

**Marine Stewardship Council (MSC) Expedited Audit
SPSG, DPPO, PFA, SPFPO & KFO Atlanto-Scandian
purse seine and pelagic trawl herring**

On behalf of

SPSG, DPPO, PFA, SPFPO & KFO

Prepared by

ME Certification Ltd

May 2018

**Authors: Dr Hugh Jones
Dr Matt Cieri**

Contents

CONTENTS	1
GLOSSARY	2
1 GENERAL SUMMARY.....	4
UoC1 - SPSG	4
UoC2 – DPPO	4
UoC3 - PFA.....	4
UoC4 – SPFPO	5
UoC5 - KFO.....	5
2 BACKGROUND	7
2.1 Background to expedited audit.....	8
2.1.1 ICES advice.....	8
2.1.2 MSC standard	9
3 ASSESSMENT PROCESS.....	11
3.1 Harmonisation.....	13
4 RESULTS.....	16
4.1 Stock Status.....	16
4.2 Reference Points	17
4.3 Stock management.....	18
5 CONCLUSION.....	20
6 EVALUATION RESULTS	21
6.1 Principle Level Scores	21
6.2 Summary of PI Level Scores.....	21
6.3 Conditions.....	23
7 REFERENCES	24
APPENDICES	26
Appendix 1. Rescoring evaluation tables	27
Principle 1 scoring rationales.....	27
Appendix 2. Conditions.....	45
Appendix 3. Client action plan (reproduced from PCR).....	50
Appendix 4. Harmonisation P1 expedited audit – Timeline 2017 and 2018.....	53

Glossary

Term / acronym	Definition
ACOM	ICES advisory committee
ASH	Atlanto-Scandian herring
B_0	Equilibrium unexploited total biomass
$B_{F_{current}}$	Equilibrium total biomass at $F_{current}$
BIM - SSP	Bord Iascaigh Mhara Seafood Stewardship Programme
B_{init}	Initial biomass at the start of the stock assessment model.
B_{MSY}	Equilibrium total biomass at MSY
CAB	Conformity Assessment Body
CCTV	Closed Circuit Television
CFP	Common Fisheries Policy
CoC	Chain of Custody
CPUE	Catch per Unit Effort
CR	MSC Certification Requirements
DCF	Data Collection Framework
DPPO	Danish Pelagic Producers Organisation
EEZ	Exclusive Economic Zone
EFF	European Fisheries Fund
EM	Electronic Monitoring
ETP	Endangered Threatened or Protected species
EU	European Union
F	Fishing mortality
$F_{current}$	Average fishing mortality at age
F_{MSY}	Fishing mortality at age resulting in MSY
HCR	Harvest Control Rule
IBWSS	International Blue Whiting Spawning Stock Survey
ICES	International Council for the Exploration of the Sea
IESNS	International Ecosystem Survey in the Nordic Seas
ITQ	Individual Transferable Quota
KFO	Killybegs Fishermen's Organisation
LRP	Limit Reference Point
LTL	Low-Trophic Level species
MBAL	Minimum biologically acceptable level
MCS	Monitoring, Control and Surveillance
MEC	ME Certification Ltd
MP	Management plan

Term / acronym	Definition
MSC	Marine Stewardship Council
MSFD	Marine Strategy Framework Directive
MSY	Maximum Sustainable Yield
NAO	North Atlantic Oscillation
NEAFC	North East Atlantic Fisheries Commission
NSSH	Norwegian spring-spawning herring (as ASH)
NVWA	Nederlandse Voedsel en Waren Autoriteit
PCDR	Public Comment Draft Report
PFA	Pelagic Freezer-trawler Association
RAC	Regional Advisory Council
RSW	Refrigerated seawater
SAM	State–space assessment model
SPFPO	Swedish Pelagic Federation Producers Organisation
SPG	Sub-polar gyre
SPSG	Scottish Pelagic Sustainability Group
SSB	Spawning stock biomass
STECF	Scientific, Technical and Economic Committee For Fisheries
TAC	Total Allowable Catch
TRP	Target Reference Point
UoC	Unit of Certification
VMS	Vessel Monitoring System
vTI	(Johann Heinrich) von Thünen-Institut
WGBYC	ICES Working Group on Bycatch of Protected Species
WGINOR	ICES Working Group on the Integrated Assessments of the Norwegian Sea
WGWIDE	ICES Working Group on Widely Distributed Stocks
WKPELA	ICES Workshop on Pelagic Stocks
XSAM	State space model and structural time-series models for fish stock assessments

1 General summary

Fishery name	SPSG, DPPO, PFA, SPFPO & KFO Atlanto-Scandian purse seine and pelagic trawl herring	
Unit(s) of assessment	UoC1 - SPSG	
	Species	Herring (<i>Clupea harengus</i>)
	Geographical range	ICES Sub-areas I, IIa & IIb, V & XIV EU waters, international waters and the EEZ of Norway and the Faroes
	Method of capture	Pelagic trawl
	Stock	Atlanto-Scandian herring
	Management Systems	Cooperative management between EU member states, the Faroe Isles, Iceland, Norway and Russia
	Client group	SPSG member vessels fishing for Atlanto-Scandian herring in ICES Sub-areas ICES Sub-areas I, IIa & IIb, V & XIV (EU waters, international waters and the EEZ of Norway) using pelagic trawl
	UoC2 – DPPO	
	Species	Herring (<i>Clupea harengus</i>)
	Geographical range	ICES Sub-areas I, IIa & IIb, V & XIV EU waters, international waters and the EEZ of Norway and the Faroes
	Method of capture	Pelagic trawl and purse seine
	Stock	Atlanto-Scandian herring
	Management Systems	Cooperative management between EU member states, the Faroe Isles, Iceland, Norway and Russia
	Client group	DPPO member vessels fishing for Atlanto-Scandian herring in ICES Sub-areas ICES Sub-areas I, IIa & IIb, V & XIV (EU waters, international waters and the EEZ of Norway) using pelagic trawl
	UoC3 - PFA	
	Species	Herring (<i>Clupea harengus</i>)
	Geographical range	ICES Sub-areas I, IIa & IIb, V & XIV EU waters, international waters and the EEZ of Norway and the Faroes
	Method of capture	Pelagic trawl

	Stock	Atlanto-Scandian herring		
	Management Systems	Cooperative management between EU member states, the Faroe Isles, Iceland, Norway and Russia		
	Client group	PFA member vessels fishing for Atlanto-Scandian herring in ICES Sub-areas ICES Sub-areas I, IIa & IIb, V & XIV (EU waters, international waters and the EEZ of Norway) using pelagic trawl		
	UoC4 – SPFPO			
	Species	Herring (<i>Clupea harengus</i>)		
	Geographical range	ICES Sub-areas I, IIa & IIb, V & XIV EU waters, international waters and the EEZ of Norway and the Faroes		
	Method of capture	Pelagic trawl and purse seine		
	Stock	Atlanto-Scandian herring		
	Management System/s	Cooperative management between EU member states, the Faroe Isles, Iceland, Norway and Russia		
	Client group	SPFPO member vessels fishing for Atlanto-Scandian herring in ICES Sub-areas ICES Sub-areas I, IIa & IIb, V & XIV (EU waters, international waters and the EEZ of Norway) using pelagic trawl		
	UoC5 - KFO			
	Species	Herring (<i>Clupea harengus</i>)		
	Geographical range	ICES Sub-areas I, IIa & IIb, V & XIV EU waters, international waters and the EEZ of Norway and the Faroes		
	Method of capture	Pelagic trawl		
	Stock	Atlanto-Scandian herring		
	Management Systems	Cooperative management between EU member states, the Faroe Isles, Iceland, Norway and Russia		
	Client group	KFO member vessels fishing for Atlanto-Scandian herring in ICES Sub-areas ICES Sub-areas I, IIa & IIb, V & XIV (EU waters, international waters and the EEZ of Norway) using pelagic trawl		
Date certified	03 Jan 2016	Date of expiry	02 Jan 2021	
Surveillance level and type	Following the changes in the perception of NSSH stock status and the management response to these changes , the three Conformity Assessment Bodies (CABs) for the four MSC-certified Atlanto-Scandian / Norwegian Spring Spawning herring fisheries held two harmonisation discussions during December 2017 and another in January			

	<p>2018 (these CABs are MEC, Acoura Marine and DNV-GL). These harmonisation discussions are required by the MSC.</p> <p>The first discussion in December took place before the management meetings had been completed and focussed on the revised perception of stock status. During the second discussion on the 20th December the CABs discussed the outcome of the Coastal States meeting and the EU Fisheries Council meeting. Between the 20th December and 10th January the CABs communicated with their clients highlighting the possible need for expedited assessment of Principle 1 and providing the clients with a chance to respond.</p> <p>At the discussion on the 10th January 2018, the three CABs reviewed the stock assessment and the management response, and considered the feedback that they had each received from their clients. It was unanimously agreed that the combination of the revised perception of stock status (SSB below MSY B_{trigger}) coupled with the management response during December to the most recent ICES advice constituted a “major change” in the circumstances of the four certified fisheries. This is on the basis that TACs for 2018 were set by the Coastal States above the level indicated by the agreed management plan and above the level recommended in ICES advice for this stock in 2018.</p> <p>The three CABs concluded that an “expedited audit” would therefore be required for each of these fisheries. This audit will examine whether or not the change in the perceived status of the stock and the response by the Coastal states to this change will affect the scoring and possibly the ongoing certification of the four fisheries.</p>	
Date of surveillance audit	21 st March 2018	
Surveillance stage (tick one)	1st Surveillance	
	2nd Surveillance	
	3rd Surveillance	
	4th Surveillance	
	Other (expedited etc)	X
Surveillance team	Lead assessor: Dr Hugh Jones Assessor(s): Dr Matthew Cieri	
CAB name	MEC	
CAB contact details	Address	Dr Hugh Jones ME Certification, 56 High Street, Lymington, SO41 9AH United Kingdom Tel: +44 (0)1590 613007 Hugh.jones@me-cert.com
	Phone/Fax	
	Email	
	Contact name(s)	
Client contact details	Address	Danish Pelagic Producers Organisation, Axeltorv 3, 6 1609 Copenhagen v. Denmark. Claus Reedtz Sparrevohn crs@pelagisk.dk
	Phone/Fax	
	Email	
	Contact name(s)	

2 Background

The Atlanto-Scandian herring stock (ASH – also referred to as Norwegian spring-spawning herring; NSSH) is the largest stock of herring (*Clupea harengus*), and the largest commercial fish stock in the NE Atlantic region. The ASH occupies an area of the NE Atlantic approximately bounded by Norway–Faroe Islands–Iceland–Svalbard (Spitzbergen). The ASH stock is seasonally migratory, making more or less a clockwise movement around the Norwegian Sea during the course of the year.

Fishing is by mid-water trawls and purse seines (mainly the former); only the Danish and Swedish fleets use seines. The vessels are modern and technologically advanced with equipment such as sonar, net and catch monitors, which have greatly improved the precision of this method of fishing. The fish are taken in the upper part of the water column, typically in deep water off the continental shelf. With the exception of the PFA vessels, all vessels are refrigerated seawater (RSW) vessels with no freezer capacity. All PFA vessels however are freezer trawlers, which process and freeze the catch on board. Effort by SPFPO and KFO vessels in the fishery is sporadic, depending on quota availability early in the year; DPPO, SPSG and PFA vessels fish ASH more consistently. It is noted that at time of certification it proved impossible for the team to separate purse seines from trawls in the scoring, because of very limited data specific to purse seines. Hence both gear types were considered in a single Unit of Certification (UoC) in this assessment. This continues in this audit and the approach has also been taken by the other MSC assessments on this stock for which both gears are used. The stock is managed via a Coastal States Agreement between the entities concerned – i.e. Norway, Iceland, Russia, the EU and the Faroe Islands, based on a TAC set following an agreed management plan and a stock assessment by ICES. All these entities accept this framework, but there remains dispute as to how the TAC should be allocated between them. This has led to a sum of individual quotas exceeding the agreed TAC in some years. The vessels in the five UoCs for this assessment fish the EU quota of the TAC (Table 1).

Table 1. Atlanto-Scandian Herring sum of unilateral quotas and EU quotas between 2015-2018.

