

# MSC SUSTAINABLE FISHERIES CERTIFICATION

## SPFPO Swedish North Sea herring



Final Report

July 2018

Client: Swedish Pelagic Federation Producers  
Organisation (SPFPO)  
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On behalf of **Acoura**

## Assessment Data Sheet

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# 1 Contents

Glossary.....	6
1 Authorship and Peer Reviewers .....	8
1.1 Assessment Team .....	8
1.2 Peer Reviewers .....	9
2 Changes since Initial Assessment.....	10
2.1 Overview.....	10
2.2 UoA and Proposed Unit of Certification (UoC) .....	10
2.2.1 Scope of the Fishery .....	10
2.2.2 Other MSC policy considerations .....	10
2.2.3 Key Low Trophic Species .....	10
2.2.4 Management Jurisdictions .....	11
2.2.5 Proposed UoAs:.....	11
2.3 Specific Changes since Initial Assessment .....	13
2.3.1 Overall .....	13
2.3.2 Principle 1 .....	13
2.3.3 Principle 2.....	13
2.3.4 Principle 3.....	13
2.4 Previous assessments .....	13
2.5 Harmonisation.....	14
3 Evaluation Procedure.....	15
3.1 Assessment Methodologies .....	15
3.2 Evaluation Processes & Techniques.....	15
3.2.1 Site Visits.....	15
3.2.2 Consultations .....	15
3.2.3 Evaluation Techniques.....	15
4 Traceability .....	17
4.1 Eligibility Date .....	17
4.2 Traceability within the Fishery .....	17
4.3 Eligibility to Enter Further Chains of Custody .....	18
4.3.1 Eligible points of landing .....	18
4.3.2 Parties eligible to use the fishery certificate .....	18
4.4 Eligibility of IPI stock(s) to Enter Further Chains of Custody.....	18
5 Evaluation Results .....	19
5.1 Principle Level Scores .....	19
5.2 Summary of Scores (both UoAs).....	19
5.3 Summary of Conditions.....	20
5.4 Recommendation: Remote Electronic Monitoring .....	20
5.5 Determination, Formal Conclusion and Agreement .....	20

References .....	22
Appendix 1 Scoring and Rationales .....	25
Appendix 1.1 Principle 1 Scoring .....	25
Evaluation Table for PI 1.1.1 .....	25
Evaluation Table for PI 1.1.2 .....	27
Evaluation Table for PI 1.1.3 .....	29
Evaluation Table for PI 1.2.1 .....	30
Evaluation Table for PI 1.2.2 .....	32
Evaluation Table for PI 1.2.3 .....	34
Evaluation Table for PI 1.2.4 .....	36
Appendix 1.2 Principle 2 Scoring .....	38
Evaluation Table for PI 2.1.1 .....	38
Evaluation Table for PI 2.1.2 .....	41
Evaluation Table for PI 2.1.3 .....	47
Evaluation Table for PI 2.2.1 .....	50
Evaluation Table for PI 2.2.2 .....	54
Evaluation Table for PI 2.2.3 .....	59
Evaluation Table for PI 2.3.1 .....	64
Evaluation Table for PI 2.3.2 .....	68
Evaluation Table for PI 2.3.3 .....	70
Evaluation Table for PI 2.4.1 .....	73
Evaluation Table for PI 2.4.2 .....	74
Evaluation Table for PI 2.4.3 .....	76
Evaluation Table for PI 2.5.1 .....	78
Evaluation Table for PI 2.5.2 .....	79
Evaluation Table for PI 2.5.3 .....	82
Appendix 1.3 Principle 3 Scoring .....	85
Evaluation Table for PI 3.1.1 .....	85
Evaluation Table for PI 3.1.2 .....	89
Evaluation Table for PI 3.1.3 .....	93
Evaluation Table for PI 3.1.4 .....	96
Evaluation Table for PI 3.2.1 .....	98
Evaluation Table for PI 3.2.2 .....	99
Evaluation Table for PI 3.2.3 .....	104
Evaluation Table for PI 3.2.4 .....	106
Evaluation Table for PI 3.2.5 .....	108
Appendix 1.4 Risk Based Framework (RBF) Outputs .....	1
Appendix 1.5 Conditions .....	1
Appendix 2. Peer Review Reports .....	2

Appendix 2.1 Peer Reviewer A..... 2

Appendix 2.2 Peer Reviewer B..... 1

Appendix 3. Stakeholder submissions..... 29

Appendix 3.1 During site visit ..... 29

Appendix 3.2 MSC Technical Oversight ..... 30

Appendix 4. Surveillance Frequency ..... 31

Appendix 5. Objections Process ..... 32

## Glossary

ASCOBANS	(Bonn Convention's) Agreement on the Conservation of Small Cetaceans in the Atlanto-Scandian and Baltic.
ACOM	ICES Advisory Committee
ACFA	ICES Advisory Committee on Fisheries and Aquaculture
B <sub>pa</sub>	Precautionary reference point for spawning stock biomass
B <sub>lim</sub>	Limit biomass reference point, below which recruitment is expected to be impaired.
CFCA	EU Community Fisheries Control Agency
CFP	EU Common Fisheries Policy
CR	Council Regulation
EC	European Commission
EEZ	Exclusive Economic Zone
EFF	European Fisheries Fund
ETP	Endangered, threatened and protected species
EU	European Union
F	Fishing Mortality
F <sub>lim</sub>	Limit reference point for fishing mortality that is expected to drive the stock to the biomass limit
F <sub>pa</sub>	Precautionary reference point of fishing mortality expected to maintain the SSB at the precautionary reference point
FAM	MSC's Fisheries Assessment Methodology
FAO	United Nations Food and Agriculture Organisation
GRT	Gross Registered Tonnage
HAWG	ICES Herring Assessment Working Group
HCR	Harvest Control Rule
ICES	International Council for the Exploration of the Sea
ITQ	Individual Transferable Quota
IUU	Illegal, unreported and unregulated fishing
LOA	Length Over All
LTMP	Long term Management Plan
MCS	Monitoring, Control and Surveillance
MSC	Marine Stewardship Council
MSY	Maximum Sustainable Yield
NEAFC	The North East Atlantic Fisheries Commission
NEA	North East Atlantic
NGO	Non-Governmental Organisation
OSPAR	Oslo-Paris Convention (Convention for the Protection of the Marine Environment of the North-East Atlantic)
P1	MSC Principle 1
P2	MSC Principle 2
P3	MSC Principle 3
PI	MSC Performance Indicator
PO	Producer Organisation
RAC	Regional Advisory Council
RSW	Refrigerated Sea Water

SAWG	ICES Stock Assessment Working Group
SI	Scoring Issue (MSC)
SLU	Swedish University of Agricultural Sciences
SONAR	Sound navigation and ranging
SSB	Spawning Stock Biomass
SPFPO	Swedish Pelagic Federation Producers Organisation
STECF	Scientific, Technical and Economic Committee for Fisheries
SwAm	Swedish Agent for Marine and Water Management
TAC	Total Allowable Catch
UoA	Unit of Assessment
UoC	Unit of Certification
UNCLOS	United Nations Convention on the Law of the Sea
VMS	Vessel Monitoring System
VPA	Virtual Population Analysis
WWF	World Wide Fund for Nature
WGECO	ICES Working Group on the ecosystem effects of Fishing Activities
WGRED	ICES Working Group on Ecosystem Description
WGWIDE	ICES Working Group on Widely Distributed Stocks
WKPELA	ICES Benchmark Workshop on Pelagic Stocks

# 1 Authorship and Peer Reviewers

## 1.1 Assessment Team

### **Assessment team leader: Tristan Southall**

Primarily responsible for assessment under Principles 2 & 3

Tristan Southall is an experienced fisheries assessor who has worked as both principles 2 and 3 expert on a number of previous MSC assessments, including the Scottish Pelagic assessments for both herring and mackerel. More recently Tristan led the IPSG Mackerel Assessment and has also been involved in the development and trialling of a new MSC assessment methodology, based on risk analysis, for use in data deficient situations.

When not assessing the sustainability of fisheries Tristan specialises in fishing and marine industry consultancy, combining detailed understanding of marine ecosystems with broad experience of fishing and aquaculture industry systems, infrastructure and management. This provides him with an informed position which balances the needs of marine ecosystems, biodiversity and wider environment with the practicalities of the industry operation. Bridging these two important areas enables sustainably-minded consultancy, able to interpret and advise upon the impacts of different management decisions on both marine ecosystems and economics.

Tristan's professional experience also includes the evaluation of fisheries on sub-sea environments, analysis of fishery and fleet performance, and a wide range of fisheries and aquaculture planning and management studies, all of which seek to combine both socio-economic and environmental perspectives. Tristan has recently coordinated EU fisheries training and promotion activities – covering all aspects of sustainable fisheries management and control.

### **Expert team member: Max Cardinale**

Primarily responsible for assessment under Principles 1 & 2

Dr Cardinale has excellent experience in marine fisheries stock assessment and management, with more than 15 years of professional experience in fisheries ecology and more than 10 years in the field of management of fisheries at national, regional and global levels. Particularly significant is his 15 years' experience at the Swedish National Board of Fisheries and Swedish University of Agricultural Sciences in charge for the assessment of the most important stocks of the North and Baltic Sea. His activities include modelling, statistical analysis, stock assessment and advice. Also significant is his several years' experience in Asia and in Africa under different SIDA projects. He is currently a nominated member of ACOM (under ICES) and STECF (under DG-MARE at EU commission) committees for fisheries and marine resource management since 2002. He has participated in more than 40 different working groups under ICES and more than 20 under DG MARE. He has been chairman of more than 10 different working groups under ICES and DG MARE umbrella, particularly SGMED, which is responsible since 2008 for stock assessment of Mediterranean stocks. In 2011, he has been invited as reviewer at the STAR panel of the Joint US-Canada Technical Review Panel for the Pacific Hake/Whiting Stock Assessment by the Centre for Independent Expert (CIE). Dr Cardinale has been recently nominated official member of the Editorial Board of the International Journal of Applied Ichthyology and ISRN Oceanography. He has produced more than 70 publications in international journals and more than 50 working reports, presented more than 30 lectures and has more than 100 hours of academic activity in different universities.

### **Expert advisor: Paul Macintyre**

MSC Chain of Custody and Traceability specialist / Lead Auditor



15 years of management experience within the aquaculture and fish processing sectors. 20 years' experience auditing ISO, HACCP, BRC, GlobalGAP, organic and conventional farming operations within the aquaculture production and fish processing sectors and including MSC Chain of Custody since 2005. ISO 9001 Lead Auditor (QMI 1991); Registered Organic Inspector (DEFRA); Diploma in Advanced Food Hygiene (Queen Margaret University Edinburgh); BRC v5 Food Manufacturing Auditor BRC (London and Manchester); GlobalGAP IFA Trainer (GlobalGAP Cologne) ; RYA Yachtmaster Offshore (RYA Southport) ; Diploma Photography (Photography Institute)

## 1.2 Peer Reviewers

Peer reviewers used for this report were Jim Andrews and Beatriz Roel.

### Jim Andrews

Jim Andrews is a marine biologist with over 20 years' experience working in marine fisheries and environmental management. His previous experience includes running the North Western and North Wales Sea Fisheries Committee as its Chief Executive from 2001 to 2005, previously working as the SFC's Marine Environment Liaison Officer (from 1996-2001), and prior to that working for the English Government's nature conservation advisor, English Nature on wildlife and coastal zone management in northwest England (from 1992-1996). During his time with the SFC he was responsible for the regulation, management and assessment of inshore finfish and shellfish stocks along a 1,500km coastline, as well as assessment and management of fisheries interactions with aquatic ecosystems in this area. He has an extensive practical knowledge of fisheries and environmental management as well as the enforcement and regulation of fisheries under UK and EC legislation. Jim has formal legal training & qualifications, with a special interest in the policy, governance and management of fisheries impacts on marine ecosystems in the UK, EU and globally (this particular subject being the focus of his LLM research over the period 1997-99). He has worked as an assessor and lead assessor on more than 20 MSC certifications within the UK, in Europe and in India since 2007. In 2008 he worked with the MSC and WWF on one of the pilot assessments using the new MSC Risk Based Assessment Framework. Jim has carried out numerous MSC Chain of Custody assessments within the UK.

