandse Nieuwe

You also mentioned the recent film "*Hollandse Nieuwe*" during our interview, which you thought contained evidence of highgrading and discarding. We confirm that during our site visit we scrutinised the uncut video footage for the parts of this film that had given rise to these concerns. We found no evidence of illegal activity, discarding or highgrading in the video that we saw, although we agree that the way that these sequences of video had been cut and edited could give the impression that this had taken place.

If you have further observations or concerns about this fishery, please do not hesitate to get in touch with us.

Yours sincerely

A handwritten signature in black ink, appearing to read "Jim Andrews", written over a horizontal line.

JIM ANDREWS
Lead Assessor
Intertek Moody Marine

Intertek Moody Marine
10a Victory Park
Victory Road
Derby
DE24 8ZF
UNITED KINGDOM

Annex 2: Notification of surveillance audit

**Pelagic Freezer-Trawler Association
Atlanto-Scandian Herring Pelagic Trawl Fishery**

MSC Certification

Surveillance Audit: 4th-5th July 2013, IJmuiden, Netherlands

Following certification of this fishery, we are now continuing the process of annual surveillance audits of the fishery. These audits have two principal functions:

1. To review any changes in the management of the fishery, including regulations, key management or scientific staff, or stock evaluation
2. To evaluate the progress of the fishery against any Conditions of Certification raised during the Main Assessment

During the audit, or at separate meetings, we shall be speaking with representatives of the fishery and fishery management organisations. We expect to carry out meetings on 4th-5th July 2013.

Meetings will be held in IJmuiden and other locations in the Netherlands and attended by Audit Team members detailed below. Details of the team members' experience is summarised overleaf.

Jim Andrews	Lead Auditor Principle 2 Principle 3	On site
John Nichols	Principle 1 Principle 2	On site

Should you have any information on this fishery that you feel should be considered in the assessment, please contact us. We may be available to meet with stakeholders as appropriate. If you would like to arrange a meeting with the assessment team, please advise us, by 1700 BST on the 28th June 2013, of:

- a) your name and contact details
- b) your association with the fishery
- c) the issues you would like to discuss (in order for us to arrange appropriate representation)
- d) where and when you would like to meet

JIM ANDREWS
Lead Assessor

30th May 2013

e-mail: james.andrews@intertek.com
Mobile: +44(0)7908-225865

Intertek Moody Marine
10a Victory Park
Victory Road
Derby, DE24 8ZF
United Kingdom
Telephone: +44 (0) 1332 544663
Fax: +44 (0) 1332 675020
Web Site: www.intertek.com

FCS 01 v2 Rev 03

**Audit Team Members:**

Both of the auditors conducting this surveillance audit were members of the team that conducted the original assessment of this fishery. Their relevant experience is summarised below.

Dr Jim Andrews.

Jim has 21 years' experience working in marine fisheries and environmental management. His previous experience includes running the North Western and North Wales Sea Fisheries Committee as its Chief Executive from 2001 to 2005, and previously working as the SFC's Marine Environment Liaison Officer. During this time he was responsible for the regulation, management and assessment of inshore finfish and shellfish stocks along a 1,500km coastline. He has an extensive practical knowledge of both fisheries and environmental management and enforcement under UK and EC legislation. Jim has formal legal training & qualifications, with a special interest in the policy, governance and management of fisheries impacts on marine ecosystems. Jim has been involved in the review of several MSC certification assessments including the South-West Mackerel Handline Fishery, Loch Torridon Nephrops, Burry Inlet Cockles, North Sea Herring and South Georgia Patagonian Toothfish. He has worked as an assessor and lead assessor on MSC certifications within the UK, in Europe and in India since 2007. In 2008 he worked with the MSC and WWF on one of the pilot assessments using the new MSC Risk Based Assessment Framework. Jim has carried out numerous MSC Chain of Custody assessments within the UK.

John Nichols.

John Nichols is a retired UK government fisheries biologist with 43 years research experience in plankton ecosystems in the North Atlantic. He has been a member of ICES working groups on herring, mackerel, horse mackerel, sardine and anchovy assessments; and mackerel and horse mackerel egg surveys. He was also a member of ICES study groups on herring larval surveys and plankton sampling. He was scientist in charge of numerous research vessel surveys for fish stock assessment purposes. He has also recently taken part in assessments of the PFA North Sea Herring, Hastings Fleet Dover sole, herring and mackerel fisheries and SW mackerel fishery re-assessment with Moody Marine.

Full CVs of the team members are available on request from IMM.

Intertek Moody Marine
10a Victory Park
Victory Road
Derby, DE24 8ZF
United Kingdom
Telephone: +44 (0) 1332 544663
Fax: +44 (0) 1332 675020
Web Site: www.intertek.com

FCS 01 v2 Rev 03