Year	Sum of quotas (Tonnes)	EU quota (Tonnes)
2018	435,000	28,319
2017	646,075	42,059
2016	377,000	20,629
2015	328,000	37,188

2.1 Background to expedited audit

2.1.1 ICES advice

ICES (2018a) presented an assessment of the Norwegian Spring Spawning Herring stock status based on “The perception of the stock has not changed since last year’s assessment.”. This statement was revised on 30 October 2017 and a further revised Version 3 was issued on 23 January 2018, see ICES (2018a). The corrected assessment results in a 14 % downwards revision of the SSB value in 2017 and a 15 % upwards revision of the F value in 2016 relative to the assessment used for the advice released in September 2017 (ICES, 2017a). As the target SSB and F remain unchanged both these changes result in a reduction of fishing mortality required to meet the criteria laid down in the HCR agreed in 1999 by the Coastal states, in total a 32 % downward revision of the September 2017 catch advice. Because of the downward revision of the SSB the status of the stock is considered to be worse than judged based on the September 2017 assessment. The status based on the October 2017/January 2018 ICES advice is summarised below (Figure 1).

		Fishing pressure				Stock size			
		2014	2015	2016		2015	2016	2017	
Maximum sustainable yield	F_{MSY}	✓	✓	✓	Below	$MSY B_{trigger}$	✗	✗	✗ Below trigger
Precautionary approach	$F_{pa} F_{lim}$	✓	✓	✓	Harvested sustainably	$B_{pa} B_{lim}$	○	○	○ Increased risk
Management plan	F_{MGT}	✓	✓	✓	Below	SSB_{MGT}	✗	✗	✗ Below

Figure 1. Herring in subareas 1, 2,5 and in Divisions 4.a and 14.a (Atlanto-Scandian Herring, Norwegian Spring Spawning Herring). State of the stock and fishery relative to reference points- Source ICES (2018a) Table 1. Status viz-a-viz stock size for MSY Btrigger and Bpa are no longer valid.

Figure 2 compares the abundance estimates used in the original stock assessment, (ICES, 2017a) and the corrected data. The report of the WKADVNSSH, ICES (2018a) provides a detailed description of the background for the correction and a presentation of the effects the correction of the input data has on the assessment results. The effects in the assessment are complicated, the model uses the survey results as indices and include an internal weighting of the different data series based on estimated CVs. Furthermore, the error affects the survey indices differently between years. The results are counterintuitive to the short description given in the ICES advice. Even so, the Assessment Team accepted the results presented in Anon (2018) and ICES (2018a).

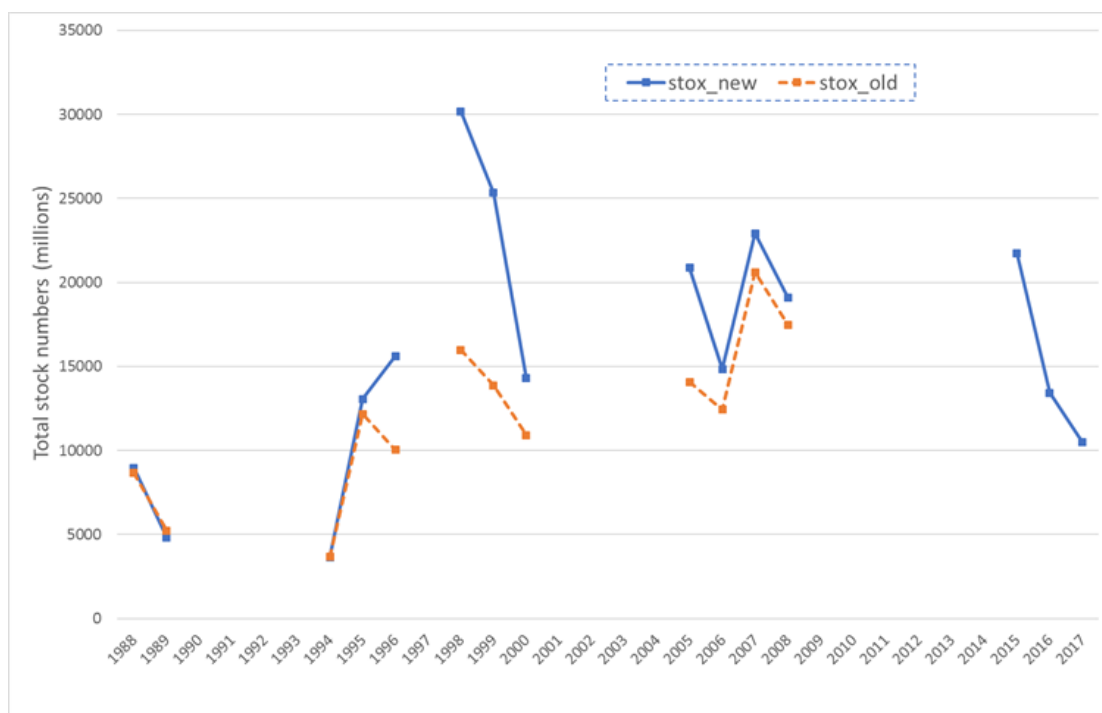


Figure 2. Abundance acoustic survey results (Fleet 1'). Old and incorrect results (yellow) and corrected values (blue). Source: IMR WD for (ICES, 2018b).

2.1.2 MSC standard

The expedited audit concerns Principle 1 (stock status). FCR 7.23.22 and requires that “The CAB shall undertake an “expedited audit”, including as it determines necessary review of documents and an on-site audit if:

7.23.22.1 The CAB becomes aware of major changes in relation to the circumstances of the fishery, or of significant new information that may cause a major change.

a. A ‘major change’ is one that is likely to be material to the certification status. A change in scope, a PI score falling below 60 or outcome PI score falling below 80, or a change that could bring about a Principle Level aggregate score to drop below 80, shall be considered material to the certification status.

b. To avoid unnecessary expedited audits, CABs shall ensure that an expedited audit is only triggered when the information available supports the conclusion that an actual material change has taken place in the status or management of the fishery.

c. Significant new information becomes available in relation to the circumstances of the fishery including during the period between the original assessment and the issue of a certificate which is likely to be material to the certification status.

7.23.22.2 An expedited audit can be a review of information, off-site audit or on-site audit, based on what the CAB determines necessary.”

The major change is ICES’s revision of the stock status between 29 September and 30 October 2017. The need for the expedited audit of the stock was based on the 30 October 2017 revision considered to be below MSY $B_{trigger}$, see Figure 1. Principle 1 was rescored on individual Performance Indicators (PI) based on Table 2. Prior to site visits and scoring

meetings and following a Coastal State request there was additional changes in the stock assessment and estimation of reference points, these changes are detailed in section 4.

Table 2. Principle 1 rescoreing.

PI	Description	Findings
1.1.1	Stock status in relation to recruitment impairment and MSY	Status based on advice October 2017: Stock status is at risk of recruitment impairment and well below MSY Status based on revised reference points ICES (ICES, 2018c): Stock is above MSY $B_{trigger}$, Fishing mortality is below F_{MSY}
1.1.2	Reference points	Updated ICES (2018c)
1.1.3	Stock rebuilding	Management is not following the agreed management plan deemed precautionary No recovery plan has been presented However, stock status based on ICES reference points does not require scoring of this PI (ICES, 2018c).
1.2.1	Harvest strategy	The harvest strategy is not effective and management decisions are inconsistent with PI 1.1.1 objectives
1.2.2	Harvest Control Rule	Harvest Control Rules are in place but not effective. Under the current management, exploitation rates are not expected to be reduced if the stock is below MSY $B_{trigger}$)
1.2.3	Information	No change
1.2.4	Assessment	No change except that the assessment methodology has been updated from XSA to XSAM and hence confidence limits for stock indicators are now available

3 Assessment Process

The SPSG, DPPO, PFA, SPFPO & KFO Atlanto-Scandian purse seine and pelagic trawl herring was certified on 3rd Jan 2016 by MEC (Table 3).

Table 3. Certificate number for the Atlanto-Scandian Herring fishery.

UoC	Client	Certificate Number
1	SPSGG	MEC-F-036
2	DPPO	MEC-F-029
3	PFA	MEC-F-035
4	SPFPO	MEC-F-037
5	KFO	MEC-F-038

FCR version: The fishery is assessed under scoring version 1.3 but using the process requirements set out in FCR version 2.0.

Template: This report follows the 'MSC Surveillance Reporting Template FCR v2.0, V 1.0 (8th October 2014).

Stakeholders were informed of the expedited audit by email on 16th February 2018 following the announcement on the MSC website. They were invited to submit comments prior to the 30 day deadline (17th March 2018 at 5pm GMT). No stakeholder comments were received prior to the audit.

The off-site audit took place via video conference on 20th March 2018. Those present were Dr Hugh Jones (Team Leader), Dr Matthew Cieri (Principle 1 expert) and Dr Claus Reedtz Sparrevohn (client representative).

The material considered at this 2018 expedited assessment is the ICES assessment reports ICES (2018a, 2018b and 2018c), the working document Anon (2018) documenting the error in the processing of the abundance survey data and the influence on the assessment and projections for 2018. Furthermore, the shift from XSA to XSAM is documented.

The purpose of the expedited audit was to assess the change in Principle 1 status against the new stock interpretation and discuss the suitability of the current conditions (Table 4).

Table 4. Summary of Existing Conditions

Condition number	Condition	Performance Indicator
1	<p>'Available evidence' may be any relevant evidence, provided through ICES or other verifiable means, that shows the implications of all available management actions (e.g. by coastal states and/or agreements with other relevant states in controlling fishing mortality) in achieving exploitation levels consistent with appropriate harvest control rules and the requirements of PI 1.1.1.</p> <p>This condition is closely aligned to Condition 2.</p>	1.2.2

Condition number	Condition	Performance Indicator
2	<p>There is a mechanism in place for international cooperation in the fishery (the Coastal States Agreement) but it is not apparently completely effective, since it is currently not working properly due to the withdrawal of the Faroes, and as of 2015 a failure of the coastal states in general to agree a TAC. The dispute has now lasted more than a year, with no sign of formal resolution as yet (although the issue has been mitigated by negotiation) – hence it is not clear that the dispute resolution framework is effective.</p> <p>The fishery should work with the EU, the Pelagic Advisory Council, other certified or suspended UoCs in the fishery and/or other parties as appropriate to support the resolution of the dispute between the coastal states and to re-establish an effective international cooperation mechanism for the fishery.</p>	3.1.1

3.1 Harmonisation

The fishery is harmonised against three other fisheries for Principle 1 (Table 5).

Table 5. Principle 1 harmonised fisheries for the ASH/NSSH stock.

Fishery	Gear types	MSC status	Expiry	CAB/Experts
SPSG, DPPO, PFA, SPFPO & KFO Atlanto-Scandian purse seine and pelagic trawl herring	Surrounding Nets - With purse lines (purse seines)...	Certified	2 Jan 2021	MEC Hugh Jones Matt Cieri
ISF Norwegian & Icelandic herring trawl and seine	Seine Nets Trawls - Midwater trawls	Certified with component(s) in assessment	28 May 2019	ACOURA Jim Andrews John Nichols
Faroese Pelagic Organisation Atlanto- Scandian herring	Surrounding Nets - With purse lines (purse seines)...	Certified	14 June 2021	DNV GL Stefan Midteide Hans Lassen
Norway spring spawning herring	Surrounding Nets - With purse lines (purse seines)...	Certified with component(s) in assessment	29 July 2019	DNV GL Sandya Chaudhury Hans Lassen

Following the announcement of the change in perception of stock status against reference points the three CABs responsible for the certified fisheries resolved to harmonise all aspects of the expedited Principle 1 assessment. A timeline of the harmonisation process and outcomes is provided in Table 6. CAB joint statements released as a result of the harmonisation process are provided in the Appendices.

Table 6. Timeline of expedited audit harmonisation process

Date	Event	CAB action
29 th September 2017	The perception of the stock has not changed since last year's assessment	None required
30 th October 2017	ICES release version 2 of the NSSH advice for 2017, with a downwards revision of SSB and catch advice for 2018	CABs made aware of new advice by MSC on 9 th November 2017 and begin arrangements for harmonisation and discussions of need to expedite assessment.
1 st December 2017	CABs formal discussions on expedited audit	CABs agree that the outcome of the Coastal States (CS) meeting on 7 th Dec is paramount to P1 scoring. MSC advised of meeting and decision via email to E. McGregor.
7 th December 2017	Coastal states meeting and sharing arrangements take place	CABs await feedback from the CS meetings to understand the management actions taken to change in stock status. Advised there may be request for reference point review.
11 th December 2017	The EU Fisheries Council meeting took place on the 11th December 2017.	EU TACs for 2018.