Jim has passed MSC training and has no Conflict of Interest in relation to this fishery. Full CV available upon request

### Beatriz Roel

Dr Roel is a fisheries scientist with wide experience in the evaluation of pelagic fish resources and squid. She leads the assessment of Thames herring and is involved in the evaluation of other EU herring stocks. She's active in the evaluation of multi-annual TAC approaches by means of simulation frameworks and in the development of stock assessment models.

She has experience in the assessment and management of fish and shellfish stocks, particularly short-lived species such as pelagic (including multispecies) and cephalopods. She has undertaken management strategy evaluation as a tool for stock management and researched the influence of the environment on the dynamics of pelagic fish stocks. She is the author or co-author of about 30 refereed papers and completed her PhD in fisheries modelling under the supervision of Professor D. Butterworth.

## 2 Changes since Initial Assessment

### 2.1 Overview

This report summarises the MSC assessment process and resulting scoring and justification for the **SPFPO Swedish North Sea Herring Fishery**. This fishery has a relatively long history of MSC certification. The fishery was first certified in June 2008. The fishery (albeit with a slightly restructured client group) was then successfully recertified in June 2013. This report therefore represents the 3<sup>rd</sup> occasion that this fishery has been subject to a full MSC assessment. Because the fishery has been covered by a previous assessment and because all outstanding actions (i.e. conditions) from previous assessments had been successfully completed prior to reassessment<sup>1</sup>, the fishery now qualifies for a '**Reduced Re-assessment**'. This allows for a slightly shorter reporting template to be used, with a little less repetition of the background material which has been included in previous assessment reports – notably the 2013 re-assessment, which can be readily downloaded from the MSC website: <https://fisheries.msc.org/en/fisheries/spfpo-swedish-north-sea-herring/@assessments>

### 2.2 UoA and Proposed Unit of Certification (UoC)

#### 2.2.1 Scope of the Fishery

Acoura Marine Ltd confirm that the fishery remains within the MSC certification scope as set out in the MSC Fisheries Certification Requirements. Specifically:

- the fishery does not target amphibians, reptiles, birds or mammals.
- the fishery does not use destructive fishing practices (explosives or poisons).
- the fishery is not subject to any “controversial unilateral exemption to an international agreement”.
- there are mechanisms in place for resolving disputes between the fishery and the management system.

The fishery is therefore eligible for assessment against the MSC Standard.

#### 2.2.2 Other MSC policy considerations

There is no enhancement in this fishery (either by restocking or artificial habitat creation). Herring are not an introduced species. And there are no non-target IPI species in the UoAs.

#### 2.2.3 Key Low Trophic Species

In spite of being considered a low trophic species in the North Sea Ecosystem, herring is not considered to meet the MSC criteria for a 'a key low trophic species' for assessment purposes. North Sea herring does not meet at least two of the following three sub- criteria in CB2.3.13 in MSC Certification requirements v2.0:

i) *A large proportion of the trophic connections in the ecosystem involve this stock, leading to significant predator dependency.*

There are numerous other species which form important sources of prey for piscivorous fish in the North Sea such as mackerel, horse mackerel, sprat, sandeels and blue whiting. According to Pláganyi and Essington, (2014) connections between this herring population and others in the ecosystem is lower than the required threshold level defined in the MSC

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<sup>1</sup> Although FCR 7.24.6 requires conditions to be closed by the 3<sup>rd</sup> surveillance, a variation request was submitted to allow for the condition to be closed on the 4<sup>th</sup> surveillance on the basis that all requisite actions had been completed by the 3<sup>rd</sup> surveillance, but the condition remained open for the maintenance of best practice – full details of the variation request are available on assessment downloads section of the MSC website. <https://fisheries.msc.org/en/fisheries/spfpo-swedish-north-sea-herring/@assessments>

certification requirements. In addition, the SURF index for this stock is lower than the threshold as defined to indicate a KEY-LTL stock as defined by the MSC.

ii) *A large volume of energy passing between lower and higher trophic levels passes through this stock.*

There are numerous other species of planktivores, most of which are listed above, through which energy passes from primary production through zooplankton to fish. According to the assessment made by Pláganyi and Essington (2014) the % of energy passing through this species to both higher and lower trophic layers was below the threshold level for a KEY-LTL as stock as defined by the MSC.

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 (i.e. the ecosystem is 'wasp waisted')*

There are numerous other prey species at this trophic level in the North Sea through which energy is passed to the top predators so the ecosystem cannot be described as 'wasp waisted'. Contextually it is notable that when the North Sea herring fishery was severely depleted in the 1970s there was no evidence of other species being adversely affected.

## 2.2.4 Management Jurisdictions

This fishery overlaps a number of possible jurisdictions and the management system is designed to reflect this in both science, regulatory and enforcement terms. The primary level of Jurisdiction is EU waters, as defined by the EU Common Fisheries Policy. This is the level that most relevant decisions are taken. However, the fishery may also occur in Norwegian waters and the stock is also caught by Norwegian vessels, outside of the EU Common Fisheries Policy. An appropriate level of cooperation is in place, notably with agreement on the setting of catch opportunities through the Coastal States Agreement (more specifically the management plan for North Sea Herring) and close cooperation on stock science (through ICES) as well as on monitoring and enforcement. The final relevant jurisdiction is at a Swedish national level, although at the National Level policy and implementation is heavily shaped by the requirements of EU Regulations and Directives. However, when referring to roles and responsibilities, consultation mechanism and enforcement mechanisms, in P3, the national jurisdiction is also considered.

## 2.2.5 Proposed UoAs:

There are 2 Units of Assessment for this fishery – these are unchanged from the time of the last re-certification in 2013

### UoA1

<b>Species:</b>	Herring ( <i>Clupea harengus</i> )
<b>Stock:</b>	Autumn spawning North Sea herring
<b>Geographical area:</b>	North Sea and Eastern Channel in ICES divisions Iva, IVb, IVc, VIId
<b>Harvest method:</b>	Purse seine w/bunt-end mesh size 32mm
<b>Client Group:</b>	Swedish Pelagic Federation Producers Organisation (SPFPO) vessels fishing for North Sea herring in ICES Divisions Iva, IVb, IVc, VIId using Purse seine gear w/cod-end mesh size 32mm
<b>Other Eligible Fishers:</b>	Swedish registered vessels fishing for North Sea herring in ICES Divisions Iva, IVb, IVc, VIId using Purse seine gear w/cod-end mesh size 32mm that are not currently members of the client group (Swedish Pelagic Federation Producers Organisation (SPFPO)).

## UoA2

<b>Species:</b>	Herring ( <i>Clupea harengus</i> )
<b>Stock:</b>	Autumn spawning North Sea herring
<b>Geographical area:</b>	North Sea and Eastern Channel in ICES divisions Iva, IVb, IVc, VIId
<b>Harvest method:</b>	Pelagic trawl gear w/cod-end mesh size 32mm
<b>Client Group:</b>	Swedish Pelagic Federation Producers Organisation (SPFPO) vessels fishing for North Sea herring in ICES Divisions Iva, IVb, IVc, VIId using Pelagic trawl gear w/cod-end mesh size 32mm
<b>Other Eligible Fishers:</b>	Swedish registered vessels fishing for North Sea herring in ICES Divisions Iva, IVb, IVc, VIId using Pelagic trawl gear w/cod-end mesh size 32mm that are not currently members of the client group (Swedish Pelagic Federation Producers Organisation (SPFPO)).

**Figure 1: A typical vessel of the client group, and harsh conditions at sea**



Source: Images provided by the client fishery

**Table 1. TAC and Catch Data**

<b>Total TAC for most recent fishing year (2016):</b>		<b>518,242t</b>
<b>Unit of Assessment share of the total TAC established for the fishery in most recent fishing year*</b>		
Original Allocations	Swedish North Sea	5286t
	Norwegian Waters	1184t
	Swedish IIIa, permissible to take in North Sea	11062t
	Total	17532t
Revised Allocations (after swaps and transfers)	Swedish North Sea	7330t
	Norwegian Waters	1276
	Swedish IIIa, permissible to take in North Sea	10694t
	Revised Total	19300t
Client (Unit of Assessment) share of the total Swedish quota established for the fishery in most recent fishing year:		100%
Total green weight catch taken by the client group in the two most recent calendar years:	2015	13254t
	2016	16162t

## 2.3 Specific Changes since Initial Assessment

### 2.3.1 Overall

Although there have been changes in the client group since the *initial* assessment (see 2.4 for details), these were well described at the time of the 2013 re-assessment. There have been no changes since that time in relation to management operation, species types, fishing practices, legal / administrative status, involvement of other entities or harmonisation.

### 2.3.2 Principle 1

There have been relatively few changes in relation to Principle 1. Although the stock status has fluctuated it has remained above  $MSYB_{Trigger}$ . Meaning that scores for PI 1.1.1 are unchanged.

The management plan was revised in 2014, as described in the 2<sup>nd</sup> surveillance audit. All details of the new management plan are included in the scoring justifications in Appendix 1.

### 2.3.3 Principle 2

There have been relatively few changes in relation to Principle 2. The catch profile remains unchanged, meaning the fishery remains a highly selective fishery with limited impacts on ecosystem elements (reflected in the lack of P2 conditions at the time of the last assessment). A potentially significant legislative change has been the introduction of the EU Landings Obligation (effectively a discard ban), however the herring fleet have reported no problems with the implementation of this as this fishery was not associated with discarding or unwanted catch.

### 2.3.4 Principle 3

There have been relatively few changes in relation to Principle 3. There have been some minor legislative changes as a result of some EU legislation having been repealed and replaced. However, the new legislation is referred to in the Scoring Justification in Appendix 1. For example, the Common Fisheries Policy legislation was updated in 2013 (REGULATION (EU) No 1380/2013) and some subsidiary legislation has changed, notably the new landings obligation. This is all fully described in the scoring and justifications in Appendix 1.

## 2.4 Previous assessments

There have been 3 previous certification reports pertaining to this fishery. All resulted in the fishery passing the MSC standard and becoming certified. These are:

Year of Certification	Fishery Name	Link to report
2008	Astrid Fiske Astrid Fiske North Sea Herring Purse Seine Fishery	<a href="https://fisheries.msc.org/en/fisheries/spfpo-swedish-north-sea-herring/@@assessments">https://fisheries.msc.org/en/fisheries/spfpo-swedish-north-sea-herring/@@assessments</a>
2010 (Withdrawn 2013)	Sveriges Pelagiska Producent Organisation (SPPO) North Sea Herring	<a href="https://fisheries.msc.org/en/fisheries/sppo-north-sea-herring/@@view">https://fisheries.msc.org/en/fisheries/sppo-north-sea-herring/@@view</a>
2013	SPFPO Swedish North Sea Herring	<a href="https://fisheries.msc.org/en/fisheries/spfpo-swedish-north-sea-herring/@@assessments">https://fisheries.msc.org/en/fisheries/spfpo-swedish-north-sea-herring/@@assessments</a>

The initial assessment of the Astrid Fiske Fishery was for purse seine vessels, whereas the initial assessment for the SPPO fishery was for mid-water pelagic trawls. These 2 Units of Certification were combined into a single assessment (with 2 Units of Certification) in the 2013 SPFPO Swedish North Sea Herring Assessment.

At the time of the most recent assessment (2013) the fishery passed with a single condition. This is detailed below. This condition was successfully closed before the end of the certification period.