Date	Event	CAB action
20 th December 2017	CAB harmonisation discussion	<p>CABs agreed:</p> <ol style="list-style-type: none"> 1. It is necessary to carry out an expedited audit for our MSC-Certified Atlanto-Scandian / Norwegian Spring Spawning herring fisheries. 2. The expedited audit should be harmonised between the four certified fisheries in terms of both its timescale and outcome. 3. With regard to timescale, we agreed provisionally that:- <ol style="list-style-type: none"> a. We will hold a further Skype meeting on 10th January 2018 at 1400 GMT to agree the logistics for the audit. b. We will aim to announce the expedited audit on the 16th January 2018, with the audit taking place 30 days later. c. We will conduct the audit remotely (there is no advantage to be gained from a site visit). d. We will coordinate the surveillance audit report so that the findings are identical for each fishery. e. We will submit our surveillance report to our clients as early as possible in the surveillance timetable to give them as much time as possible to formulate their client action plan.
21 st December 2017	CABs advice MSC and Clients of the need to expedite and begin contract talks.	See Appendix 1 below
10 th January 2018	Harmonisation of Announcements and site visits	See appendix 2 below, joint CAB statement sent to clients and MSC 12 th January 2018.
15 th February 2018	All CABs announce expedited audit	See relevant fisheries pages on MSC website.
21 st March to 4 th April 2018	CABs hold independent remote audits	
10 th April 2018	CABs hold joint P1 scoring meeting.	Joint statement made by CABs to MSC clients and stakeholders
26 th April 2018	ICES release - Coastal States request for ICES to re-evaluate the reference points for Norwegian spring-spawning herring	
27 th April 2018	CAB P1 scoring meeting based on new ICES advice	Draft Scoring proposed and CABs given time to review and reflect
9 th May 2018	CABs confirm scoring to each other via email.	Draft Reports prepared.

The parties involved throughout the harmonisation and scoring process are given in Table 7.

Table 7. CAB harmonisation personal.

Name	CAB
Hugh Jones	MEC
Matthew Cieri	
Billy Hines	Acoura
John Nicholls	
Polly Burns	
Jim Andrews	
Hans Lassen	DNV-GL
Stefan Midteide	
Sandhya Chaudhury	

4 Results

4.1 Stock Status

The data sources for evaluating stock status is unchanged against the assessment that took place in 2015 (Gascoigne et al., 2015). These data include for the assessment period 1988–2017:

- Basic biological information on the herring population dynamics
- Commercial catches-at-age (stock weight-at-age from surveys and since 2009 from catch sampling).
- Three survey indices: Norwegian acoustic survey on spawning grounds in February/March (NASF, 1994–2005, 2015–2017); International Ecosystem Survey in the Nordic Seas (IESNS) covering the adult stock in the Nordic seas (1996–2017) and the juvenile stock in the Barents Sea (1991– 2017).
- Maturity ogive variable by year-class strength.
- Natural mortalities are fixed values from historical analyses (age 2 = 0.9, ages greater than 3 = 0.15).

The stock assessment methodology was changed at the benchmark in 2016 (ICES, 2016a) and is now XSAM. XSAM It is an independent model developed at “Norges regnesentral” used widely for ICES assessment that is fitted to the NSSH herring population dynamic. The model framework has been given the name XSAM to reflect that this is another version (X) of a statistical assessment model. XSAM uses catches abundance indices in the model and in the forecast and also includes error structures in catches and abundance indices (ICES, 2016a, 2017b). The output results are provided with confidence limits.

The results are summarised in Figure 2 demonstrating that the fishing mortality is below F_{MSY} while the SSB is declining but still above $MSY B_{trigger}$.

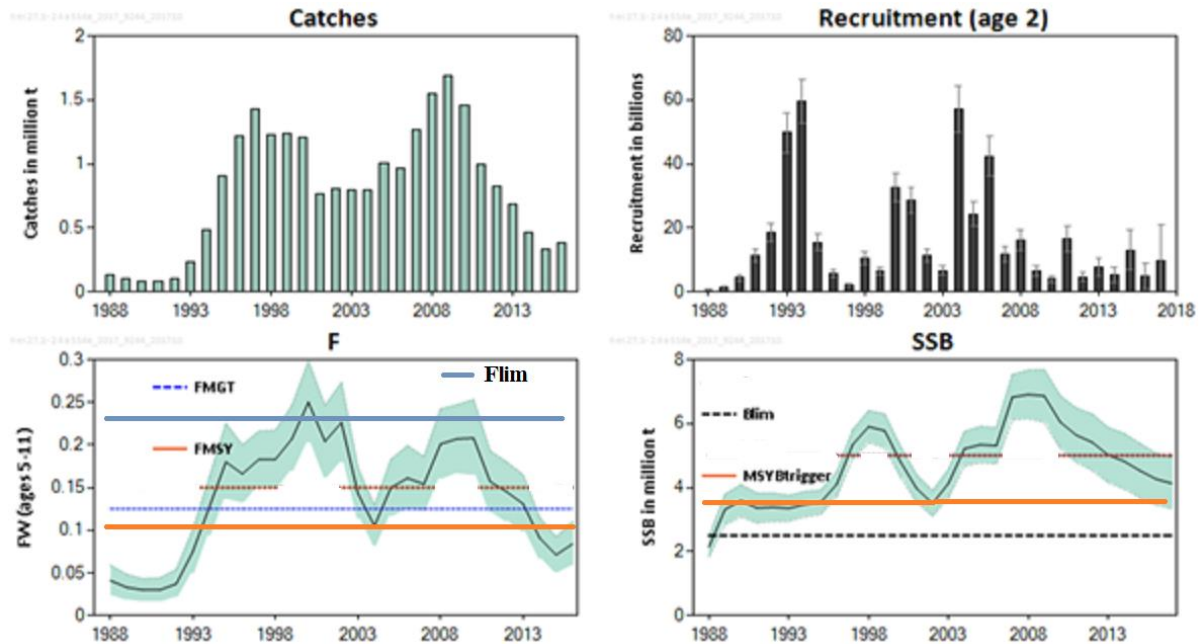


Figure 3. Atlanto-Scandian Herring stock status summary. The figure shows the revised MSY $B_{trigger}$, F_{lim} and F_{MSY} . Broken lines are the old P_a values. Original figure source ICES (2018a), Figure 1, modified to include new RPs from ICES (2018c).

4.2 Reference Points

There are reference points available, Table 4. Following the release of the revised advice which triggered the expedited audit in October 2017, a re-evaluation of reference points and the current management plan was presented in April 2018 by ICES (2018c). ICES advises, based on revised precautionary and MSY reference points, that the current B_{lim} value of 2.5 million tonnes for the Norwegian spring-spawning herring (NSSH) should be retained while B_{pa} and MSY $B_{trigger}$ should be revised to 3.184 million tonnes from 5.0 millions tonnes. ICES furthermore advises that F_{MSY} should be set to 0.102 not previously defined, with F_{lim} revised to 0.234 and F_{pa} revised to 0.182 from 0.15.

Table 8. Reference points for Herring in subareas 1,2,5 and in Divisions 4.a and 14.a. Source ICES (2018a, 2018c).

Framework	Reference point	Value	Technical basis	Source
MSY Approach	MSY $B_{trigger}$	3.184 million t	Set as the maximum value of B_{pa} and the 5 th percentile of SSB when fishing at the F that maximizes annual yield, taking into consideration assessment/prediction error.	ICES (2018c)
	F_{MSY}	0.102	The value of F that maximizes the median long-term yield, without including any MSY $B_{trigger}$ (i.e. constant F exploitation) but including assessment error, was $F = 0.152$. However, this F resulted in long-term $P(SSB < B_{lim}) > 5\%$. Therefore, in	ICES (2018c)

Framework	Reference point	Value	Technical basis	Source
			accordance with ICES guidelines, F_{MSY} was set at the value of F that resulted in long-term $P(SSB < B_{lim}) = 5\%$ when that F was applied in combination with $MSY B_{trigger} = 3.184$ million t; $F_{p05} = F_{MSY} = 0.102$.	
Precautionary approach	B_{lim}	2.500 million t	MBAL (accepted in 1998). Reconsidered in 2018 and still found appropriate	ICES (2018c)
	B_{pa}	3.184 million t	Derived from B_{lim} , using the model-estimated CV for SSB in the assessment year and averaged over the period 2002–2017, i.e. $B_{pa} = B_{lim} \times \exp(1.645 \times \sigma)$, where $\sigma = 0.147$.	ICES (2018c)
	F_{lim}	0.234	Calculated as the value that results in $P(SSB < B_{lim}) = 50\%$ in long-term equilibrium, assuming $B_{lim} = 2.5$ million tonnes, and without including any $MSY B_{trigger}$ (i.e. constant F exploitation) or any assessment error.	ICES (2018c)
	F_{pa}	0.182	Based on medium-term simulations	ICES (2018c)
EU–Faroes–Iceland–Norway–Russia long-term management strategy	SSB_{mgt_lower}	2.5 million t	Medium-term simulations conducted in 2001 and 2014	ICES (2018a)
	SSB_{mgt}	5.0 million t		
	F_{mgt_lower}	0.05		
	F_{mgt}	0.125		

4.3 Stock management

A long-term management plan including as a central element a Harvest control rule, was agreed by the EU, Faroe Islands, Iceland, Norway, and Russia, constituting the Coastal States, in 1999. The plan (reproduced below) is based on the ICES Precautionary approach and maximum sustainable yield reference points for biomass and fishing mortality. The management plan is designed to be responsive to the current status of the stock and to maintain fishing mortality and SSB at levels which constrain harvesting within safe biological limits and support the maximum sustainable yield in the long term. ICES has evaluated the plan and concluded that it is consistent with the precautionary approach. However, with the revision of the reference points presented in ICES (2018c) this plan (or at least central elements of the plan) is now defunct.

The long-term Management plan has four basic elements:

- 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 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 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} (5 000 000 t) to 0.05 at B_{lim} (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 Coastal State HCR is currently not effective due to controversy over the sharing of the pelagic resources in the Northeast Atlantic (mackerel, blue whiting and herring), in 2017 the summed TACs were 20 % - 30 % above the TAC suggested by the Management Plan (805,142 t vs 646,075 t as advised September 2016). The Coastal State meeting in December 2017 agreed that the overall TAC should be below 435,000 t. However, the ICES advice is for 384,197 t and the stock status is now 'at increased risk'. Hence the Harvest strategy and the HCR (PI 1.2.1 and PI 1.2.2) do no longer seem to meet the SG80 criteria, see Appendices for rescoreing.

The sharing 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 60.55 % to Norway, 14.51 % to Iceland, 12.82 % to the Russian Federation, 6.51 % to the EU and 5.61 % to the Faroe Islands (Table 9). Based on client information and assumptions on TAC setting by different Coastal States, the total TAC for 2018 is likely to be around 25 % above the target (435,000 t) that the Coastal States have agreed to (Agreed Record of fisheries Consultations for 2018) and 35 % above the TAC advised by ICES. Using the ICES MSY framework the overshoot is about 6 % (Table 9).

Table 9. TACs set for 2018 for Atlanto-Scandian Herring. Iceland has not yet set its TAC running on a fishing year 1/9-31/8.

State	TAC 2018 (t)	% of 435,000 t (Coastal states)	2007 agreement (%)
EU	28,319 t	6.51	6.51
Faroe Islands	88,000 t	20.2	5.61
Iceland	~70,000 t	16.1 (2007 agreement corrected with the Norwegian overshoot (70/60.55))	14.51
Norway	304,500 t	70.0	60.55
Russia	55,768 t (Not confirmed)	12.82 (2007 agreement)	12.82
Total	~540,000 t	~125	100
Coastal State Agreement December 2017	435,000 t		

State	TAC 2018 (t)	% of 435,000 t (Coastal states)	2007 agreement (%)
ICES advice based on Coastal State Management Plan	384,179 t		
ICES MSY Approach	489,022 t		

5 Conclusion

The main findings are

- The assessment teams accepted the corrections of the abundance acoustic survey and the consequent revision of the stock assessment and scientific advice; ICES (2018a);
- The Assessment teams accepted the revised reference points as advised by ICES (2018c);
- The Atlanto Scandian herring stock is declining but SSB remains above PRI reference and MSY $B_{trigger}$ points;
- Currently, stock management is not effective and the assessment teams defined new conditions against 1.2.1 (Harvest Strategy) (see Appendix 2.);
- The existing condition against PI 3.1.1 remains effective. There are now three conditions for this fishery against 3.1.1 (Management), 1.2.2 (Harvest Control Rule) and 1.2.1 (Harvest Strategy);
- PI 1.2.4c was rescored to take account of the change of the stock assessment methodology from XSA to XSAM
- The three CABs affected by the Expedited Audit (DNV GL, MEC and ACOURA) harmonized the scoring and conditions;
- The Coastal States have called a meeting on 14th May 2018 with the intention of agreeing a revised management plan taking the ICES advice into account. Possible changes in the HCR will be accounted for at the annual surveillance audits.

6 Evaluation Results

Table 10 summarises the history of the assessment scores and presents the overall results of the present expedited audit. Table 9 summarised the individual PI scores. The rescoring is detailed in Appendices - Principle 1 scoring rationales.

Table 10. Rescoring of Principle 1 and history of the fishery assessment for Principle 1

Component	PI No.	Performance Indicator (PI)	Score	Expedited Audit.
Outcome	1.1.1	Stock status	90	Rescored
	1.1.2	Reference points	90	Rescored
	1.1.3	Stock rebuilding		N/A
Management	1.2.1	Harvest strategy	70	Rescored
	1.2.2	Harvest control rules & tools	75	Rescored
Information	1.2.3	Information & monitoring	90	Not Scored
	1.2.4	Assessment of stock status	100	1.2.4c Rescored based on the change in assessment methodology
Overall score at Expedited audit 2018			86.9	
Scored at SA1 2017			88.7 - 1.2.2 rescored at SA1	
Scored at reassessment 2014			90.6	

6.1 Principle Level Scores

The final principal scores are provided in Table 11.

Table 11. Final Principle Scores

Final Principle Scores	
Principle	Score
Principle 1 – Target Species	86.9
Principle 2 – Ecosystem	83
Principle 3 – Management System	88.9

6.2 Summary of PI Level Scores

Grey scores remain as per the PCR Gascoigne et al. (2015) and are unassessed as part of this expedited audit.

Principle	Component	Weighting	PI number	Performance Indicator	Score
1	Outcome	0.5	1.1.1	Stock status	90
			1.1.2	Reference points	90
			1.1.3	Stock rebuilding	N/A
	Management	0.5	1.2.1	Harvest Strategy	70
			1.2.2	Harvest control rules and tools	75
			1.2.3	Information and monitoring	90
			1.2.4	Assessment of stock status	100

Principle	Component	Weighting	PI number	Performance Indicator	Score
2	Retained species	0.2	2.1.1	Outcome	80
			2.1.2	Management	80
			2.1.3	Information	85
	Bycatch species	0.2	2.2.1	Outcome	80
			2.2.2	Management	85
			2.2.3	Information	80
	ETP species	0.2	2.3.1	Outcome	80
			2.3.2	Management	80
			2.3.3	Information	80
	Habitats	0.2	2.4.1	Outcome	90
			2.4.2	Management	90
			2.4.3	Information	95
	Ecosystem	0.2	2.5.1	Outcome	80
			2.5.2	Management	80
			2.5.3	Information	80
3	Governance and Policy	0.5	3.1.1	Legal and customary framework	65
			3.1.2	Consultation, roles and responsibilities	100
			3.1.3	Long term objectives	100
			3.1.4	Incentives for sustainability	90
	Fishery-specific management system	0.5	3.2.1	Fishery specific objectives	90
			3.2.2	Decision making processes	85
			3.2.3	Compliance and enforcement	100
			3.2.4	Research plan	90
			3.2.5	Management performance evaluation	80

6.3 Conditions

Table 12. Conditions

Condition number	Condition	Performance Indicator
1	<p>The SG80 requirement for SI c) above must be met.</p> <p>'Available evidence' may be any relevant evidence, provided through ICES or other verifiable means, that shows the implications of all available management actions (e.g. by coastal states and/or agreements with other relevant states in controlling fishing mortality) in achieving exploitation levels consistent with appropriate harvest control rules and the requirements of PI 1.1.1.</p> <p>This condition is closely aligned to Condition 2.</p>	1.2.2 Raised at PCR.
2	<p>There is a mechanism in place for international cooperation in the fishery (the Coastal States Agreement) but it is not apparently completely effective, since it is currently not working properly due to the withdrawal of the Faroes, and as of 2015 a failure of the coastal states in general to agree a TAC. The dispute has now lasted more than a year, with no sign of formal resolution as yet (although the issue has been mitigated by negotiation) – hence it is not clear that the dispute resolution framework is effective.</p> <p>The fishery should work with the EU, the Pelagic Advisory Council, other certified or suspended UoCs in the fishery and/or other parties as appropriate to support the resolution of the dispute between the coastal states and to re-establish an effective international cooperation mechanism for the fishery.</p>	3.1.1 raised at PCR
3	<p>The prospects of halting stock decline within the next five years are uncertain in the absence of higher levels of recruitment but also because the fishery is not under full control as the quota allocation agreement has broken down. It is therefore not demonstrated that the plan is able to maintain a stock, which is so dependent on sporadic strong recruitment, at or above the management plan target level during such periods of low recruitment.</p> <p>The fishery shall demonstrate that the harvest strategy is achieving its objectives and that overall quotas are within sustainable limits.</p>	1.2.1 Raised as part of this expedited audit

7 References

- Anon, 2018. Updated assessment and forecast for Herring (*Clupea harengus*) in subareas 1, 2, and 5, and in divisions 4.a and 14.a, (Northeast Atlantic) (Norwegian Spring Spawning) due to an error in the estimates from the spawning survey. Working paper for WKADVNSSH December 2017. ICES.
- Essington, T., Pláganyi, É.E., 2013. Model and data adequacy for Marine Stewardship Council key low trophic level species designation and criteria and a proposed new assessment index. Marine Stewardship Council Science Series 1, 171–191.
- Gascoigne, J., Cieri, M., Sieben, C., Honneland, G., 2015. MSC Public Certification Report (PCR) The SPSG, DPPO, PFA, SPFPO & KFO Atlanto-Scandian purse seine and pelagic trawl herring fishery. ME Certification.
- ICES, 2013. Report of the Blue Whiting/Norwegian Spring-Spawning (Atlanto-Scandian) Herring Workshop (WKBWNSSH),. ICES, 11–13 March 2013, Bergen, Norway. ICES CM 2013/ACOM:69. 88 pp.
- ICES, 2014. Herring in Subareas I, II, V and Divisions IVa and XIVa (Norwegian spring-spawning herring). In Report of the ICES Advisory Committee, 2014. ICES Advice 2014, Book 9, Section 9.3.11. ICES, In Report of the ICES Advisory Committee, 2014. ICES Advice 2014, Book 9, Section 9.3.11.
- ICES, 2015. Report of the Working Group on Widely Distributed Stocks (WGWIDE). ICES Headquarters, Copenhagen, Denmark.
- ICES, 2016a. Report of the Benchmark Workshop on Pelagic stocks (WKPELA). ICES Headquarters, Copenhagen, Denmark.
- ICES, 2016b. Report of the Working Group on Widely Distributed Stocks (WGWIDE). ICES Headquarters, Copenhagen, Denmark.
- ICES, 2017a. ICES Advice on fishing opportunities, catch, and effort Northeast Atlantic - Herring (*Clupea harengus*) in subareas 1, 2, and 5, and in divisions 4.a and 14.a, Norwegian spring-spawning herring (Northeast Atlantic). ICES Headquarters, Copenhagen, Denmark.
- ICES, 2017b. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 30 August–5 September 2017, IC. ES Headquarters, Copenhagen, Denmark. ICES CM 2017/ACOM:23. 994 pp.
- ICES, 2018a. ICES Advice on fishing opportunities, catch, and effort Northeast Atlantic - Herring (*Clupea harengus*) in subareas 1, 2, and 5, and in divisions 4.a and 14.a, Norwegian spring-spawning herring (Northeast Atlantic). Published 29 September 2017 her.27.1-24a514a Version 2: 30 October 2017, Version 3: 23 January 2018. DOI: 10.17895/ices.pub.3392. ICES Headquarters, Copenhagen, Denmark.
- ICES, 2018b. Report of the Workshop on the scientific basis for the advice for 2018 for Norwegian Spring Spawning Herring (WKADVNSSH), 4-5 December 2017, I. CES HQ, Copenhagen, Denmark. ICES CM 2017/ACOM:53. 21 pp.
- ICES, 2018c. Coastal States request for ICES to re-evaluate the reference points for Norwegian spring-spawning herring. ICES Special Request Advice Northeast Atlantic and Arctic Ocean Ecoregions Published 26 April 2018, sr.2018.06 <https://doi.org/10.17895/ices.pub.4295>.
- NEAFC, 2016a. Working Group on a Framework for Coastal State Negotiations meetings. North East Atlantic Fisheries Commission, Marylebone, London, UK.

NEAFC, 2016b. 35th Annual Meeting of the North-East Atlantic Fisheries Commission. North East Atlantic Fisheries Commission, Marylebone, London, UK.

Appendices

Appendix 1. Rescoring evaluation tables

Principle 1 scoring rationales

Evaluation Table for PI 1.1.1

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	It is likely that the stock is above the point where recruitment would be impaired.	It is highly likely that the stock is above the point where recruitment would be impaired.	There is a high degree of certainty that the stock is above the point where recruitment would be impaired.
	Met?	Y	Y	Y
	Justification	<p>The scoring refers to Figure 3. The stock is currently above its biomass limit reference point of 2.5 million tonnes which is the minimum biologically acceptable level (MBAL) set in 1998 and below which impaired recruitment has been observed. The SSB is estimated to be above B_{lim}. SG60 is met</p> <p>The most recent estimate of SSB at spawning time in 2016 was 4.266 million tonnes (+5.07 / - 3.46) 95 % confidence interval. The lower 95 % confidence interval estimate of 3.46 million tonnes provides a high degree of certainty that the stock is currently above the point where recruitment would be impaired with a high degree of certainty, i.e. above B_{lim} (2.5 mill. t. The confidence limit of the low estimate for SSB (95 %) is estimated to be above B_{lim}. SG80 and SG100 are met.</p>		
b	Guide post		The stock is at or fluctuating around its target reference point.	There is a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years.
	Met?		Y	N

	Justification	<p>Concerning current status refer to Figure 3 and Table 8. The MSY is not defined. F_{MSY} is set at 0.102. The stock is declining but remains above $MSY B_{trigger} = B_{pa}$. The retrospective estimates of the SSB show that it fell below the old MSY $B_{trigger}$, the biomass precautionary level (B_{pa}) and the management level (SSB_{mgt}) of 5.0 million tonnes in 2014. This was the first time that SSB had fallen below 5.0 million tonnes since 2003. The SSB has been estimated to fall further to 4.13 million tonnes at spawning time in 2017. The revised MSY $B_{trigger}$ is set at 3.184 mill. t and is above this value.</p> <p>The stock is below the target defined in the agreed (but not effective) management plan. Also, the lower confidence limit 3.3 mill tonnes is above the MSY $B_{trigger}$ value.</p> <p>The fishing mortality is estimated to be at 0.084 and is below the F_{MSY} value the upper confidence limit is above the F_{MSY}. SG80 is met. Because the MSY level is not defined, the upper limit of the F confidence limit is above F_{MSY} and the steady decline in SSB there is not a high degree of certainty that the stock is fluctuating around its target reference point. SG100 is not met.</p> <p>Fluctuations in SSB are influenced by the biology of the species and Atlanto Scandian herring are characterized by fluctuating patterns of recruitment. The ongoing scoring of this PI will therefore be strongly influenced by ongoing trends in recruitment. In the absence of improved recruitment, then consideration will need to be given to appropriate stock rebuilding/recovery measures.</p>		
References	ICES (2018a, 2018c)			
Stock Status relative to Reference Points				
	Type of reference point	Value of reference point	Current stock status relative to reference point	
Target reference point	B_{pa} F_{MSY} F_{pa} F_{mgt}	$MSY B_{trigger} = B_{pa} = 3.184$ mill t $F_{MSY} = 0.102$ $F_{pa} = 0.182$ $F_{mgt} = 0.125$	SSB(2017) 4.131 mill. t Confidence limits (2.5 %-97.5 %) [3.3;4.9 mill. t]	
Limit reference point	B_{lim}	$B_{lim} = 2.5$ mill t	$F(2016) = 0.084$ Confidence limits (2.5 %-97.5 %) [0.058;0.110]	
OVERALL PERFORMANCE INDICATOR SCORE:				90
CONDITION NUMBER (if relevant):				NA

Evaluation Table for PI 1.1.2

PI 1.1.2		Limit and target reference points are appropriate for the stock		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	Generic limit and target reference points are based on justifiable and reasonable practice appropriate for the species category.	Reference points are appropriate for the stock and can be estimated.	
	Met?	Y	Y	
	Justification	<p>Following a request by the Coastal States to ICES in December 2017 to continue with their re-evaluation of reference points ICES provided revised reference points in April 2018. The reference points meet internationally agreed standards and have been evaluated and endorsed by ICES as consistent with a precautionary approach to managing the stock.</p> <p>A raft of appropriate biological reference points, for biomass and fishing mortality have been defined and agreed within a Coastal states agreement and embedded in a management plan developed by ICES. SG60 and SG80 are met.</p> <p>The Coastal States agreed to meet (before 15 May 2018) to consider a possible revision of the long-term management strategy.</p>		
b	Guide post		The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.	The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity following consideration of precautionary issues.
	Met?		Y	Y