**Table 2. Summary of Previous Assessment Conditions**

Condition	PI	Year closed	Justification
Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rule	1.2.2	Year 4 (2017)	Throughout the period of certification, the agreed HCR formed the basis for annual TAC decisions. Minor deviations from the HCR were justified, for example where fishing mortality reference points for North Sea were re-estimated, resulting in a higher $F_{MSY}$ (0.33) compared to the management strategy (0.26).

## 2.5 Harmonisation

Although the template for Reduced re-assessment reporting does not include a section for Harmonisation, it was considered useful to include reference to the other MSC fisheries for North Sea Herring which have been assessed and certified in recent years. These are:

Name	Most recent certification	Link to Report
PFA & SPSG North Sea Herring	April 2017	<a href="https://fisheries.msc.org/en/fisheries/pfa-spsg-north-sea-herring/@@view">https://fisheries.msc.org/en/fisheries/pfa-spsg-north-sea-herring/@@view</a>
Northern Ireland Pelagic Sustainability Group (NIPSG) North Sea Herring Fishery	December 2016	<a href="https://fisheries.msc.org/en/fisheries/northern-ireland-pelagic-sustainability-group-nipsg-irish-sea-atlantic-mackerel-north-sea-herring/@@view">https://fisheries.msc.org/en/fisheries/northern-ireland-pelagic-sustainability-group-nipsg-irish-sea-atlantic-mackerel-north-sea-herring/@@view</a>
DPPO and DFPO North Sea herring	July 2015	<a href="https://fisheries.msc.org/en/fisheries/dppo-and-dfpo-north-sea-herring/@@view">https://fisheries.msc.org/en/fisheries/dppo-and-dfpo-north-sea-herring/@@view</a>
Norway North Sea and Skagerrak herring	July 2014	<a href="https://fisheries.msc.org/en/fisheries/norway-north-sea-and-skagerrak-herring/@@view">https://fisheries.msc.org/en/fisheries/norway-north-sea-and-skagerrak-herring/@@view</a>
FROM Nord North Sea and Eastern Channel pelagic trawl herring	Apr 2015	<a href="https://fisheries.msc.org/en/fisheries/from-nord-north-sea-and-eastern-channel-pelagic-trawl-herring/@@view">https://fisheries.msc.org/en/fisheries/from-nord-north-sea-and-eastern-channel-pelagic-trawl-herring/@@view</a>

The outcomes, scores and justifications for these preceding assessments were considered at the time of this fishery assessment. The scores awarded in this assessment are in line and broadly harmonised with the fisheries listed above – all of which met the MSC pass mark, without conditions.



## 3 Evaluation Procedure

### 3.1 Assessment Methodologies

- This re-assessment was carried out according to the scoring guideposts in the MSC Fisheries Certification Requirements v1.3. However, some process elements, including reporting timelines were in accordance with the requirements for MSC CRv2.
- This report uses the 'MSC Reduced Re-Assessment Reporting Template' version - v1.0 Published: 8 October 2014.
- The scoring justifications in Appendix 1 are the default evaluation tables

### 3.2 Evaluation Processes & Techniques

#### 3.2.1 Site Visits

Site visits were used to inform this re-assessment. This also coincided with the 4th surveillance audit, for the previous period of certification. Both team members - Tristan Southall and Massimiliano Cardinale attended the site visit in Gothenburg, Sweden on 21st & 22nd September 2017.

#### 3.2.2 Consultations

A total of 48 stakeholder organisations and individuals with a relevant interest in the fishery were identified and alerted to this re-assessment audit, by means of e-mail, and given the opportunity to either request a meeting with the assessment team or submit information for their consideration. The interest of others not appearing on this list was solicited through the postings on the MSC website. The use of e-mail and website was deemed to be the most effective means of reaching relevant stakeholders.

No organisations or individuals came forward to request a meeting with the surveillance team. The assessment team arranged face to face meetings with the client representative, which provided the opportunity for both team members to discuss with the client all relevant details about the fishery. In addition, a vessel visit was carried out on board the fishing vessel 'Sunnanland', followed by a meeting with 2 skippers of the certified fleet. This provided the opportunity for both team members to discuss with skippers all relevant operational details about the fishery. Details of these oral submissions is provided in Appendix 3.

The assessment team subsequently concluded that due to evidence provided by the client and information obtained in the 2 stakeholder meetings, and the large body of published material available to review (including most recent stock assessments and records of Coastal States negotiations), no further meetings were required in order to inform the team of changes in the last 12 months or progress against conditions.

#### 3.2.3 Evaluation Techniques

The MSC Principles and Criteria provide the overall requirements necessary for certification of a sustainably managed fishery. To facilitate assessment of any given fishery against this standard, these Criteria are further split into Performance Indicators (PIs) and Scoring Issues (SIs). These represent separate areas of important information and therefore, provide a detailed checklist of factors to guide the investigations and consultations of the assessment team members. The evaluation technique used therefore relies upon identifying data, supporting research and focusing consultations on these areas, in order to provide auditable justifications in support of scores given. Because sufficient auditable evidence has been available to the assessors in this fishery the MSC's Risk Based Framework has not been required.

Once this audit evidence is identified scoring can be done and scoring justifications written. The scoring is done as a group exercise although Scoring Justifications are later written up

individually. Scoring seeks to find consensus between team members. This is normally achievable, as was the case in the scoring of the SPFPO Swedish Herring Fishery.

In order to make the assessment process as clear and transparent as possible, the Scoring Guideposts are presented in the scoring table and describe the level of performance necessary to achieve 100 (represents the level of performance for a Performance Indicator that would be expected in a theoretically 'perfect' fishery), 80 (defines the unconditional pass mark for a Performance Indicator for that type of fishery), and 60 (defines the minimum, conditional pass mark for each Performance Indicator for that type of fishery).

### Scoring outcomes

There are two, coupled, scoring requirements that constitute the Marine Stewardship Council's minimum threshold for a sustainable fishery:

- » The fishery must obtain a score of 80 or more for each of the MSC's three Principles, based on the weighted average score for all Criteria and Sub-criteria under each Principle.
- » The fishery must obtain a score of 60 or more for each Performance Indicator.

A score below 80 at the Principle level or 60 for any individual Performance Indicator would represent a level of performance that causes the fishery to automatically fail the assessment, whereas a score of 80 or above for all three Principles results in a pass.

**Table 3 Scoring elements**

Component	Scoring elements	Main/not main	Data-deficient or not
P1	Herring ( <i>Clupea harengus</i> )	n/a	n/a
P2 - Retained	There are no main or minor retained species		
P2 – Bycatch	There are no main or minor bycatch species		
P2 - ETP	A full ETP list is presented in the scoring justification for PI 2.3.1. There is no main / minor for ETP species.		



## 4 Traceability

### 4.1 Eligibility Date

As this is a re-assessment the Eligibility Date will be the date of re-certification.

### 4.2 Traceability within the Fishery

Traceability up to the point of first landing has been scrutinised as part of this assessment and the positive results reflect that the systems in place are deemed adequate to ensure fish is caught in a legal manner and is accurately recorded. The report and assessment trees describe these systems in more detail, but briefly traceability can be verified by:

- no transshipment;
- a geographically restricted fishery enabling concentrated inspection effort;
- accurate reporting – log books and sales notes (regularly inspected and cross-checked);
- verified landings data (including data on other retained species) are used for official monitoring of quota up-take and national statistics;
- a high level and sophisticated system of at-sea monitoring, control and surveillance, both in EU waters, including routine boarding and inspection, spotter planes, VMS; and electronic logbooks.
- close cooperation between EU regulatory and enforcement authorities and no immunity from prosecution in other jurisdictions;
- reporting prior to landing with limited tolerance;
- a high level of inspection of landings prior to unloading. Officially calibrated weighing systems of landing. Routine inspection of entire factory process.

The above is considered sufficient to ensure fish and fish products invoiced as such by the fishery originate from within the evaluated fishery and no specific risk factors have been identified.

**Table 4 Traceability Factors within the Fishery:**

Traceability Factor	Description of risk factor if present. Where applicable, a description of relevant mitigation measures or traceability systems
Potential for non-certified gear/s to be used within the fishery	The 2 main gear types are covered by this assessment. Only 1 type of gear is allowed to be carried at one time meaning that there is no risk of switching fishing methods during a trip. Inspections are carried out at sea to ensure compliance with technical regulations such as mesh size.
Potential for vessels from the UoC to fish outside the UoC or in different geographical areas (on the same trips or different trips)	Vessels are only allowed to fish a single stock quota area on a single trip. This is readily enforced by VMS and areal inspections. There is therefore little potential for vessels from the UoC to fish outside the UoC or in different geographical areas
Potential for vessels outside of the UoC or client group fishing the same stock	All Swedish Pelagic vessels are members of the client group and included in the UoC. Other nationalities do fish the same stock but most are also covered by an MSC assessment. Catches from different fleets are readily segregated meaning that catches from outside the UoC are unlikely to be mixed.
Risks of mixing between certified and non-certified catch during storage, transport, or handling activities (including transport at sea and on land, points of landing, and sales at auction)	This assessment covers the risks of mixing up to the point of first sale. Risks associated with subsequent mixing during transport and handling are dealt with in the Chain of Custody Assessment. There is no risk of mixing with non-certified catch during fishing or unloading operations because only catches from a single herring stock are permitted on a trip.

Risks of mixing between certified and non-certified catch during processing activities (at-sea and/or before subsequent Chain of Custody)	There are no at sea processing activities. This is therefore covered by the Chain of Custody Assessment.
Risks of mixing between certified and non-certified catch during transhipment	There is no transhipment.
Any other risks of substitution between fish from the UoC (certified catch) and fish from outside this unit (non-certified catch) before subsequent Chain of Custody is required	No risks identified. Other herring fisheries such as Atlanto Scandian are also certified. Landing controls are such that the veracity of the stated species and origin of the landed catch can be assured (Landings are recorded by Swedish Agent for Marine and Water Management (SwAM)).

### 4.3 Eligibility to Enter Further Chains of Custody

Only North Sea Herring caught in the manner defined in the Unit of Certification (Section 2.2) under restrictions detailed throughout the body of the final Public Certification Report for this fishery shall be eligible to enter the Chain of Custody. Chain of Custody should commence following the first point of landing, at which point the product shall be eligible to carry the MSC logo (under restrictions imposed by the MSC Chain of Custody standard). There are no restrictions on the fully certified product entering further chains of custody. The SPFPO does not require its own chain of custody certificate.

#### 4.3.1 Eligible points of landing

Although landings are typically into Swedish or Danish ports, vessels covered by this assessment may also land catches from this fishery into registered ports in other EU countries and Norway. All landings made to these ports are subject to the same scrutiny and reporting procedures and there is a well-established mechanism to enable port-of-landing authorities to report the landing to the relevant authorities in a timely fashion.

There are no further restrictions defining port of landing, over and above those stated in national fishing regulations (for example vessels must land to registered ports). There is no requirement for the vessels to land at ports named in this report. There are no specific risk factors after the point of landing which need to be highlighted or that may influence chain of custody assessments.

#### 4.3.2 Parties eligible to use the fishery certificate

Only Swedish registered pelagic RSW trawlers are eligible who are members of the client group and fully compliant with all on board Code of Conduct and reporting systems may to use this certificate. There are no other Swedish vessels who have rights to fish in the areas included in the UoC.

### 4.4 Eligibility of IPI stock(s) to Enter Further Chains of Custody

No Inseparable or Practicably Inseparable (IPI) stock is defined.