	Justification	<p>ICES reviewed the reference points of Norwegian spring spawning herring in 2013 and again in 2018. In the period 1950 – 2017 the stock size shows a wide dynamic range, with clear signs of impaired recruitment at low stock sizes. With a fitted segmented regression the estimates of B_{lim} are distributed around the current B_{lim} value of 2.5 million tonnes. Thus, ICES considers that the current B_{lim} remains appropriate and remain unchanged at 2.5 million tonnes. ICES considers B_{lim} to be consistent with the precautionary approach and set at a level which should maintain full reproductive capacity for the stock. SG80 is met.</p> <p>Defining the biomass limit reference point in terms of the stock and recruitment relationship has been rigorously investigated. The B_{lim} is discussed above while the MSY $B_{trigger}$ is set as the maximum value of B_{pa} and the 5th percentile of SSB when fishing at the F that maximizes annual yield, taking into consideration assessment/prediction error. SG100 is met.</p>		
c	Guide post		The target reference point is such that the stock is maintained at a level consistent with B_{MSY} or some measure or surrogate with similar intent or outcome.	The target reference point is such that the stock is maintained at a level consistent with B_{MSY} or some measure or surrogate with similar intent or outcome, or a higher level, and takes into account relevant precautionary issues such as the ecological role of the stock with a high degree of certainty.
	Met?		Y	N
	Justification	<p>The SSB precautionary approach reference point and F_{MSY} are set firmly based on the stock recruitment relationship. Simulation studies demonstrate that these are appropriate for the NSSH stock, see Table 8. The management plan aims to constrain harvesting within safe biological limits and is designed to provide a sustainable fishery in the long term. SG80 is met.</p> <p>Whilst the current management plan / harvest control rule is clearly consistent with MSY reference points for both biomass and fishing mortality it is not entirely clear that precautionary issues such as the ecological role of the stock are taken into account within that management plan with a high degree of certainty. Environmental data, both physical and biological, are quite clearly collected and analysed on the ecosystem surveys which support the stock assessment. However, the way in which these data are incorporated into the stock modelling, procedures and how they are utilised in the whole management strategy, is not clear. SG 100 is not met.</p>		
d	Guide post		For key low trophic level stocks, the target reference point takes into account the ecological role of the stock.	

	Met?		N	
	Justification	<p>Herring play an important role in the North East Atlantic and Arctic ecosystem as prey species for larger fish, birds and marine mammals and as a predator on capelin and zooplankton. This provides clear evidence of their role as a lower trophic level species. However in the North East Atlantic and Arctic ecosystem herring cannot be considered to be a key LTL species because it does not meet at least two of the three sub- criteria in CB2.3.13 in Certification requirements v1.3 as cited in italics below.</p> <p><i>i) A large proportion of the trophic connections in the ecosystem involve this stock, leading to significant predator dependency.</i></p> <p><i>In the North East Atlantic and Arctic there are numerous other species which form important sources of prey for piscivorous fish sea birds and mammals. There are mackerel, horse mackerel, capelin, polar cod, Norway pout, sandeels, blue whiting, Argentines, Maurolicus and juvenile saithe and cod.</i></p> <p>According to the connectance score (=0.0005) calculated by Essington and Pláganyi (2013), the proportion of the trophic connections in the ecosystem involving this stock are not large as it falls below the required 4 % threshold level defined in the MSC certification requirements CR v1.3.</p> <p><i>ii) A large volume of energy passing between lower and higher trophic levels passes through this stock.</i></p> <p>There are numerous other species of planktivores, most of which are listed above in (i), through which energy passes from primary production through zooplankton to fish. In the Arctic ecosystem even adult cod are known to feed on dense concentrations of euphausiids in certain areas at certain times of the year and haddock have been recorded feeding on zooplankton.</p> <p><i>iii) There are few other species at this trophic level through which energy can be transmitted from lower to higher trophic levels, such that a high proportion of the total energy passing between lower and higher trophic levels passes through this stock (ie the ecosystem is ‘wasp wasted’</i></p> <p>As noted above there are numerous other species of planktivores which are abundant in the North East Atlantic and Arctic ecosystems through which energy is passed to the top predators. Quite clearly these ecosystems are not ‘wasp wasted’</p> <p>Further, historical, evidence for herring not meeting the requisite criteria for a key LTL species can be seen when the NSS herring stock was close to extinction in the late 1980s, there was no evidence of other stocks or species being placed at risk as the trophic role of herring was probably replaced by other species, such as capelin and young gadoids.</p> <p>Within the North East Atlantic and Arctic fish ecosystem there is no evidence that any species of fish bird or mammal is entirely dependent on herring as a source of food</p>		
	References	Anon (2018) and ICES (2018c), ICES (2013, 2014), Essington and Pláganyi (2013).		

OVERALL PERFORMANCE INDICATOR SCORE:	90
CONDITION NUMBER (if relevant):	NA

Evaluation Table for PI 1.2.1

PI 1.2.1		There is a robust and precautionary harvest strategy in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The harvest strategy is expected to achieve stock management objectives reflected in the target and limit reference points.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points.	The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points.
	Met?	Y	Y	N
	Justification	<p>The elements of the long term management plan as agreed by the Coastal States are designed to be responsive to the state of the stock insofar as it effectively reduces the advised annual TAC if SSB is estimated to have fallen below the management plan upper target of 5 Mt. That reduction, in the advised catch level, is achieved through successive reductions in the fishing mortality, used to calculate it. That reduction is at least linearly linked from the management plan target $F=0.125$ at B_{pa} to effectively zero at the biomass limit level. ICES confirms that the management plan is aimed at constraining the harvest within safe biological limits and is designed to provide sustainable fisheries in the long term. The annual ICES advice to the Coastal States has been based on the harvest control rule and management plan since 1998. The advice is in the form of the predicted catch corresponding to the advice which is the basis on which to set the total TAC. The strategy is therefore expected to achieve stock management objectives reflected in the target and limit reference points. SG60 is met.</p> <p>The management plan has been used as the basis for the provision of advice by ICES and setting an annual TAC, through the Coastal States agreement, since 1999. The plan has remained unchanged since 1999 and is currently partly achieving its objectives as evidenced by the current levels of F while the SSB is dropping below the MSY $B_{trigger}$ level. TAC levels have been reduced over recent years as SSB has now fallen below the Management plan and MSY biomass trigger level of 5.0 million tonnes. SG 80 is met.</p> <p>However, there is an inevitable time lag in the way that the plan reacts to changes in SSB. Whilst the estimates of SSB, on which the advised fishing mortality is determined, are reliable the impact of the time lag, on the effectiveness of the management plan, is minimal. In the current situation, where SSB is consistently overestimated, the management plan cannot respond quickly enough to falling SSB</p>		

		<p>levels. Therefore, the plan, which underpins the harvest strategy, cannot be said to be designed to achieve stock management objectives reflected in the target and limit reference points. The requirements at SG 100 are therefore not fully met.</p> <p>The update of the acoustic survey data may influence the performance of the assessment model and also the introduction of the XSAM model may have better performance than previous assessment models. It may therefore be possible or even likely that the scoring could be increased in the certification period when information on the performance of the assessment is available.</p>		
b	Guidepost	The harvest strategy is likely to work based on prior experience or plausible argument.	The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives.	The performance of the harvest strategy has been fully evaluated and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.
	Met?	Y	N	N
	Justification	<p>The fishing mortality rate remains below target values and catch levels have decreased in line with the continuing reductions in SSB since 2009. Historically the stock has been rebuilt from very low levels. SG60 is met.</p> <p>The harvest strategy in the form of the management plan has been fully tested and in general, the stock has been managed in compliance with the management plan. However, In 2013 the SSB fell below the current management plan target and precautionary approach level of 5 million tonnes and has continued to decline since that time.</p> <p>By 2018 the SSB is still above B_{lim} of 2.5 million tonnes and above the $MSY B_{trigger}$ of 3.184 mill tonnes. Safeguards are in place within the strategy to ensure that there is a low probability that SSB will fall below that biomass limit level. Whilst those safeguards appear to be responding satisfactorily in relation to the biomass limit level the prospects of halting stock decline and returning to above the management target level within the next five years are uncertain in the absence of higher levels of recruitment but also because the fishery is not under full control as the quota allocation agreement has broken down. It is therefore not demonstrated that the plan is able to maintain a stock, which is so dependent on sporadic strong recruitment, at or above the management plan target level during such periods of low recruitment. The current decline in SSB is an additional factor suggesting that the current harvest strategy is ineffective in achieving stock at target levels. SG 80 is not met.</p>		
c	Guidepost	Monitoring is in place that is expected to determine whether the harvest strategy is working.		

	Met?	Y		
	Justification	There is a comprehensive stock monitoring and assessment programme in place leading to an annual evaluation of the success of the harvest strategy. This is based on accurate catch statistics and an appropriate level of biological sampling of catches and landings. Whilst it is accepted that there may be some unaccounted mortality in this fishery related to the fishing operation, slippage and discarding, careful monitoring and observation shows that the level is very low and does not affect the annual assessment of the status of the stock on which the harvest strategy is based. ICES regards the current level of unaccounted mortality to be negligible in the context of the stock assessment. SG60 is met.		
d	Guidepost			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			Y
	Justification	The plan was re-evaluated, ICES (2014) following a request from the Coastal States. As a result of the thorough investigation of the plan and the related reference points ICES recommended that the plan remained unchanged. The Coastal states have committed themselves to an evaluation of the harvest strategy and the HCR in 2018. This process is ongoing. SG100 is met		
e	Guidepost	It is likely that shark finning is not taking place.	It is highly likely that shark finning is not taking place.	There is a high degree of certainty that shark finning is not taking place.
	Met?	Not relevant	Not relevant	Not relevant
	Justification	Scoring issue need not be scored if sharks are not a target species. Herring is not a shark.		
References		ICES (2014, 2018a, 2018c)		
OVERALL PERFORMANCE INDICATOR SCORE:				70
CONDITION NUMBER (if relevant):				3

Evaluation Table for PI 1.2.2

PI 1.2.2		There are well defined and effective harvest control rules in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	Generally understood harvest rules are in place that are consistent with the harvest strategy and which act to reduce the exploitation rate as limit reference points are approached.	Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.	
	Met?	Y	Y	
	Justification	<p>The current strategy is to set an annual TAC in accordance with the management plan agreed by the Coastal States in 1999. This strategy is supported by technical and conservation measures such as the ban on discarding and the minimum landing size. The annual implementation of the harvest strategy is the responsibility of the Coastal States group, who meet at least annually to agree on the national quota shares in the fishery. The harvest strategy has clear rules which effectively reduce the fishing effort, and thus the resultant annual TAC, if the SSB falls below the Management plan trigger level of 5.0 million tonnes. Fishing effort is effectively reduced to zero if the SSB falls to the biomass limit level. Hence the harvest strategy includes a HCR consistent with the strategy and include an obligation to reduce the exploitation rate as limit reference points are approached. SG60 is met.</p> <p>The rules are well-defined, section 4.3. The management plan governing the subsequent allocation of the TAC in this fishery, both nationally and by area, through the Coastal States Agreement, are also well defined and understood. Similarly, the rules allocating shares in the quota to individual fishing enterprises at the national level are generally understood. The rules governing this type of harvest strategy are common and well understood. This clearly meets the requirements at SG 80 is met</p>		
b	Guide post		The selection of the harvest control rules takes into account the main uncertainties.	The design of the harvest control rules takes into account a wide range of uncertainties.
	Met?		Y	N