## 5 Evaluation Results

### 5.1 Principle Level Scores

Table 5: Final Principle Scores

Final Principle Scores	Score	
Principle	UoA 1	UoA 2
Principle 1 – Target Species	91.9	91.9
Principle 2 – Ecosystem (both UoAs)	90.0	90.0
Principle 3 – Management System (both UoAs)	89.9	89.9

### 5.2 Summary of Scores (both UoAs)

Principle	Component	PI No.	Performance Indicator (PI)	Score
One	Outcome	1.1.1	Stock status	100
		1.1.2	Reference points	80
		1.1.3	Stock rebuilding	n/a
	Management	1.2.1	Harvest strategy	100
		1.2.2	Harvest control rules & tools	90
		1.2.3	Information & monitoring	90
		1.2.4	Assessment of stock status	95
Two	Retained species	2.1.1	Outcome	100
		2.1.2	Management	95
		2.1.3	Information	95
	Bycatch species	2.2.1	Outcome	100
		2.2.2	Management	90
		2.2.3	Information	95
	ETP species	2.3.1	Outcome	80
		2.3.2	Management	80
		2.3.3	Information	80
	Habitats	2.4.1	Outcome	100
		2.4.2	Management	90
		2.4.3	Information	90
	Ecosystem	2.5.1	Outcome	80
		2.5.2	Management	80
		2.5.3	Information	95
Three	Governance and policy	3.1.1	Legal & customary framework	100
		3.1.2	Consultation, roles & responsibilities	95
		3.1.3	Long term objectives	100
		3.1.4	Incentives for sustainable fishing	80
	Fishery specific management system	3.2.1	Fishery specific objectives	90
		3.2.2	Decision making processes	85
		3.2.3	Compliance & enforcement	95
		3.2.4	Research plan	80
		3.2.5	Management performance evaluation	80

The scoring justification in Principle 2 (which would normally separate out UoAs) has been combined for the 2 Units of Assessment (UoA) because scores were deemed to be the same. This is because no evidence has been presented of a different impact of the 2 gears, or where such evidence exists, the justification is based upon the worst-case scenario (i.e. lowest MSC scoring).

### 5.3 Summary of Conditions

No conditions have been raised.

### 5.4 Recommendation: Remote Electronic Monitoring

*This is a repetition of the recommendation made by the assessment team at the time of the last assessment. Given the on-going development of technology in this area, this offers considerable potential and would contribute to scoring at the SG100 level in several areas of P2.*

Historically, unaccounted mortality has been a challenge in pelagic fisheries. Today much of the uncertainty over unaccounted mortality has gone. Enforcement is much tighter, compliance is much improved, and scientific assessments point to a smaller and largely resolved problem of unaccounted mortality. The on-board logs that fishermen have introduced to record any exceptional impacts are welcome, and there now exists a system for recording any instances of slippage, or ETP interaction, for example. To date these have shown zero interaction.

At the same time, state funding for research and observer programmes has reduced in recent years, therefore there is now less independent corroboration of fisheries interactions at sea, than there has been in the past, although arguably past research and observations have led the focusing of scarce resources on the (other) fisheries with higher perceived risk of impact. None the less, there remains considerable scope for improving the independent corroboration of the fisheries impact at sea. This has not been the subject of a condition as it is accepted that at current times the rationale and evidence available suggest that potential impacts are likely to be low – in particular in terms of slippage, ETP or habitat interactions. However, some form of independent corroboration, has a number of advantages, such as providing strengthened assurance of minimal impact and detecting any changes in the patterns of interactions.

One form of independent observation which is rapidly becoming more accessible, affordable and tailored to the needs of the fishing industry has been the use of remote electronic monitoring (REM), including CCTV cameras. These are being increasingly adopted in demersal fisheries and part of the catch quota scheme. Given the state of the art sophistication of UK pelagic fleet, and their pioneering progress in moving toward a position of assured sustainability, REM should be given careful consideration as a best practice tool to provide true assessment of the fishery's minimal impact as well as important information for research. Other EU pelagic fisheries are also currently examining the role and potential of REM, but as yet, none of the EU pelagic fleet has taken the step. The assessment team are therefore of the view that this could be a useful addition to a fishery seeking to demonstrate their on-going sustainability.

### 5.5 Determination, Formal Conclusion and Agreement

The assessment team have determined that the fishery meets the requirements of the MSC standard and recommends MSC certification.

Following this assessment team's work, and review by stakeholders and peer-reviewers, the determination will be presented to Acoura's decision making entity that this fishery has passed its assessment and should be re-certified.

(REQUIRED FOR PCR)

1. The report shall include a formal statement as to the certification action taken by the CAB's official decision-makers in response to the Determination recommendation.

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## Appendix 1 Scoring and Rationales

### Appendix 1.1 Principle 1 Scoring

#### 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	Guidepost	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	For the North Sea herring stock, the estimated stock spawning biomass (SSB) in 2016, is 2 178 180 t, with catches in 2016 of 563 610 t, which is about 1.5% larger than the management plan and the ICES advice (i.e. 555 086 t). The estimated SSB has been above $B_{lim}$ (800 000 t) since 1993, above $B_{pa}$ (1 000 000 t) since 1996 and above $MSY B_{trigger}$ and the upper limit of $SSB_{MGT}$ (1 500 000 t) since 2009. $F$ has been below $F_{pa}$ and $F_{MSY}$ since 1996 and below the current upper limit of $F_{MGT}$ since 2006. Thus, it is highly likely that the stock is above the point where recruitment (R) would be impaired and SG 60 and 80 are met. Moreover, as uncertainty is explicitly estimated in the assessment, it is possible to evaluate with a high degree of certainty that the stock is above the point where recruitment would be impaired and thus SG 100 is met.		
b	Guidepost		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	Y
	Justification	In the latest years, the estimated SSB of North Sea herring stock has been well above $B_{pa}$ , $MSY B_{trigger}$ and the upper level of the $SSB_{MGT}$ . $F$ has been below $F_{MGT}$ and $F_{MSY}$ since 1996. According to the most recent ICES advice (June 2017), the lower 95% CI of the SSB has been well above $B_{lim}$ since the middle of the 1990s and it is estimated to be almost 2.25 times larger than $B_{lim}$ in 2016. Moreover, as uncertainty is estimated in the assessment, it is possible to evaluate with high degree of certainty that the stock has been fluctuating around its target reference point, or it has been well above its target reference point, over recent years and thus SG 80 and 100 are met.		
References		ICES 2012, ICES 2015, ICES 2016a,b, ICES 2017a,b		
Stock Status relative to Reference Points				
	Type of reference point	Value of reference point	Current stock status relative to reference point	

PI 1.1.1	The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
Target reference point	$B_{pa}$	1 000 000 t	2.18
	$MSY B_{trigger}$	1 500 000 t	1.45
	$SSB_{MGT}$	800 000 -1 500 000 t	2.72, 1.45
	$F_{MGT}$	0.26	1.00
	$F_{MSY}$	0.33	0.79
Limit reference point	$B_{lim}$	800 000 t	2.72
OVERALL PERFORMANCE INDICATOR SCORE:			100
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	Guidepost	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>Reference points for the North Sea herring stock have been estimated by simulations. <math>F_{MSY}</math> is estimated to be 0.33 and it is derived from the latest assessment (i.e. carried out in 2017). <math>F_{MGT}</math> is the value that delivers the maximum sustainable yield as well as having a 95% probability of avoiding the <math>F_{lim}</math>, and it has been estimated with the previous assessment model (i.e. carried out in 2016). For North Sea herring stock, <math>F_{MGT}</math> ranges between 0.10 and 0.26 depending on the stock size.</p> <p><math>B_{lim}</math> is set as the change point in the stock-recruitment relationship (i.e. 800 000 t) and <math>B_{pa}</math> (i.e. 1 000 000 t) is estimated as the stock spawning biomass that maintains SSB above <math>B_{lim}</math> with more than 95% probability and given the average CV of the estimate of SSB from the terminal assessment year conducted in 2012. <math>MSY B_{trigger}</math> is the SSB that results in less than 5% probability of the SSB being below <math>B_{lim}</math> and it has been derived using the latest assessment model. <math>SSB_{MGT}</math> is informed by simulation and chosen by the managers and ranges from 800 000 to 1 500 000 t.</p> <p>ICES consider that the estimated reference points, including <math>SSB_{MGT}</math> and <math>F_{MGT}</math>, to be in accordance with both the precautionary approach and the MSY framework. Thus, implicitly ICES consider that <math>SSB_{MGT}</math> and <math>F_{MGT}</math> are an appropriate proxy for <math>F_{MSY}</math> for this stock. Therefore, the team considered that the reference points are appropriate and that SG 60 and 80 are met.</p>		
b	Guidepost		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	N

PI 1.1.2		Limit and target reference points are appropriate for the stock		
	Justification	<p><math>B_{lim}</math> is set as the change point in the stock-recruitment relationship (i.e. 800 000 t) and <math>B_{pa}</math> (i.e. 1 000 000 t) is estimated as the stock spawning biomass that maintains SSB above <math>B_{lim}</math> with more than 95% probability and given the average CV of the estimate of SSB from the terminal assessment year conducted in 2012. The team considered that the limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity and thus SG 80 is met.</p> <p>However, as the limit reference point (<math>B_{lim}</math>) is set exactly where R starts to be impaired, the assessment team consider that “considerations of precautionary issues” are not explicitly integrated into the definition of the limit reference point for the North Sea herring stock. Thus, although ICES has concluded that the ICES Harvest Control Rules (HCRs) as well as the HCRs of the “Long term management strategy for herring of North Sea origin” are in accordance to the PA, the assessment team consider that SG 100 is not met.</p>		
c	Guidepost		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>ICES <math>MSY B_{trigger}</math> is considered the lower bound of spawning–stock biomass fluctuation around <math>B_{MSY}</math>. It is a biomass reference point that triggers a cautious response [ICES 2016]. The assessment team considers that ICES <math>MSY B_{trigger}</math> cannot be considered as a proxy for <math>B_{MSY}</math> but it has similar intent or outcome and therefore SG 80 is met.</p> <p>Simulations carried out by ICES showed that the target reference point (<math>F_{MGT}</math>) is able to maintain the stock above <math>B_{pa}</math> and <math>MSY B_{trigger}</math> with a probability larger than 95% under different recruitment scenario. However, data used in the stock assessment model and in the Management Strategy Evaluation (MSE) for the estimation of target and limit reference points is not directly taking into account interaction with other species or environmental effect, with the exception of the use of a time variant natural mortality estimated by a multi-species model. Thus, the assessment team considers that the ecological role of the stock is not taken explicitly into account with a high degree of certainty and thus SG 100 is not met.</p>		
d	Guidepost		For key low trophic level stocks, the target reference point takes into account the ecological role of the stock.	

<b>PI 1.1.2</b>		<b>Limit and target reference points are appropriate for the stock</b>		
	<b>Met?</b>		N/A	
<b>References</b>		ICES 2012, ICES 2015, ICES 2016a; ICES2016b, ICES 2017a; ICES 2017b		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				<b>80</b>
<b>CONDITION NUMBER (if relevant):</b>				<b>NA</b>

### Evaluation Table for PI 1.1.3

As the target (P1) stock is not depleted (evidenced in response to PI 1.1.1) this evaluation table is not applicable and has been removed.