	Justification	<p>The main uncertainty affecting the harvest control rule is the reliability of the annual stock assessment in estimating current SSB and fishing mortality.</p> <p>In the past there have been small discrepancies in the official reported catch and the estimates of that catch by the ICES assessment working group. This is related to the problem of underreporting, slippage, discarding and the fishing operation. ICES (2018a) notes that these although not included in the assessment are negligible. This area of potential uncertainty is kept under regular review by the assessment working group.</p> <p>Biological sampling of the landings by all countries except Greenland ensures an adequate coverage of all the landings (around 90 % of the catch is sampled in recent years). This level of coverage is supported by sampling the catch at sea on the Norwegian reference fleet. The main uncertainties which affect the harvest control rules are therefore taken into account. SG 80 is met.</p> <p>The annual stock assessment, underpins the ICES advice which does take into account the uncertainty generated by the current Coastal States dispute. The dispute has led to annual catches exceeding the advised TAC by more than 10 %. Predicted catches include this uncertainty in the determination of catch levels in the subsequent fishing year.</p> <p>The recent revision of the survey data and the introduction of the XSAM model leaves some doubt if the known uncertainties related to overestimations in the assessment have been dealt with effectively. SG 100 is not met.</p>		
c	Guide post	There is some evidence that tools used to implement harvest control rules are appropriate and effective in controlling exploitation.	Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.	Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the harvest control rules.
	Met?			
	Justification	<p>At the generic level, setting an annual TAC, based on a reliable annual estimate of stock status, backed by a precautionary long term Management plan, together with technical measures, does have a reliable track record for many stocks in the Northeast Atlantic. The management of the Norwegian Spring Spawning herring stock has all these elements in place supported by rigorous surveillance, monitoring and enforcement of the national quotas and technical measures. The problem of slippage, discarding and underreporting of landings is not considered to be a problem in relation to the annual stock assessment and subsequent advice. Although the SSB fell below the Management plan level in 2013 for the first time since 2003, the harvest control rules have ensured an appropriate reduction in fishing effort to safeguard the stock from falling to the critical biomass limit level. This provides some evidence from past performance, that the harvest control rules and tools, currently in place, are effective and are appropriate methods to control exploitation SG60 is met.</p> <p>In the past the Management Plan has been effective and has worked successfully to control exploitation and even to-day exploitation has remained within the desired bounds. Responsibility for the allocation of the annual TAC is administered by a Coastal States Agreement which for this fishery involves the European Union, the Faroe Islands, Iceland, Norway and the Russian Federation. There are currently internal issues in relation to that agreement and the agreement has not been successful since 2013. All participating countries have declared their intention to set autonomous quotas. Hence, the HCR is not effectively implemented as the quota allocation among the Coastal states is disputed, see Table 9 and the table below.</p>		

		Year	Advice (t)	Agreed TACs (t)	ICES Catch (t)
		2007	1,280,000	1,280,000	1,266,993
		2008	1,518,000	1,518,000	1,545,656
		2009	1,643,000	1,643,000	1,6873.371
		2010	1,483,000	1,483,000	1,457,015
		2011	988,00 - 1,170,000	988,000	992,997
		2012	833,000	833,000	826.000
		2013	619,000	692,000	684,743
		2014	418,487	436,893	461.306
		2015	283,013	328,206	328,740
		2016	316,876	376,612	383,174
		2017	437,364	805,142	
		2018	384,179	~570,000	
		Evidence over recent years clearly shows that current management actions (tools in use) used to share the scientifically advised annual TAC are not effective in achieving the exploitation levels required under the harvest control rules. SG 80 is not met.			
References		Agreed Record of consultations 2007 – 2018. (ICES, 2018a)			
OVERALL PERFORMANCE INDICATOR SCORE:					75
CONDITION NUMBER (if relevant):					2 - existing

Evaluation Table for PI 1.2.3

PI 1.2.3		Relevant information is collected to support the harvest strategy		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	Some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.	Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.	A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly related to the current harvest strategy, is available.
	Met?	Y	Y	Y
	Justification	<p>The Norwegian spring spawning herring stock is a widely migratory stock which has shown large fluctuations in stock abundance, related to large recruitment variability and a dependency on the irregular occurrence of very strong year classes, over the past 60 years. These changes have been reflected in the fishery which, for a period from the late 1960s to the late-1980s, completely collapsed. The importance and turbulent history of this stock has resulted in intense biological research targeted at an understanding of the fundamental biology and underlying dynamics of the stock.</p> <p>Those research programmes have provided valuable information on seasonal distribution and migration of the stock throughout the whole of its geographic range.</p> <p>The harvest control rules, applicable to this stock, operate over the whole of its geographic range through the Coastal States agreement. Research programmes in Norway have also clarified the mix, at certain times of the year between the spring spawning stock and local populations of coastal and fjord herring.</p> <p>Through the well monitored biological sampling programme adequate data are collected on density dependent changes in the maturity status of the stock, growth rates and natural mortality. These all strongly support the annual stock assessment process. Research effort has also been deployed into attempts to understand the underlying processes affecting the huge recruitment variability and the relationship between spawning stock size and recruitment. Such information is important in terms of the prediction of stock trends and the lack of a complete understanding does generate a degree of uncertainty in that respect.</p> <p>Through the individual knowledge and contributions of the ICES assessment working group there is a comprehensive data base on the structure of the fleets exploiting the resource both past and present. This includes knowledge of gear types, numbers and sizes of vessels and in some cases the proportion of the national quotas taken by each vessel type on an annual basis. This database is regularly reviewed and updated.</p>		

		<p>Information on age, growth and sex is routinely collected as part of the scientific sampling programmes by all participating countries except Greenland. This programme currently covers 95 % of the total landings. In addition to the onshore scientific sampling programme sampling of the catch at sea is carried out on Norwegian reference fleet fishing vessels.</p> <p>In addition to the data collected as a statutory requirement for direct input to the annual stock assessment there is a now a body of supporting environmental data.</p> <p>Information on the physical environment, abundance of zooplankton and other prey species is collected on the two annual ecosystem surveys covering the Norwegian and Barents Seas. This represents a movement towards the vision of a more ecosystem / multi species based approach to fish stock management in the future.</p> <p>Most of the basic research is carried out by Norwegian scientists but there is support from research programmes in some of the other countries, who have an interest in this fishery, in particular Russia.</p> <p>Most of the basic research is carried out by Norwegian scientists but there is support from research programmes in some of the other countries, who have an interest in this fishery. The requirements at SG 100 are fully met.</p>		
b	Guide post	Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.	Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.	All information required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.
	Met?	Y	Y	N
	Justification	<p>The total landings data are adequately monitored and most uncertainty related to their validity is removed through national monitoring and surveillance programmes. These include inspections at sea, surveillance by fisheries patrol aircraft and at sea monitoring on reference fleet vessels. In these ways earlier concerns of the assessment working group regarding discarding at sea, slippage and underreporting have been satisfactorily addressed. Whilst they accept that there is still likely to be an element of unrecorded mortality the assessment working group are satisfied that the quantities involved are trivial compared with the total landings.</p> <p>Basic biological data from the Norwegian spring spawning herring fishery is routinely collected by all countries participating in the fishery with the exception of Greenland. The Greenland catch in 2011 was only 3,426 tonnes and failure to sample this is not considered to be a problem. This sampling programme has covered over 90 % of the landings (95 % in 2011) and provides strong support for the age based analytical stock assessment process The annual stock assessment which underpins the harvest control rule is further supported by a number of fishery independent surveys which provide indices of the abundance of various year classes in the stock The most important of these fishery independent surveys is the international Nordic Seas ecosystem survey. This uninterrupted time series dates back to 1991 and provides a fishery independent estimate on the abundance of age groups 1 and 2 and 4 – 15+ years old in the stock. The use of the fishery independent survey data was reviewed in the last benchmark assessment, including the use of three historical survey series no</p>		

		<p>longer carried out. These series continue to be used in the 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. Thus, all the relevant information required for carrying out an annual stock assessment, which provides the basic information on the status of the stock on which the harvest control rules are based, is appropriately monitored. Monitoring of landings in support of the TAC control is carried out contemporaneously with the fishery and enforcement action can be introduced quickly.</p> <p>Whilst there are some minor uncertainties in the data sources which are not serious enough to affect the robustness of the assessment the fishery does not meet the high standard required at SG 100 level of this performance indicator.</p>		
c	Guide post		There is good information on all other fishery removals from the stock.	
	Met?		Y	
	Justification	<p>There is a requirement that by-catches of NSS herring in other fisheries (e.g. mackerel and blue whiting) are landed, recorded and counted against NSSH quota.</p> <p>ICES notes that with the more northerly distribution of the NEA mackerel fishery and overlap with the NSSH fishery in summer. This implies potential discarding in international waters resulting in the potential for some unaccounted herring mortality. However, the Coastguard vessels maintain a close watch on the pelagic fleet and IMR also has information from the reference fleet which would include recording any accidental losses of herring through gear damage and slippage.</p> <p>The working group has considered this potential and concluded that it does not represent a significant problem. Consequently, the assessment is undertaken under the assumption that the catch recording - no discard requirements are met in full. SG80 is met.</p>		
References		ICES (2018a)		
OVERALL PERFORMANCE INDICATOR SCORE:				90
CONDITION NUMBER (if relevant):				NA

Evaluation Table for PI 1.2.4

PI 1.2.4		There is an adequate assessment of the stock status		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post		The assessment is appropriate for the stock and for the harvest control rule.	The assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery.
	Met?		Y	Y
	Justification	<p>The assessment is an age based statistical analytical assessment model (XSAM; ICES (2017b)) that uses catches in the model and in the forecast and also includes error structures in catches and abundance indices.</p> <p>Input data used in the assessment model include data for the period 1988 - 2017. These data include Commercial catches-at-age (stock weight-at-age from surveys and since 2009 from catch sampling). Three survey indices: Norwegian acoustic survey on spawning grounds in February/March (NASF, 1994 – 2005, 2015 – 2017); International Ecosystem Survey in the Nordic Seas (IESNS) covering the adult stock in the Nordic seas (1996 – 2017) and the juvenile stock in the Barents Sea (1991– 2017). Maturity ogive variable by year-class strength. Natural mortalities are fixed values from historical analyses (age 2 = 0.9, ages greater than 3 years M = 0.15).</p> <p>The stock assessment is based on a database of catch statistics and basic supporting biological information, such as age composition and maturity, dating back to 1988. All countries participating in the fishery, with the exception of Greenland which only supplies catch data, are contributors to the scientific sampling database. Their national representatives, with the exception of Greenland, attend and take part in the annual evaluation of those data at the ICES stock assessment working group.</p> <p>Most of these surveys are acoustic surveys as is appropriate for a pelagic shoaling species. Commercial catch per unit of effort (CPUE) data are notably unreliable in large scale pelagic fisheries and no commercial cpue series are used in the assessment process. SG 80 and SG 100 are fully met.</p>		
b	Guide post	The assessment estimates stock status relative to reference points.		
	Met?	Y		

	Justification	Stock status is evaluated based on reference points cf, status table PI 1.1.1. SG60 is met.		
c	Guide post	The assessment identifies major sources of uncertainty.	The assessment takes uncertainty into account.	The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way.
	Met?	Y	Y	Y
	Justification	<p>The main uncertainties in relation to the assessment are the potential for unaccounted mortality, consistency and reliability of the survey data, estimates of natural mortality and recruitment, and changes in catchability at age. These sources of uncertainty are clearly identified by the assessment Working Group and their potential effect, on the estimation of stock status, evaluated annually.</p> <p>The potential problem of unaccounted mortality is kept under constant review, its effect on the assessment is currently considered to be negligible by the WGWISE.</p> <p>SG 60 is met.</p> <p>A wide range of fishery independent surveys which provide separate windows on the abundance of various age groups. Changes in the behaviour of herring in particular changes in migration and seasonal distribution can have a negative effect on the reliability of these survey data. This area of potential uncertainty is evaluated every year and the impact on the assessment of any one survey, or age groups within a survey, can be reduced by down-weighting its effect on the assessment or rejecting the survey completely.</p> <p>All these potential sources of uncertainty are carefully considered during the exploratory phases of the annual assessment and taken into account before a final assessment is produced. The current status of the stock in relation to SSB, the MSY biomass trigger level and fishing mortality indicates that the assessment, which underpins the harvest strategy and TAC controls, is both appropriate and robust. SG 80 is met.</p> <p>The XSAM model that replaced the former used XSA model deals with uncertain in the data and provides confidence limits on the estimates, cf PI 1.1.1. Hence the assessment process takes into account a wide range of relevant uncertainties and provide stock status in a probabilistic way. SG 100 is met.</p>		

d	Guide post			The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.
	Met?			Y
	Justification	<p>Data are under constant review and the recent amendment of the acoustic survey data illustrates that not only are the models under scrutiny in the benchmark process but also data are under review. The Benchmark process explores other assessment models and compare the results with the established modelling procedure.</p> <p>It is an important and robust element of the ICES stock assessment process that any major changes, to either a model, modelling procedures, input data (including the fishery independent surveys), have to be evaluated and endorsed by an independent benchmark workshop before they can be accepted for use in an assessment.</p>		
e	Guide post		The assessment of stock status is subject to peer review.	The assessment has been internally and externally peer reviewed.
	Met?		Y	Y
	Justification	<p>The assessment is subject to peer review within Coastal States agreement, by the WGWIDE and the ICES Advisory Committee on Management (ACOM) The Coastal States annual meeting reviews the assessment independently of ICES, even though many of the scientists involved are also members of the Working group. This process satisfies the minimum requirements at SG 80</p> <p>The assessment of the stock is also subject to rigorous annual review at a number of other levels. An integral part of the ICES peer review process is to commission occasional external reviews of specific stock assessments. These external reviews involve specialists from other countries, either not directly involved with that specific stock or completely outside the ICES stock assessment system. Assessments, assessment methods, management procedures and advice are also subject to frequent scrutiny by a range of third parties from the fishing industry itself to a variety of environmental NGOs. This rigorous independent process fully satisfies the requirements at SG 100</p>		
References		ICES (2017a, 2017b)		
OVERALL PERFORMANCE INDICATOR SCORE:				100
CONDITION NUMBER (if relevant):				NA

Appendix 2. Conditions

Table 13. Condition 1 – unchanged from Surveillance Year 1.