### 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.
		Y	Y	Y
	Justification	<p>Harvest Strategy is defined as the combination of monitoring, stock assessment, harvest control rules and management actions, which may include a Management Plan or a Long-term management strategy and be tested by MSE.</p> <p>The stock of North Sea herring is managed according to the EU-Norwegian “Long term management strategy for herring of North Sea origin”. ICES evaluated the plan to be consistent with the precautionary approach and the MSY framework. The harvest control rules were revised in 2016 by ICES. The harvest strategy of the current “Long term management strategy” contains well defined harvest control rules with the aim to maintain a minimum level of Spawning Stock Biomass (SSB) greater than <math>MSY B_{trigger}</math> and to reduce the fishing mortality when the SSB is below <math>MSY B_{trigger}</math>. Where the SSB is estimated by the ICES to be below <math>MSY B_{trigger}</math>, the TAC should be based on a fishing mortality that is linearly reduced from <math>F_{MGT}</math> upper at <math>SSB = MSY B_{trigger}</math> to <math>F=0.10</math> at SSB equal to <math>B_{lim}</math> or lower. The TAC is set to be no more than 15 % greater or 15 % less than the TAC of the preceding year. Thus, the team considers that 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. Moreover, annual monitoring of the catches (e.g. size and age structure, spatial and temporal distributions, catches by fleet), scientific surveys (i.e. four different scientific surveys are conducted annually and used in the stock assessment), herring general biology (e.g. growth, maturity, natural mortality) as well as annual stock assessment is in place. There is also a process with which technical measures can be introduced as appropriate if deemed to be needed by the managers.</p> <p>For these reasons, the assessment team consider that the harvest strategy is “designed” to achieve stock management objectives reflected in the target and limit reference points and therefore SG 100 is met.</p>		

PI 1.2.1		There is a robust and precautionary harvest strategy in place		
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	Y	Y
	Justification	ICES has evaluated the current management plan through simulations (i.e. Management Strategy Evaluations; MSE) and considered to be in accordance with the precautionary approach and the MSY framework. Although, the focus of the MSE is on the evaluations of the HCRs, recent stock assessments have shown that F and SSB have been on target (F is lower than $F_{MSY}$ since 1996 and SSB is larger than $MSY B_{trigger}$ since 2009). Thus, the team considers that evidence exists to show that the harvest strategy is achieving its objectives including being clearly able to maintain the stock of North Sea herring at target levels and therefore SG 60, 80 and 100 is met.		
c	Guidepost	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	Y		
	Justification	Data necessary for stock assessment, including effort and catches by fleet, biological data as size and age composition, growth, maturity and natural mortality, and fisheries-independent stock information (i.e. four different scientific surveys are conducted annually and used in the stock assessment), are collected yearly according to the Norwegian monitoring scheme and the EU DCF (Data Collection Framework). ICES carries out yearly an assessment of the stock and provide catch advice. Thus, the team considers that the monitoring currently in place is of appropriate quality to determine whether the harvest strategy is working and thus SG 60 is met.		
d	Guidepost			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			Y
	Justification	The last benchmark for this stock occurred in 2012. Reference points ( $B_{lim}$ , $F_{pa}$ , $F_{MSY}$ , and $MSY B_{trigger}$ ) were updated in 2016. Moreover, the current harvest strategy has been reviewed by ICES in 2016 and is considered in accordance with the precautionary approach and with the MSY framework. Therefore, SG 100 is met.		

PI 1.2.1		There is a robust and precautionary harvest strategy in place		
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?	NA	NA	NA
		NA		
References		ICES 2012; ICES 2015; EU-Norway 2008, 2014, 2015, 2016		
OVERALL PERFORMANCE INDICATOR SCORE:				100
CONDITION NUMBER (if relevant):				NA

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	Guidepost	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	The harvest strategy of the current management plan contains well defined harvest control rules with the aim to maintain a minimum level of SSB greater than the $SSB_{MGT}$ upper trigger of 1.5 million t (which has been estimated based on simulations) and to reduce F when the SSB is below $SSB_{MGT}$ upper and further reduce F when the SSB is below the $SSB_{MGT}$ lower trigger of 0.8 million t. Where the SSB is estimated by the ICES to be below $SSB_{MGT}$ upper, the TAC should be based on a fishing mortality that is linearly reduced from $F_{MGT}$ ( $F_{ages\ 0-1} = 0.05$ and $F_{ages\ 2-6} = 0.26$ ) at $SSB = SSB_{MGT}$ upper to $F_{ages\ 0-1} = 0.04$ and $F_{ages\ 2-6} = 0.10$ at SSB equal or less than the $SSB_{MGT}$ lower trigger of 0.8 million t. Thus, the team considers that well defined harvest control rules are in place, which are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached. Thus, SG 60 and 80 are met.		
b	Guidepost		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.



PI 1.2.2		There are well defined and effective harvest control rules in place		
	Met?		Y	N
	Justification	ICES conducted simulations on the harvest control rules, which included several sources on uncertainty (e.g. recruitment, assessment error, implementation errors) and were considered them to be in accordance with the precautionary approach and the MSY framework. However, it is important to note that even if uncertainties are built in the definition of the precautionary and MSY reference points (i.e. $F_{pa}$ , $B_{pa}$ , MSY $B_{trigger}$ and $F_{MSY}$ ), it is not possible to say that the design of the harvest control rules take into account a wide range of uncertainties such as the environment effect on recruitment or other biological parameters (e.g. growth, maturity and natural mortality). Thus, although only part of the uncertainty is considered in the assessment and in the definition of the reference points, uncertainty it is not formally incorporated in the design of the harvest control rules. Thus, SG 100 is not met, only SG 80.		
c	Guidepost	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?	Y	Y	Y
	Justification	The assessment team notes that between 2012 and 2017, the TAC has been set equal or less than the scientific advice provided by ICES in 2014 and in 2016. It is important to note that the TAC corresponds to the A fleet only while the ICES advice corresponds to the total catch. Further, the ICES catch of autumn spawners includes the transfer from 3a into the North Sea (agreed TAC-setting procedure, EU-Norway 2016). The transfer is subtracted from the spring spawners TAC and effectively results in an increase in autumn spawners catch above the ICES catch advice (ICES Advice 2017 her 27.20-24). Fishing mortality has been smaller than the $F_{MGT}$ (since 2006) and $F_{MSY}$ (since 1996). Therefore, the team considers that evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules and thus SG 100 is met.		
References		ICES 2012; ICES 2015; ICES 2016a; ICES 2016b; ICES 2017a; ICES2017b; EU-Norway 2008, 2014, 2015, 2016		
OVERALL PERFORMANCE INDICATOR SCORE:				90
CONDITION NUMBER (if relevant):				NA

### 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	Guidepost	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	Data necessary for stock assessment and to support the harvest strategy, which includes fleet composition, effort data by fleet, catches (landings and discards) by fleet, biological data and fisheries-independent stock information, are yearly collected according the Norwegian and the EU DCF monitoring scheme. SG 60 and 80 are met. Other data such as environmental information are also available under the ICES website or through other fora, although these data are independent from the stock assessment and the effect of the environment on stock productivity is not formally considered in the assessment. Nevertheless, the team considers that a comprehensive range of information is available and thus SG 100 is met.		
b	Guidepost	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

PI 1.2.3		Relevant information is collected to support the harvest strategy			
	Justification	ICES collate stock assessment data and carries out a yearly assessment of the North Sea herring stock. Retrospective analysis has shown a rather robust assessment for both SSB and F, which implies that the stock spawning biomass and the harvest rate are monitored with sufficient frequency to support the harvest control rule. Discard information are considered to be negligible and thus not included in the assessment while bycatch of North Sea herring stock in other fisheries (i.e. herring fisheries in the Skagerrak-Kattegat) is included in the assessment. This implies that all information required by the harvest control rule is monitored with high frequency. SG 60 and 80 are met.  However, inherent uncertainty in the information and the robustness of the assessment and management to this uncertainty is not explicitly integrated in the stock assessment model and in the MSE used to estimate reference points and evaluate the harvest control rules and thus SG 100 is not met.			
c	Guidepost		There is good information on all other fishery removals from the stock.		
	Met?		Y		
	Justification	Catches (landings and discards) by fleet are yearly collected according to the Norwegian and the EU DCF and are considered by ICES to be of good quality to carry out an assessment of the stock. Discards are considered to be negligible and thus not included in the assessment. Also IUU are considered to be absent or anyhow negligible in this area. This implies that there is good information on all other fishery removals from the stock and thus SG 80 is met.			
References		Commission Regulation (EC) No. 665/2008 <a href="https://datacollection.jrc.ec.europa.eu/dcf-legislation">https://datacollection.jrc.ec.europa.eu/dcf-legislation</a> .			
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	Guidepost		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	The model used for the assessment of North Sea herring (i.e. SAM model) is considered appropriate and widely used by ICES for several stocks of both demersal and pelagic species. The most relevant data are included in the stock assessment (i.e. landings at age, weight at age, survey indices, etc). Four survey indices (IBTS Q1 1-ringer, IBTS0, SCAI, HERAS), annual maturity data from HERAS survey, and natural mortalities from SMS North Sea multispecies model are included in the model. Discards are considered to be negligible and thus not included in the assessment. Thus, the team considered that SG 80 and 100 are met.		
b	Guidepost <sub>t</sub>	The assessment estimates stock status relative to reference points.		
	Met?	Y		
	Justification	The assessments provide a comprehensive and robust vision of the stock status of the North Sea herring stock in terms of spawning stock biomass, recruitment and fishing mortality. Moreover, stock status is directly related to the PA and MSY reference points, and to the management reference points in an analytical way and therefore the analyses appear robust. Thus, the team considered that SG 60 is met.		
c	Guidepost	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	N

PI 1.2.4		There is an adequate assessment of the stock status		
	Justification	<p>Input data from sampling and monitoring programmes are considered to be of good quality. Both the spawning-stock biomass and the fishing mortality are estimated consistently between years by the stock assessment.</p> <p>The integration of time varying natural mortality in the assessment model aims to take into account and mirror changes in the ecosystem that might affect the herring stock. In 2016, updated natural mortality estimates by age class were derived from the North Sea multispecies assessment model and used in the assessment. This caused to a change in perception of the stock and total mortality in 2016. The reference points were adapted accordingly.</p> <p>The assessment estimates uncertainty (i.e. within the model) and retrospective analysis has shown a rather robust assessment for both SSB and F. However, no probabilistic approaches, such as risk analyses, are used in the assessment. Thus, the team considered that SG 100 is not met.</p>		
d	Guidepost			The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.
	Met?			Y
	Justification	<p>The assessment of the North Sea herring stock is regularly benchmarked according to the ICES benchmark system, which implies that input data are rigorously reviewed and different assessment models are tested and explored. The North Sea herring stock assessment was benchmarked last time in 2012 and it has been considered by ICES as robust to provide advice. Reference points (<math>B_{lim}</math>, <math>F_{lim}</math>, <math>F_{pa}</math>, <math>F_{MSY}</math>, and <math>MSY B_{trigger}</math>) were updated in 2016, following the update of the natural mortality by age derived by a new run of the North Sea multispecies assessment model. Thus, the team considered that SG 100 is met.</p>		
e	Guidepost		The assessment of stock status is subject to peer review.	The assessment has been internally and externally peer reviewed.
	Met?		Y	Y
	Justification	<p>During the benchmark meeting held in 2012, the stock assessment of North Sea herring was peer reviewed both internally (by ICES) and externally (by independent non-European reviewer). The reviewers concluded that the assessment model and the input data were adequate to provide an assessment of the North Sea herring stock. Thus, the team considered that the SG 80 and 100 are met.</p>		
References		ICES (2016)b; ICES (2016)c; ICES (2017)a; ICES (2017)b.		
OVERALL PERFORMANCE INDICATOR SCORE:				95
CONDITION NUMBER (if relevant):				NA

## Appendix 1.2 Principle 2 Scoring

The scoring justification for the 2 Units of Assessment (UoA) is combined. This is because no evidence has been presented of a different impact of the 2 gears, or where such evidence exists, the justification is based upon the worst case scenario (i.e. lowest MSC scoring).

### Evaluation Table for PI 2.1.1

PI 2.1.1		The fishery does not pose a risk of serious or irreversible harm to the retained species and does not hinder recovery of depleted retained species		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Main retained species are likely to be within biologically based limits (if not, go to scoring issue c below).	Main retained species are highly likely to be within biologically based limits (if not, go to scoring issue c below).	There is a high degree of certainty that retained species are within biologically based limits and fluctuating around their target reference points.
	Met?	Y	Y	Y
	Justification	<p>According to MSC standards, main retained species are those with levels larger than 5% of the total catches, while minor retained species are those less than 5%. In case catches of other species than the target species are under 1%, they are considered as negligible and not included in the evaluation, unless they are ETP or out of scope species (i.e. mammals, reptiles, birds).</p> <p>In general, the incidental catch of non-target species in the North Sea pelagic herring fishery is considered to be low. A recent study carried out in 2016 and considering the same gears, areas and stock caught by the Swedish Pelagic vessels considered here, showed that other species than herring constitute 1% or less of the total catches of the Dutch and German fleet and thus they are considered to be as minor species. Discard ratios for the pelagic fisheries are generally low.</p> <p>Reported catches of Swedish Pelagic vessels targeting herring in the North Sea are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to the Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework (DCF), pers. comm). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries. Thus, the assessment team considers that there are no retained species in this fishery and thus SG 60, 80 and 100 are met.</p>		
b	Guidepost <sub>t</sub>			Target reference points are defined for retained species.
	Met?			Y

PI 2.1.1		The fishery does not pose a risk of serious or irreversible harm to the retained species and does not hinder recovery of depleted retained species		
	Justification	Reported catches of Swedish Pelagic vessels targeting herring in the North Sea are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm). SA3.2.1 of the MSC certification requirements states that where the UoA has no impact on a particular component it shall receive a score of 100 under the outcome PI. Thus, the assessment team considers that there are no retained species and thus SG 100 is met.		
c	Guidepost	If main retained species are outside the limits there are measures in place that are expected to ensure that the fishery does not hinder recovery and rebuilding of the depleted species.	If main retained species are outside the limits there is a partial strategy of demonstrably effective management measures in place such that the fishery does not hinder recovery and rebuilding.	
	Met?	Y	Y	
	Justification	In the past, Swedish Pelagic vessels were covered by the observer Programme run by the Swedish authorities (i.e. the Swedish National Board of Fisheries). However, as the amount of by catch, discards and slipping was minimal and basically absent, the Swedish authorities excluded this section of the fleet from the yearly observer programme. Also, Since 2015, the Swedish Pelagic vessels are subject to EU landing obligation regime, which implies that all catches must be retained and landed and discards are illegal. Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to the (Swedish Agent for Marine and Water Management (SwAM)) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries. Therefore, as there are no main retained species, the assessment team considers that SG 60 and 80 are met.		



PI 2.1.1		The fishery does not pose a risk of serious or irreversible harm to the retained species and does not hinder recovery of depleted retained species		
d	Guidepost	If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the retained species to be outside biologically based limits or hindering recovery.		
	Met?	Y		
	Justification	Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to the Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish responsible of the EU Data Collection Framework, pers. comm). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries. Therefore, as there are no retained species, the assessment team considers that SG 60 is met.		
References		<p>Ulleweit <i>et al</i> (2016); Borges <i>et al</i> (2008); Pierce <i>et al</i> (2002); IMARES (2014)</p> <p>Commission Regulation (EC) No. 665/2008. <a href="https://datacollection.jrc.ec.europa.eu/dcf-legislation">https://datacollection.jrc.ec.europa.eu/dcf-legislation</a> .</p> <p>EU. 2013. Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy. Brussels, Belgium. <a href="http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:354:0022:0061:EN:PDF">http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:354:0022:0061:EN:PDF</a>.</p> <p>EU DCF, National plans and annual reports. <a href="https://datacollection.jrc.ec.europa.eu/nps">https://datacollection.jrc.ec.europa.eu/nps</a>.</p> <p>Swedish National Data Collection Program. <a href="https://www.havochvatten.se/en/swam/eu--international/international-cooperation/data-collection-framework-dcf/national-programs-and-annual-reports.html">https://www.havochvatten.se/en/swam/eu--international/international-cooperation/data-collection-framework-dcf/national-programs-and-annual-reports.html</a>.</p> <p>Commission Delegated Regulation (EU) 2018/189 of 23 November 2017 amending Delegated Regulation (EU) No 1395/2014 establishing a discard plan for certain small pelagic fisheries and fisheries for industrial purposes in the North Sea</p>		
OVERALL PERFORMANCE INDICATOR SCORE:				100
CONDITION NUMBER (if relevant):				NA



### Evaluation Table for PI 2.1.2

PI 2.1.2		There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are measures in place, if necessary, that are expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a partial strategy in place, if necessary, that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a strategy in place for managing retained species.
	Met?	Y	Y	Y

PI 2.1.2		There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species		
	Justification	<p>Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels of this unit of assessment targeting herring in the North Sea are considered accurate according to the Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries.</p> <p>Since the previous assessment, there is a significant change in the regulation and nowadays the pelagic fisheries in the North Sea are subject to landing obligation. As a result, any discard is now illegal in pelagic fisheries in the North Sea and this includes the practice of slippage.</p> <p>Highly sophisticated target species fishing procedures (i.e. recognition of the species-specific echo sounder marks, selection of areas and periods with high density of herring, continuous communication with other fishing vessels with regard to the location of the herring shoals, species mix and size composition of herring shoals, etc.) are in place onboard of Swedish pelagic RSW vessels in order to avoid bycatch species and obtain clean catches of herring. These practical procedures aid vessels in avoiding shoals which contain high ratios of mixed species. Also, fishing is done in locations where shoals are dense and clearly identifiable, further minimizing the risk of catching species other than herring.</p> <p>There are also several other legislative mechanisms aimed to minimise the risk of discards that are part of the strategy in place. Vessels are not allowed to pump fish out of the hold. No on board sorting or grading occurs so there is no opportunity for high grading. All tanks are checked to ensure that there is no piping to allow underwater discharging.</p> <p>Based on the catch data reported for this fleet, anecdotal evidence that both discards and slippage is minimal based on past observer reports, on board reporting, fishers own testimony, scientific assessment and enforcement and also considering the opinion of Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm), the assessment team consider that there is a strategy in place for managing retained species and thus SG 100 is met.</p>		
b	Guidepost	The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).	There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or species involved.	Testing supports high confidence that the strategy will work, based on information directly about the fishery and/or species involved.
	Met?	Y	Y	N

PI 2.1.2		There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species		
	Justification	<p>No direct observations (i.e. independent observers or onboard cameras) have been collected onboard of the member vessels considered by this assessment to verify with high confidence that the strategy in place is efficient to avoid the capture of main retained species when targeting North Sea herring in the North Sea.</p> <p>However, there is objective basis for confidence about the low level of discards, given the national landings reports and cross-checking procedures, which provide additional verification of the exception low levels of retained bycatch in these fisheries. Thus, the assessment team concluded that discards are negligible or nil and some objective basis for confidence that the partial strategy works exists, and therefore SG 60 and 80 are met. However, the lack of independent verification of the catches of the fleet impedes SG 100 to be met for this fishery.</p> <p>Also, the assessment team has made a recommendation (see PI 2.2.2) to develop CCTV for this fleet as a tool to independently verify catch information from this fleet.</p>		
c	Guidepost		There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	Met?		Y	Y

PI 2.1.2		There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species		
	Justification	<p>Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm). Thus, this metier has been excluded from the list of fisheries to be covered by on board observers within the Swedish National Programme for collection of fisheries data (EU DCF). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries.</p> <p>Moreover, highly sophisticated target species fishing procedures (i.e. recognition of the species-specific echo sounder marks, selection of areas and periods with high density of herring, continuous communication with other fishing vessels with regard to the location of the herring shoals, species mix and size composition of herring shoals, etc.) are in place onboard of Swedish pelagic RSW vessels in order to avoid bycatch species and obtain clean catches of herring. These practical procedures aid vessels in avoiding shoals which contain high ratios of mixed species. Also, fishing is done in locations where shoals are dense and clearly identifiable, further minimizing the risk of catching species other than herring.</p> <p>There has been a significant change in the regulation and nowadays the pelagic fisheries in the North Sea are subject to landing obligation. There are also several other legislative mechanisms aimed to minimise the risk of discards that are part of the strategy in place. Also, vessels are not allowed to pump fish out of the hold. No on board sorting or grading occurs so there is no opportunity for high grading. All tanks are checked to ensure that there is no piping to allow underwater discharging. SG 60 and 80 are met.</p> <p>Therefore, as reported catches of Swedish Pelagic vessels targeting herring in the North Sea are made 100% of herring, the fleet has a strategy to avoid by catch and also EU legislation and national regulations do minimize the risk of by-catch and discards, the assessment team considers that the strategy has been implemented successfully and thus SG 100 is met.</p>		
d	Guidepost			There is some evidence that the strategy is achieving its overall objective.
	Met?			Y

PI 2.1.2		There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species		
	Justification	<p>Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to the Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm). Thus, this metier has been excluded from the list of fisheries to be covered by on board observers within the Swedish National Programme for collection of fisheries data (EU DCF). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries.</p> <p>Moreover, highly sophisticated target species fishing procedures (i.e. recognition of the species-specific echo sounder marks, selection of areas and periods with high density of herring, continuous communication with other fishing vessels with regard to the location of the herring shoals, species mix and size composition of herring shoals, etc.) are in place onboard of Swedish pelagic RSW vessels in order to avoid bycatch species and obtain clean catches of herring. These practical procedures aid vessels in avoiding shoals which contain high ratios of mixed species. Also, fishing is done in locations where shoals are dense and clearly identifiable, further minimizing the risk of catching species other than herring.</p> <p>There has been a significant change in the regulation and nowadays the pelagic fisheries in the North Sea are subject to landing obligation. There are also several other legislative mechanisms aimed to minimise the risk of discards that are part of the strategy in place. Also, vessels are not allowed to pump fish out of the hold. No on board sorting or grading occurs so there is no opportunity for high grading. All tanks are checked to ensure that there is no piping to allow underwater discharging. SG 60 and 80 are met.</p> <p>ICES routinely estimate catches from 'other fisheries' in any stock assessments. This fishery is not identified as being a significant cause of incidental mortality of any other stock in the North Sea. Therefore, the assessment team considers that the strategy is achieving its overall objective and thus SG 100 is met.</p>		
e	Guidelines	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.
		NA	NA	NA
References		<p>Commission Regulation (EC) No. 665/2008.  <a href="https://datacollection.jrc.ec.europa.eu/dcf-legislation">https://datacollection.jrc.ec.europa.eu/dcf-legislation</a>.</p> <p>EU DCF, National plans and annual reports.  <a href="https://datacollection.jrc.ec.europa.eu/nps">https://datacollection.jrc.ec.europa.eu/nps</a>.</p> <p>Swedish National Data Collection Program.  <a href="https://www.havochvatten.se/en/swam/eu--international/international-cooperation/data-collection-framework-dcf/national-programs-and-annual-reports.html">https://www.havochvatten.se/en/swam/eu--international/international-cooperation/data-collection-framework-dcf/national-programs-and-annual-reports.html</a>.</p>		

PI 2.1.2	There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species			
	Commission Delegated Regulation (EU) 2018/189 of 23 November 2017 amending Delegated Regulation (EU) No 1395/2014 establishing a discard plan for certain small pelagic fisheries and fisheries for industrial purposes in the North Sea			
OVERALL PERFORMANCE INDICATOR SCORE:				95
CONDITION NUMBER (if relevant):				NA