Performance Indicator	PI 1.2.2 There are well defined and effective harvest control rules in place
Score	75
Rationale	<p>SI: 1.2.2 c (60).</p> <p>Conclusion: Available evidence over recent years shows that current management actions (tools in use) used to share the scientifically advised annual TAC cannot be considered appropriate nor effective in achieving the exploitation levels required under the current harvest control rules. As a consequence, the fishery does not meet the SG 80 scoring guideposts. SG80: Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.</p>
Condition	<p>The SG80 requirement for SI c) above must be met. 'Available evidence' may be any relevant evidence, provided through ICES or other verifiable means, that shows the implications of all available management actions (e.g. by coastal states and/or agreements with other relevant states in controlling fishing mortality) in achieving exploitation levels consistent with appropriate harvest control rules and the requirements of PI 1.1.1.</p> <p>This condition is closely aligned to Condition 2.</p>
Milestone	<p>Year 1: Communication should be begun or continued with Coastal State representatives to promote delivery of exploitation levels consistent with meeting the requirements of Principle 1. Evidence should also be provided of any other actions or analyses undertaken in relation to prevailing exploitation levels and/or the implications of these for the stock. The client shall provide documented evidence of all related correspondence, analyses, actions, meetings, representations etc.</p> <p>Year 2 and Year 3: It is understood that the condition could be closed at any time during the certification. Year 2 and 3 should therefore provide updated information on the issues set out in Yr 1.</p> <p>Year 4: The SG80 requirements should be met. At the time this is achieved, this PI will be rescored at 80.</p>
Client Action Plan	<p>Action year 1: During negotiations for 2016 TACs and sharing arrangements, arrange meetings with other UoCs in the fishery and European Commission to encourage a management solution for 2016.</p> <p>Outcome year 1. By March 2016, all Coastal States have formally agreed on management and sharing arrangements for 2016 and beyond.</p>
Observations at Year 1 SA	<p>Outcome year 1 has not been met. The actions for year 1 has grosso modo taken place, but the result was not an overall agreement between coastal states on sharing and management for this stock.</p> <p>What has been achieved is Coastal States agreement on the scientific basis for the advice and continued respect for the long term management plan in place. A bilateral understanding of management decisions and reciprocal access agreement has been developed between EU and Norway for the ASH fishery in 2017.</p> <p>Lobbying</p>

	<p>EU industry lobbied hard in 2015 to encourage the EU/member states and the Norwegian industry to reach at least a bilateral agreement on the ASH fishery. In 2016, the EU industry again lobbied for the EU/member states and Norway to reach a bilateral agreement if an agreement between the coastal states could not be reached.</p> <p>During 2014, 2015 and 2016 the EU industry has had numerous contacts with the EC, member states administrations on the sharing and management of ASH. The ASH management has also been discussed in the Pelagic Advisory Council (where the relevant NGO's on pelagic fisheries in the N E A are active). Here the accent has been mostly on the scientific underpinning of the management of this stock.</p> <p>Industry liaison The EU industry and Norwegian industry have met several times to discuss the management of the ASH fisheries. This was also the case during 2014, 2015 and 2016. Over the years a close working relationship has developed between the EU and Norwegian pelagic industries.</p> <p>Apart from these bilateral discussions, in 2014 and 2015 meetings have also been held among the industries of the 4 coastal states (EU, Norway, Faroe Islands and Iceland) on the management of the pelagic stocks in the N E A, including ASH. The character of these meetings were rather exploratory as the industries of the coastal states had grown apart following the strong disagreement on mackerel fisheries.</p> <p>In fact the bilateral collaboration between the EU and Norwegian industry has resulted in a joint MSC trajectory for mackerel (under the MINSAs collaboration). Also for the blue whiting certification process – initiated by the EU industry – the Norwegian industry has been invited to join. In first instance the Norwegian industry decided not to join this certification. Recently however they have decided to be certified and to join our blue whiting certification. This process is now on-going.</p> <p>For ASH no initiatives in relation to joint MSC certificates outside the EU have been initiated yet.</p> <p>Science The client group, led by chief scientists from DPPO Claus Sparrevohn (WGWIDE, WGPELA) and Martin Pastoors from PFA (WGWIDE), actively contributed to ICES scientific work in 2015 and 2016. The industry is also taking part in an ongoing process to evaluate the reference points for the ASH stock. This work is not finished yet and so no report is available at this point.</p>
References evidence	/ List of participants and contents (ICES, 2015, 2016a, 2016b).
Status condition	of Behind target – Formally agreed management and sharing arrangements for 2016 have not been achieved although significant progress has been made by the fishery to achieve this. Monitoring required of this condition in the next audit.

Table 14. Condition 2 – Not evaluated in this audit as relates to Principle 3.

Performance Indicator	<p>PI 3.1.1. The management system exists within an appropriate legal and/or customary framework which ensures that it:</p> <p>Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2; and observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and incorporates an appropriate dispute resolution framework.</p>
------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Score	65
Rationale	There is a mechanism in place for international cooperation in the fishery (the Coastal States Agreement) but it is not apparently completely effective, since it is currently not working properly due to the withdrawal of the Faroes, and as of 2015 a failure of the coastal states in general to agree a TAC. The dispute has now lasted more than a year, with no sign of formal resolution as yet (although the issue has been mitigated by negotiation) – hence it is not clear that the dispute resolution framework is effective.
Condition	The fishery should work with the EU, the Pelagic Advisory Council, other certified or suspended UoCs in the fishery and/or other parties as appropriate to support the resolution of the dispute between the coastal states and to re-establish an effective international cooperation and dispute-resolution mechanism for the fishery.
Milestones	<p>Year 1 – Make contact with other interested parties and lobby the European Commission to initiate negotiations for a mechanism, for cooperation and dispute resolution between the Coastal States which is effective in agreeing an appropriate management mechanism consistent with the management plan. Score 80 if dispute resolved, 65 if not.</p> <p>Year 2 – If the dispute is not resolved, continue to lobby. Demonstrate that discussions have taken place and progress has been made towards agreeing an appropriate cooperation and dispute resolution system within the Coastal States Agreement. If it appears that the coastal states, cannot agree, evaluate options for development of an agreement at the level of the various fleets involved in the fishery to ensure that the TAC is not overshoot to an unsustainable level in the future, directly or via the Pelagic AC or other bodies as appropriate. Note: this approach should be subject to harmonisation with other MSC UoCs in the fishery, as appropriate. Score 80 if dispute resolved, 65 if not.</p> <p>Year 3 – Demonstrate that an appropriate system for coastal states cooperation and dispute resolution is agreed. Alternatively, develop a fleet level management plan to ensure sustainable management in the absence of international agreement, in agreement with other MSC UoCs and CABs. Score 80 if dispute resolved, 65 if not.</p> <p>Year 4 – Demonstrate that the effective coastal states cooperation/dispute resolution system is in place and operational. Alternatively, validate and implement the fleet-level plan, in agreement with other MSC UoCs and CABs. Score 80.</p>
Client Action Plan	<p>Action year 1:</p> <p>During negotiations for 2016 TACs and sharing arrangements, arrange meetings with other UoCs in the fishery and European Commission to gather information and evidence. Participate in ICES advice drafting group on widely distributed stocks and the ICES preparatory meetings for the stock benchmark in January 2016. Lobby all parties all parties in seeking a joint solution within the framework of a long term management plan.</p> <p>Outcome year 1.</p> <p>By March 2016, all Coastal States have formally agreed on management and sharing arrangements for 2016 and beyond.</p>
Observations at Year 1 SA	<p>Numerous actions have taken place, led by the Client Group of EU fishing industry representatives. (see condition 1)</p> <p>During 2015 and 2016 the EU industry had numerous contacts with their member state administrations, with the EC, and liaised directly with the Norwegian, Faroese and Iceland fishing industry representatives on the margin of Coastal States meetings and at NEAFC meetings</p> <p>There is still no overall agreement on TAC shares to reduce fishing mortality to FMSY. Sustainable management for the stock has not yet been achieved. The condition remains open. A new long-term management plan is scheduled to be</p>

	developed in 2017, and there is still no formal agreement regarding sharing arrangements between Coastal States for the ASH fishery. The expected outcome hasn't been reached and the condition remains
References evidence	/ List of participants and contents: (NEAFC, 2016a, 2016b)
Condition status	Behind target – Formally agreed management and sharing arrangements for 2016 have not been achieved although significant progress has been made by the fishery to achieve this. Monitoring required of this condition in the next audit.

Table 15. Condition 3 – new at this audit

	PI	Scoring issue/scoring guidepost text	Score
Performance Indicator(s) & Score(s)	1.2.1- There is a robust and precautionary harvest strategy in place	1.2.1.b: SG 80: The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives.	70
Condition	The prospects of halting stock decline within the next five years are uncertain in the absence of higher levels of recruitment but also because the fishery is not under full control as the quota allocation agreement has broken down. It is therefore not demonstrated that the plan is able to maintain a stock, which is so dependent on sporadic strong recruitment, at or above the management plan target level during such periods of low recruitment. The fishery shall demonstrate that the harvest strategy is achieving its objectives and that overall quotas are within sustainable limits.		
Milestones	<p>As per Condition 1:</p> <p>Year 1: Communication should be begun or continued with Coastal State representatives to promote delivery of exploitation levels consistent with meeting the requirements of Principle 1. Evidence should also be provided of any other actions or analyses undertaken in relation to prevailing exploitation levels and/or the implications of these for the stock. The client shall provide documented evidence of all related correspondence, analyses, actions, meetings, representations etc.</p> <p>Year 2 and Year 3: It is understood that the condition could be closed at any time during the certification. Year 2 and 3 should therefore provide updated information on the issues set out in Yr 1.</p> <p>Year 4: The SG80 requirements should be met. At the time this is achieved, this PI will be rescored at 80.</p>		
Client Action Plan	As per Condition 1		
Progress on Condition	N/A		
Status on Condition	N/A		

Appendix 3. Client action plan (reproduced from PCR)

DPPO, SPSG, PFA, SPFPO & KFO Atlanto-Scandian purse seine and pelagic trawl herring fishery

DPPO, SPSG, PFA, SPFPO & KFO Atlanto-Scandian purse seine and pelagic trawl herring fishery

November 25. 2015

Client Action Plan on securing evidence that indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules for Atlanto-Scandian Herring (Condition: 1.2.2, raised through the MSC harmonisation process with other CABs)

A condition of acceptance for achieving MSC certification for the Atlanto-Scandian purse seine and pelagic trawl herring fishery is that the client group will work to secure available evidence that indicates that the management tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules for the Atlanto-Scandian Herring fishery.

The Client group has agreed to formulate an action plan describing new initiatives and the continuation of ongoing activities in securing available evidence that indicates that the management tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules for the Atlanto-Scandian Herring fishery.

Although no formal agreement has been reached between all Coastal States on the management of the Atlanto-Scandian Herring fishery, it must be acknowledged that parties have made significant progress over the last year and negotiations are ongoing in November 2015.

The parties within the client group strongly believe in the principle of well-managed and sustainable fisheries and have demonstrated their commitment to that by re-entering their respective herring fisheries for assessment against MSC principles and criteria. All members of the client group have worked diligently to address conditions and recommendations placed on their respective fisheries and to date have made excellent progress. It's therefore hugely disappointing and disheartening through no fault of their own to be in a position where conditions of acceptance have been placed on their fisheries.

The parties are however committed to independent fisheries certification and between them have many additional fisheries accredited to MSC standard. Therefore, the parties believe that working jointly on the following plan is a real commitment to resolving the current herring management challenge and return to a framework of a Coastal States Agreement.

The client group views the plan as an adaptive process aiming at facilitating sustainable and science based management of the ASH stock.

The plan will be reviewed and revised following the end of the Coastal States quota and sharing negotiations for the following year. For 2016 negotiations are expected to be finalised by end of 2015. Should Coastal States not have resolved management issues by the end of the negotiations; the client group will review and revise the action plan. The plan is linked to the Corrective Action Plan submitted in May 2015.

Milestones:**Milestone year 1:**

Make contact with representatives from other Coastal States, EU-Commission, NEAFC and ICES in order to secure information on management, fishing activities and scientific analysis in the respective states and transnational governing bodies. Encourage all parties to seek a joint solution within the framework of a management plan.