### Evaluation Table for PI 2.1.3

PI 2.1.3		Information on the nature and extent of retained species is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage retained species		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Qualitative information is available on the amount of main retained species taken by the fishery.	Qualitative information and some quantitative information are available on the amount of main retained species taken by the fishery.	Accurate and verifiable information is available on the catch of all retained species and the consequences for the status of affected populations.
	Met?	Y	Y	N
	Justification	<p>Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to the Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm). Thus, this metier has been excluded from the list of fisheries to be covered by on board observers within the Swedish National Programme for collection of fisheries data (EU DCF). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries. Yearly verifications with direct observations (i.e. independent observers or on-board cameras) are not considered necessary by the Swedish authorities for this metier due to the fact that the risk of obtaining catches other than herring in this fishery is considered negligible. Also, system of cross checking of landing declarations and sales notes, combined with tighter enforcement in pelagic fisheries has increased the accuracy of all landings information. SG 60 and 80 are met.</p> <p>However, the assessment team interpret the definition of “verifiable” as the need of having independent observation of the catches of all retained species. As this is lacking for this fleet, the assessment team consider that SG 100 is not met.</p> <p>In this context, the assessment team has made a recommendation (see PI 2.2.2) to develop CCTV for this fleet as a tool to independently verify catch information from this fleet.</p>		
b	Guidepost	Information is adequate to qualitatively assess outcome status with respect to biologically based limits.	Information is sufficient to estimate outcome status with respect to biologically based limits.	Information is sufficient to quantitatively estimate outcome status with a high degree of certainty.
	Met?	Y	Y	Y



PI 2.1.3		Information on the nature and extent of retained species is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage retained species		
	Justification	Although direct onboard observations of the catches are lacking, the outcome status of the retained species would be always be estimated with a high degree of certainty as the hypothetical quantity will be too low to affect their assessment and thus the estimate of fishing mortality. Thus, the assessment team consider that SG 60, 80 and 100 are met.		
c	Guidepost	Information is adequate to support measures to manage main retained species.	Information is adequate to support a partial strategy to manage main retained species.	Information is adequate to support a strategy to manage retained species, and evaluate with a high degree of certainty whether the strategy is achieving its objective.
	Met?	Y	Y	Y
	Justification	Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring (Swedish Agent for Marine and Water Management (SwAM)). However, catches of any retained species in the Swedish pelagic fisheries, if any and even if very low, would be routinely recorded and would be always reported with a high degree of accuracy to EU and ICES working groups and used by ICES in the annual stock assessment of the stocks. Thus, the assessment team consider that SG 60, 80 and 100 are met.		
d	Guidepost		Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator score or the operation of the fishery or the effectiveness of the strategy)	Monitoring of retained species is conducted in sufficient detail to assess ongoing mortalities to all retained species.
	Met?		Y	Y
	Justification	Monitoring of the catches of retained species is conducted in sufficient detail during discharging operations, including the use of calibrated scales, to assess the quantity of all retained species in the fishing gears. It is conceivable that bycatch of mackerel, haddock, horse mackerel and whiting might occur in the fishery, even if they are reported to be null in the Swedish pelagic fisheries for herring in the North Sea. The assessment team therefore concludes that the retention of any other species is an exceptionally rare event and hypothetical quantity of retained species will be too low to affect their assessment and thus the estimate of fishing mortality and does not need to be considered. Thus, the assessment team considers that the fishery meets SG 80 and 100.		
References		Commission Regulation (EC) No. 665/2008. <a href="https://datacollection.jrc.ec.europa.eu/dcf-legislation">https://datacollection.jrc.ec.europa.eu/dcf-legislation</a> . EU. 2013. Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy.		

PI 2.1.3	<b>Information on the nature and extent of retained species is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage retained species</b>	
	<p>Brussels, Belgium. <a href="http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:354:0022:0061:EN:PDF">http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:354:0022:0061:EN:PDF</a>.</p> <p>EU DCF, National plans and annual reports. <a href="https://datacollection.jrc.ec.europa.eu/nps">https://datacollection.jrc.ec.europa.eu/nps</a>.</p> <p>Swedish National Data Collection Program. <a href="https://www.havochvatten.se/en/swam/eu--international/international-cooperation/data-collection-framework-dcf/national-programs-and-annual-reports.html">https://www.havochvatten.se/en/swam/eu--international/international-cooperation/data-collection-framework-dcf/national-programs-and-annual-reports.html</a>.</p> <p>Commission Delegated Regulation (EU) 2018/189 of 23 November 2017 amending Delegated Regulation (EU) No 1395/2014 establishing a discard plan for certain small pelagic fisheries and fisheries for industrial purposes in the North Sea</p>	
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>		<b>95</b>
<b>CONDITION NUMBER (if relevant):</b>		<b>NA</b>

### Evaluation Table for PI 2.2.1

PI 2.2.1		The fishery does not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted bycatch species or species groups		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Main bycatch species are likely to be within biologically based limits (if not, go to scoring issue b below).	Main bycatch species are highly likely to be within biologically based limits (if not, go to scoring issue b below).	There is a high degree of certainty that bycatch species are within biologically based limits.
	Met?	Y	Y	Y
	Justification	<p>Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm). Thus, this metier has been excluded from the list of fisheries to be covered by on board observers within the Swedish National Programme for collection of fisheries data (EU DCF). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries. Thus, the assessment team concludes that the bycatch and discarding of any other species is an exceptionally rare event and negligible in its impact and thus it does not need to be considered.</p> <p>The assessment team also noticed that members of the client group continuously provided official invitation to the former National Board of Fisheries and the today Swedish University of Agricultural Sciences (SLU) authorities that observers are very welcome on board their vessels. However, SLU has chosen to not send observers on board of any of the pelagic vessels as the amount and frequency of catching bycatch species is considered to be very low (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm.).</p> <p>It is also important to notice that since the previous assessment, there is a significant change in the regulation and nowadays the pelagic fisheries in the North Sea are subject to landing obligation. As a result, any discard is now illegal in pelagic fisheries in the North Sea and this includes the practice of slippage, which was already considered to be a rare event. Therefore, the assessment team considered that there are no by-catch species and thus the fishery meets SG 60, 80 and 100.</p>		

PI 2.2.1		The fishery does not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted bycatch species or species groups		
b	Guidepost	If main bycatch species are outside biologically based limits there are mitigation measures in place that are expected to ensure that the fishery does not hinder recovery and rebuilding.	If main bycatch species are outside biologically based limits there is a partial strategy of demonstrably effective mitigation measures in place such that the fishery does not hinder recovery and rebuilding.	
	Met?	Y	Y	
	Justification	<p>Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to the Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm). Thus, this metier has been excluded from the list of fisheries to be covered by on board observers within the Swedish National Programme for collection of fisheries data (EU DCF). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries.</p> <p>Moreover, highly sophisticated target species fishing procedures (i.e. recognition of the species-specific echo sounder marks, selection of areas and periods with high density of herring, continuous communication with other fishing vessels with regard to the location of the herring shoals, species mix and size composition of herring shoals, etc.) are in place onboard of Swedish pelagic RSW vessels in order to avoid bycatch species and obtain clean catches of herring. These practical procedures aid vessels in avoiding shoals which contain high ratios of mixed species. Also, fishing is done in locations where shoals are dense and clearly identifiable, further minimizing the risk of catching species other than herring.</p> <p>There are also several other legislative mechanisms aimed to minimise the risk of discards that are part of the strategy in place. Vessels are not allowed to pump fish out of the hold. No on board sorting or grading occurs so there is no opportunity for high grading. All tanks are checked to ensure that there is no piping to allow underwater discharging. Thus, considering that reported catches are composed 100% by herring and the mitigation measures are in place to minimise the risk of by catch, the assessment team consider that SG 60 and 80 are met.</p>		

PI 2.2.1		The fishery does not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted bycatch species or species groups		
c	Guidepost	If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the bycatch species to be outside biologically based limits or hindering recovery.		
	Met?	Y		
	Justification	<p>Since the previous assessment, there is a significant change in the regulation and nowadays the pelagic fisheries in the North Sea are subject to landing obligation. As a result, any discard is now illegal in pelagic fisheries in the North Sea and this includes the practice of slippage. Thus the assessment team consider that there are measures in place that are expected to result in the fishery not causing bycatch species to be outside biologically based limits or hindering recovery. Also, the fleet has in place measures to avoid by-catch as highly sophisticated target species fishing procedures (i.e. recognition of the species-specific echo sounder marks, selection of areas and periods with high density of herring, continuous communication with other fishing vessels with regard to the location of the herring shoals, species mix and size composition of herring shoals, etc.) are in place onboard of Swedish pelagic RSW vessels in order to avoid bycatch species and obtain clean catches of herring. These practical procedures aid vessels in avoiding shoals which contain high ratios of mixed species. Also, fishing is done in locations where shoals are dense and clearly identifiable, further minimizing the risk of catching species other than herring. As the reported catches are composed 100% by herring, this fishery does not cause the bycatch species to be outside biologically based limits or hindering their recovery.</p> <p>Since the previous assessment, there is a significant change in the regulation and nowadays the pelagic fisheries in the North Sea are subject to landing obligation. There are also several other legislative mechanisms aimed to minimise the risk of discards that are part of the strategy in place. Vessels are not allowed to pump fish out of the hold. No on board sorting or grading occurs so there is no opportunity for high grading. All tanks are checked to ensure that there is no piping to allow underwater discharging.</p> <p>Thus, considering the EU landings obligation, the mitigation measures and the legislative mechanisms aimed to minimise the risk of discards in place, and the fact that there are no by catch species reported in the catches of the Swedish pelagic fleet, the assessment team considers that SG 60 is met.</p>		
References		<p>Commission Regulation (EC) No. 665/2008.  <a href="https://datacollection.jrc.ec.europa.eu/dcf-legislation">https://datacollection.jrc.ec.europa.eu/dcf-legislation</a> .</p> <p>EU. 2013. Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy. Brussels, Belgium. <a href="http://eur-">http://eur-</a></p>		

PI 2.2.1	<b>The fishery does not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted bycatch species or species groups</b>	
	<a href="http://lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:354:0022:0061:EN:PDF">lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:354:0022:0061:EN:PDF</a> .  EU DCF, National plans and annual reports. <a href="https://datacollection.jrc.ec.europa.eu/nps">https://datacollection.jrc.ec.europa.eu/nps</a> .  Swedish National Data Collection Program. <a href="https://www.havochvatten.se/en/swam/eu--international/international-cooperation/data-collection-framework-dcf/national-programs-and-annual-reports.html">https://www.havochvatten.se/en/swam/eu--international/international-cooperation/data-collection-framework-dcf/national-programs-and-annual-reports.html</a> .  Commission Delegated Regulation (EU) 2018/189 of 23 November 2017 amending Delegated Regulation (EU) No 1395/2014 establishing a discard plan for certain small pelagic fisheries and fisheries for industrial purposes in the North Sea	
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>		<b>100</b>
<b>CONDITION NUMBER (if relevant):</b>		<b>NA</b>

## Evaluation Table for PI 2.2.2

PI 2.2.2		There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are measures in place, if necessary, that are expected to maintain the main bycatch species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a partial strategy in place, if necessary, that is expected to maintain the main bycatch species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a strategy in place for managing and minimizing bycatch.
		Met?	Y	Y
	Justification	<p>Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to the Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm). Thus, this metier has been excluded from the list of fisheries to be covered by on board observers within the Swedish National Programme for collection of fisheries data (EU DCF). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries.</p> <p>Since the previous assessment, there is a significant change in the regulation and nowadays the pelagic fisheries in the North Sea are subject to landing obligation. As a result, any discard is now illegal in pelagic fisheries in the North Sea and this includes the practice of slippage. Moreover, the fleet has in place highly sophisticated target species fishing procedures (i.e. recognition of the species specific echo sounder marks, selection of areas and periods, continuous communication with other fishing vessels, etc.) in order to avoid retained species and obtain clean catches of herring.</p> <p>There are also several other legislative mechanisms aimed to minimise the risk of discards that are part of the strategy in place. Vessels are not allowed to pump fish out of the hold. No on board sorting or grading occurs so there is no opportunity for high grading. All tanks are checked to ensure that there is no piping to allow underwater discharging. SG 60 and 80 are met.</p> <p>Thus, as there are no bycatch species in these fisheries and an EU strategy and a management strategy of the fleet are in place for managing and minimizing bycatch, the assessment team consider that that SG 100 is met.</p>		