Action year 1:

During negotiations for 2016 TACs and sharing arrangements, arrange meetings with other UoCs in the fishery and European Commission to gather information and evidence.

Participate in ICES advice drafting group on widely distributed stocks and the ICES preparatory meetings for the stock benchmark in January 2016. Lobby all parties all parties in seeking a joint solution within the framework of a long term management plan.

Outcome year 1.

By March 2016, all Coastal States have formally agreed on management and sharing arrangements for 2016 and beyond.

Milestone year 2:

If the dispute is not resolved, continue to lobby and gather information.

Provide updated information on the management actions of Coastal States, EU-Commission, NEAFC and ICES in order to secure information on management, fishing activities and scientific analysis in the respective states and transnational governing bodies.

Demonstrate that discussions have taken place and progress has been made towards agreeing on a long-term management plan encompassing all relevant fishing nations.

Action year 2:

During negotiations for 2017 TACs and sharing arrangements, arrange meetings with other UoCs in the fishery and European Commission to gather information and evidence.

Participate in ICES advice drafting group on widely distributed stocks and the ICES benchmark in January 2016.

Lobby all parties all parties in seeking a joint solution within the framework of a long term management plan.

Outcome year 2: By March 2017, all Coastal States have formally agreed on management and sharing arrangements for 2017 and beyond. Alternatively options for an “industry” level management arrangement have been analysed.

Milestone year 3:

If the dispute is not resolved, continue to lobby and gather information.

Provide updated information on the management actions of Coastal States, EU-Commission, NEAFC and ICES in order to secure information on management, fishing activities and scientific analysis in the respective states and transnational governing bodies.

Demonstrate that discussions have taken place and progress has been made towards agreeing on a long term management plan encompassing all relevant fishing nations.

Action year 3:

If no agreement has been reached, the client group will continue to further develop an industry level management arrangement. The work will be done in agreement with other UoCs and CABs.

Participate in ICES advice drafting group on widely distributed stocks.

Outcome year 3:

By March 2018, all Coastal States have formally agreed on management and sharing arrangements for 2018 and beyond. Alternatively the framework for an “industry” level management arrangement has been developed.

Milestone year 4:

Demonstrate that the effective coastal states cooperation/dispute resolution system is in place and operational. Alternatively, validate and implement the fleet-level plan, in agreement with other MSC UoCs and CABs.

Action year 4:

If no agreement has been reached, the client group together with other UoCs and CABs will implement the industry level management arrangement.

Outcome year 4:

By March 2019, all Coastal States have formally agreed on management and sharing arrangements for 2019 and beyond. Alternatively an “industry” level management arrangement has been agreed among UoCs and CABs and implemented.

Yours sincerely

Esben Sverdrup-Jensen



On behalf of Denmark: DPPO, Scotland: SPSG, The Netherlands, Germany, France, England, Lithuania: PFA, Sweden: SPFPO and Ireland: KFO

Appendix 4. Harmonisation P1 expedited audit – Timeline 2017 and 2018.

Harmonised Fisheries

Fishery	Principle	MSC expire	status	CAB	stage
Faroese Pelagic Organization (FPO) Atlanto-Scandian herring	1 and 3	14 th Jun 2021		DNV	SA 2
ISF Norwegian & Icelandic herring trawl and seine	1 and 3	28 th May 2019		Acoura	SA 4
Norway spring spawning herring	1 and 3	29 th Jul 2019		DNV	SA 4
SPSG, DPPO, PFA, SPFPO & KFO Atlanto-Scandian purse seine and pelagic trawl herring	1 and 3	02 nd Jan 2021		MEC	SA 2

Timeline of harmonisation:

Date	Event	CAB action
29 th September 2017	The perception of the stock has not changed since last year's assessment	None required
30 th October 2017	ICES release version 2 of the NSSH advice for 2017, with a downwards revision of SSB and catch advice for 2018	CABs made aware of new advice by MSC on 9 th November 2017 and begin arrangements for Harmonisation and discussions of need to expedite assessment.
1 st December 2017	CABs formal discussions on expedited audit	CABs agree that the outcome of the CS meeting on 7 th Dec is paramount to P1 scoring. MSC advised of meeting and decision via email to E. McGregor.
7 th December 2017	Coastal states meeting and sharing arrangements take place	CABs await feedback from the CS meetings to understand the management actions taken to change in stock status. Advised there may be request for reference point review.
11 th December 2017	The EU Fisheries Council meeting took place on the 11th December 2017.	EU TACs for 2018.
20 th December 2017	CAB harmonisation discussion	CABs agree: 1. It is necessary to carry out an expedited audit for our MSC-Certified Atlanto-Scandian / Norwegian Spring Spawning herring fisheries. 2. The expedited audit should be harmonised between the four certified fisheries in terms of both its timescale and outcome. 3. With regard to timescale, we agreed provisionally that:- a. We will hold a further Skype meeting on 10th January 2018 at 1400GMT to agree the logistics for the audit. b. We will aim to announce the expedited audit on the 16th January 2018, with the audit taking place 30 days later. c. We will conduct the audit remotely (there is no advantage to be gained from a site visit).

Date	Event	CAB action
		<p>d. We will coordinate the surveillance audit report so that the findings are identical for each fishery.</p> <p>e. We will submit our surveillance report to our clients as early as possible in the surveillance timetable to give them as much time as possible to formulate their client action plan.</p>
21 st December 2017	CABs advice MSC and Clients of the need to expedite and begin contract talks.	See Appendix 3a below
10 th January 2018	Harmonisation of Announcements and site visits	See appendix 3b below, joint CAB statement sent to clients and MSC 12 th January 2018.
15 th February 2018	All CABs announce expedited audit	See relevant fisheries pages on MSC website.
21 st March to 4 th April 2018	CABs hold independent site visits	
10 th April 2018	CABs hold joint P1 scoring meeting.	Joint statement made by CABs to MSC clients and stakeholders appendix 3c
26 th April 2018	ICES release - Coastal States request for ICES to re-evaluate the reference points for Norwegian spring-spawning herring	
27 th April 2018	CAB P1 scoring meeting based on new ICES advice	

Appendix 3a

Joint statement to MSC and clients 20th Dec 2017

Dear <Client / MSC>

I am writing in connection with your/the MSC-certified <XXXX> fishery/ies. There have been some recent changes in the perception of stock status and the management response to these changes which mean that <name of CAB> now need to carry out an “expedited audit” of the fishery during the early part of 2018. I have set out some background to this below.

In late October 2017 ICES issued revised advice on the status of the Atlanto-Scandian / Norwegian Spring Spawning herring stock (*Clupea harengus* in subareas 1, 2, and 5, and in divisions 4.a and 14.a). This advice indicated that the current perception of the stock is that the Spawning Stock Biomass (SSB) is below the target reference point set out in the management plan.

On 7th December 2017, a meeting of the Coastal States responsible for management of the stock took place. The EU Fisheries Council meeting took place on the 11th December 2017.

The three Conformity Assessment Bodies (CABs) for the four MSC-certified Atlanto-Scandian / Norwegian Spring Spawning herring fisheries held two harmonisation discussions during December 2017 (these CABs are MEC, Acoura Marine and DNV). The first discussion took place before the management meetings had been completed and focussed on the current perception of stock status. At the second discussion on the 20th December the CABs had available to them the outcome of the Coastal States meeting and the EU Fisheries Council meeting as well as the most recent ICES advice.

The three CABs unanimously agreed on the 20th December that the management response during December to the most recent ICES advice may constitute what the MSC consider is a “major change” in the circumstances of the four certified fisheries which together with the response by the Coastal states to the change in stock perception triggered the need for an “expedited audit”. The three CABs concluded that an “expedited audit” would therefore be required. This expedited audit would examine whether or not the change in the fishery and the response by the Coastal states to this change would affect the scoring and ongoing certification of the four fisheries.

The CABs have agreed to work closely together to harmonise the expedited audit. We have agreed that our first step will be to inform the client fisheries and the MSC of the decision to trigger the procedure for an expedited audit. We will hold a further discussion in early January 2018 to harmonise the announcement of the expedited audits and to harmonise the timetable for conducting these audits.

We appreciate that you may have some queries about this matter. Please do not hesitate to contact me if you wish to discuss this further.

Appendix 3b

CAB joint statement 12th January 18 – NSSH / ASH stock.

Following the changes in the perception of NSSH stock status¹ and the management response to these changes², the three Conformity Assessment Bodies (CABs) for the four MSC-certified Atlanto-Scandian / Norwegian Spring Spawning herring fisheries held two harmonisation discussions during December 2017 and another in January 2018 (these CABs are MEC, Acoura Marine and DNV-GL). These harmonisation discussions are required by the MSC.

The first discussion in December took place before the management meetings had been completed and focussed on the revised perception of stock status. During the second discussion on the 20th December the CABs discussed the outcome of the Coastal States meeting and the EU Fisheries Council meeting. Between the 20th December and 10th January the CABs communicated with their clients highlighting the possible need for expedited assessment of Principle 1 and providing the clients with a chance to respond.

At the discussion on the 10th January 2018, the three CABs reviewed the stock assessment and the management response, and considered the feedback that they had each received from their clients. It was unanimously agreed that the combination of the revised perception of stock status (SSB below MSYBtrigger) coupled with the management response during December to the most recent ICES advice constituted a “major change” in the circumstances of the four certified fisheries. This is on the basis that TACs for 2018 were set by the Coastal States above the level indicated by the agreed management plan and above the level recommended in ICES advice for this stock in 2018.

The three CABs concluded that an “expedited surveillance audit” would therefore be required for each of these fisheries. This audit will examine whether or not the change in the perceived status of the stock and the response by the Coastal states to this change will affect the scoring and possibly the ongoing certification of the four fisheries.

The CABs have agreed to work closely together to harmonise the expedited audit. It is the intention of the CABs to now organise contracts with clients and assessors and we expect to announce expedited audits by the middle of February 2018 .

¹ ICES. 2017. Herring (*Clupea harengus*) in subareas 1, 2, and 5, and in divisions 4.a and 14.a, Norwegian spring-spawning herring (the Northeast Atlantic and the Arctic Ocean). Pages 1–9. ICES, Copenhagen. <http://ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/her.27.1-24a514a.pdf>.

² Agreed Record of conclusions of fisheries consultations between the Russian Federation, the European Union the Faroe Islands, Iceland and Norway on the management of the Norwegian Spring-Spawning (Atlanto-Scandian) herring stock in the North-East Atlantic in 2018 . Copenhagen, 7th December 2017.

Appendix 3c

CAB joint statement 10 April 2018 – NSSH / ASH stock.

Following the changes in the perception of NSSH stock status³ and the management response to these changes, the three Conformity Assessment Bodies (CABs) for the four MSC-certified Atlanto-Scandian / Norwegian Spring Spawning herring fisheries met to discuss a harmonised scoring approach on 10th April 2018. This meeting was convened following the announcement of the expedited audits for Principle 1 for all four certificates on the 15th February 2018.

However, since the expedited audit announcements there have been two important developments in relation to the stock.

Firstly, ICES announced that there would be a workshop on the determination of reference points for Norwegian Spring Spawning Herring (WKNSSHREF) on the 10th – 11th April with the release of the advice and workshop report on the 25th April 2018.

Secondly, in response to WKNSSHREF the Coastal States will meet on the 14th May 2018 to produce new HCRs and send them to ICES for evaluation.

Based on these developments, the CABs concluded that scoring the fishery based on the information available to date (10th April) would result in scores which could likely change by the time of the expedited audit report publication (15th May at the latest), and therefore resolved to reconvene the scoring meeting after the release of the ICES report. This aligns with MSC FCR 2.0 7.23.22.1b and guidance G7.23.22.1 regarding the avoidance of unnecessary expedited audits for temporary changes in status and when stock models are not fully validated. The CABs note that as this is an autumn winter fishery this delay has no implications on the 2018 – 2019 fishing season.

Should the advice from ICES released on 25th April 2018 not result in any meaningful change in stock reference points against current stock status, the fishery will be scored by the CABs at a meeting on the 27th April 2018. If there is a significant change in the reference points resultant from the workshop, then the CABs may be required to consider whether there is a need to wait on the outcome of the Coastal States agreement on 14th May before scoring. If this second option is taken a further joint statement will be provided by the CABs as well as a request for a short extension to the May 15th 2018 deadline.

The CABs agreed that the outcome of the Coastal States meeting on 14th May 2018 would be considered the cut off point for this expedited audit and no new information for scoring would be included beyond this time.

³ ICES. 2017. Herring (*Clupea harengus*) in subareas 1, 2, and 5, and in divisions 4.a and 14.a, Norwegian spring-spawning herring (the Northeast Atlantic and the Arctic Ocean). Pages 1–9. ICES, Copenhagen. <http://ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/her.27.1-24a514a.pdf>.