PI 2.2.2		There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations		
b	Guidepost	The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/species).	There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or species involved.	Testing supports high confidence that the strategy will work, based on information directly about the fishery and/or species involved.
	Met?	Y	Y	N
	Justification	<p>Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to the Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm). Thus, this metier has been excluded from the list of fisheries to be covered by on board observers within the Swedish National Programme for collection of fisheries data (EU DCF). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries. Thus, the assessment team considers that there are no bycatch species in these fisheries.</p> <p>Since the previous assessment, there is a significant change in the regulation and nowadays the pelagic fisheries in the North Sea are subject to landing obligation. As a result, any discard is now illegal in pelagic fisheries in the North Sea and this includes the practice of slippage. Also, the fleet has in place highly sophisticated target species fishing procedures (i.e. recognition of the species-specific echo sounder marks, selection of areas and periods, continuous communication with other fishing vessels, etc.) are in place onboard of member vessels in order to avoid retained species and obtain clean catches of herring.</p> <p>There are also several other legislative mechanisms aimed to minimise the risk of discards that are part of the strategy in place. Vessels are not allowed to pump fish out of the hold. No on board sorting or grading occurs so there is no opportunity for high grading. All tanks are checked to ensure that there is no piping to allow underwater discharging.</p> <p>Therefore, as an EU strategy and a management strategy of the fleet are in place for managing and minimizing bycatch and by catch is estimated to be nil, the assessment team considers that SG 80 is met.</p> <p>However, as the discard ban has not yet been evaluated as well as there is a lack of direct observers onboard for this fleet the assessment team considers that as information directly about the fishery are not available to verify that the strategy in place is working and thus SG 100 is not met.</p> <p><b>Recommendation:</b> The assessment team considers that an independent verification would be necessary to achieve SG 100. This might be also achieved, for example, by the use of CCTV.</p>		

PI 2.2.2		There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations		
c	Guidepost		There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	Met?		Y	N
	Justification	<p>Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to the Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm). Thus, this metier has been excluded from the list of fisheries to be covered by on board observers within the Swedish National Programme for collection of fisheries data (EU DCF). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries.</p> <p>Since the previous assessment, there is a significant change in the regulation and nowadays the pelagic fisheries in the North Sea are subject to landing obligation. As a result, any discard is now illegal in pelagic fisheries in the North Sea and this includes the practice of slippage. Also, the fleet has in place highly sophisticated target species fishing procedures (i.e. recognition of the species specific echo sounder marks, selection of areas and periods, continuous communication with other fishing vessels, etc.) are in place onboard of member vessels in order to avoid retained species and obtain clean catches of herring.</p> <p>There are also several other legislative mechanisms aimed to minimise the risk of discards that are part of the strategy in place. Vessels are not allowed to pump fish out of the hold. No on board sorting or grading occurs so there is no opportunity for high grading. All tanks are checked to ensure that there is no piping to allow underwater discharging.</p> <p>Therefore, as an EU strategy and a management strategy of the fleet are in place for managing and minimizing bycatch and by catch is estimated to be nil, the assessment team considers that SG 80 is met.</p> <p>However, as the discard ban has not yet been evaluated as well as there is a lack of direct observers onboard for this fleet the assessment team considers that as information directly about the fishery are not available to verify that the strategy in place is working, SG 100 is not met.</p> <p><b>Recommendation:</b> The assessment team considers that an independent verification would be necessary to achieve SG 100. This might be also achieved, for example, by the use of CCTV.</p>		
d	Guidepost			There is some evidence that the strategy is achieving its overall objective.
	Met?			Y

PI 2.2.2	There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations
Justification	<p>Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to the Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm). Thus, this metier has been excluded from the list of fisheries to be covered by on board observers within the Swedish National Programme for collection of fisheries data (EU DCF). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries.</p> <p>Moreover, highly sophisticated target species fishing procedures (i.e. recognition of the species-specific echo sounder marks, selection of areas and periods with high density of herring, continuous communication with other fishing vessels with regard to the location of the herring shoals, species mix and size composition of herring shoals, etc.) are in place onboard of Swedish pelagic RSW vessels in order to avoid bycatch species and obtain clean catches of herring. These practical procedures aid vessels in avoiding shoals which contain high ratios of mixed species. Also, fishing is done in locations where shoals are dense and clearly identifiable, further minimizing the risk of catching species other than herring.</p> <p>There are also several other legislative mechanisms aimed to minimise the risk of discards that are part of the strategy in place. Vessels are not allowed to pump fish out of the hold. No on board sorting or grading occurs so there is no opportunity for high grading. All tanks are checked to ensure that there is no piping to allow underwater discharging. SG 60 and 80 are met.</p> <p>As the reported catches are composed 100% by herring based on the landings reported by this fleet and that the data are considered to be reliable as for the opinion of the Swedish experts for Data Collection (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm) and according to past observer reports, on board reporting, fishers own testimony, scientific assessment and enforcement, the assessment team consider that some evidence that the strategy is achieving its overall objective is available and thus SG 100 is met.</p>
References	<p>Commission Regulation (EC) No. 665/2008. <a href="https://datacollection.jrc.ec.europa.eu/dcf-legislation">https://datacollection.jrc.ec.europa.eu/dcf-legislation</a> .</p> <p>EU. 2013. Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy. Brussels, Belgium. <a href="http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:354:0022:0061:EN:PDF">http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:354:0022:0061:EN:PDF</a></p> <p>EU DCF, National plans and annual reports. <a href="https://datacollection.jrc.ec.europa.eu/nps">https://datacollection.jrc.ec.europa.eu/nps</a>.</p> <p>Swedish National Data Collection Program. <a href="https://www.havochvatten.se/en/swam/eu--international/international-cooperation/data-collection-framework-dcf/national-programs-and-annual-reports.html">https://www.havochvatten.se/en/swam/eu--international/international-cooperation/data-collection-framework-dcf/national-programs-and-annual-reports.html</a>.</p>

PI 2.2.2	There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations			
	Commission Delegated Regulation (EU) 2018/189 of 23 November 2017 amending Delegated Regulation (EU) No 1395/2014 establishing a discard plan for certain small pelagic fisheries and fisheries for industrial purposes in the North Sea			
OVERALL PERFORMANCE INDICATOR SCORE:				90
CONDITION NUMBER (if relevant):				NA

### Evaluation Table for PI 2.2.3

PI 2.2.3		Information on the nature and the amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Qualitative information is available on the amount of main bycatch species taken by the fishery.	Qualitative information and some quantitative information are available on the amount of main bycatch species taken by the fishery.	Accurate and verifiable information is available on the catch of all bycatch species and the consequences for the status of affected populations.
	Met?	Y	Y	N

PI 2.2.3	Information on the nature and the amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch
Justification	<p>Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to the herring Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm). Thus, this metier has been excluded from the list of fisheries to be covered by on board observers within the Swedish National Programme for collection of fisheries data (EU DCF). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries.</p> <p>Moreover, highly sophisticated target species fishing procedures (i.e. recognition of the species-specific echo sounder marks, selection of areas and periods with high density of herring, continuous communication with other fishing vessels with regard to the location of the herring shoals, species mix and size composition of herring shoals, etc.) are in place onboard of Swedish pelagic RSW vessels in order to avoid bycatch species and obtain clean catches of herring. These practical procedures aid vessels in avoiding shoals which contain high ratios of mixed species. Also, fishing is done in locations where shoals are dense and clearly identifiable, further minimizing the risk of catching species other than herring.</p> <p>There are also several other legislative mechanisms aimed to minimise the risk of discards that are part of the strategy in place. Vessels are not allowed to pump fish out of the hold. No on board sorting or grading occurs so there is no opportunity for high grading. All tanks are checked to ensure that there is no piping to allow underwater discharging.</p> <p>Also, although the client has reiterated that observers are very welcome on board their vessels, SLU has chosen to not send observers on board of any of the pelagic vessels as the amount and frequency of catching bycatch species is considered to be very low (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm.). Therefore, as an EU strategy and a management strategy of the fleet are in place for managing and minimizing bycatch and by catch is estimated to be nil, the assessment team considers that SG 80 is met.</p> <p>However, is important to notice that discard ban has not yet been evaluated as well as there is a lack of direct observers onboard this fleet. For these reasons, and because accurate and verifiable information is not available on the catch of all bycatch species, the assessment team considers that SG 100 is not met.</p> <p><b>Recommendation:</b> The assessment team considers that an independent verification would be necessary to achieve SG 100. This might be also achieved, for example, by the use of CCTV.</p>

PI 2.2.3		Information on the nature and the amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch		
b	Guidepost	Information is adequate to broadly understand outcome status with respect to biologically based limits	Information is sufficient to estimate outcome status with respect to biologically based limits.	Information is sufficient to quantitatively estimate outcome status with respect to biologically based limits with a high degree of certainty.
	Met?	Y	Y	Y
	Justification	Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to the Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Framework, pers. comm). Thus, this metier has been excluded from the list of fisheries to be covered by on board observers within the Swedish National Programme for collection of fisheries data (EU DCF). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries. Thus, the assessment team considers that as there are no bycatch species in these fisheries such information is sufficient to quantitatively estimate the outcome status of the retained species with respect to biologically based limits (i.e. the influence of the herring fishery on other by catch species is nil) with a high degree of certainty and therefore the assessment team considers that SG 60, 80 and 100 are met.		
c	Guidepost	Information is adequate to support measures to manage bycatch.	Information is adequate to support a partial strategy to manage main bycatch species.	Information is adequate to support a strategy to manage retained species, and evaluate with a high degree of certainty whether the strategy is achieving its objective.
	Met?	Y	Y	Y



PI 2.2.3		Information on the nature and the amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch		
	Justification	<p>Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring). The catches information from the member vessels targeting herring in the North Sea are considered accurate according to the Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Programme, pers. comm). Thus, this metier has been excluded from the list of fisheries to be covered by on board observers within the Swedish National Programme for collection of fisheries data (EU DCF). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries. SG 60 and 80 are met.</p> <p>Thus, information available is adequate to support a strategy to manage retained species (i.e. there are no retained species), and evaluate with a high degree of certainty whether the strategy is achieving its objective (i.e. it does as catches constituted of 100% of herring) and therefore the assessment team considers that SG 100 is met.</p>		
d	Guidepost		Sufficient data continue to be collected to detect any increase in risk to main bycatch species (e.g., due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the strategy).	Monitoring of bycatch data is conducted in sufficient detail to assess ongoing mortalities to all bycatch species.
	Met?		Y	Y

PI 2.2.3		Information on the nature and the amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch
	Justification	<p>Reported catches of Swedish Pelagic vessels targeting herring in the North Sea in the last 3 years are made 100% of herring. The catches information from the member vessels targeting herring in the North Sea are considered accurate according to the Swedish Agent for Marine and Water Management (SwAM) and by Swedish experts (Maria Hansson, Swedish coordinator of the Data Collection Programme, pers. comm). Thus, this metier has been excluded from the list of fisheries to be covered by on board observers within the Swedish National Programme for collection of fisheries data (EU DCF). Also, although the limited coverage of specific observer programmes for the pelagic fisheries in the North Sea, ICES consider discards of other species to be very low in the North Sea herring fisheries. Also, although the client has reiterated that observers are very welcome on board their vessels, SLU has chosen to not send observers on board of any of the pelagic vessels as the amount and frequency of catching bycatch species is considered to be very low (Maria Hansson, Swedish coordinator of the Data Collection Programme, pers. comm.).</p> <p>Even if the discard ban has not yet been evaluated as well as there is a lack of direct observers onboard this fleet, monitoring of bycatch data is conducted in sufficient detail to assess ongoing mortalities to all bycatch species. As the amount of by catch is most likely to be very low or close to nil, the assessment team considers that fishing mortalities of bycatch species associated to this herring fishery is negligible and therefore SG 80 and 100 are met.</p>
	References	<p>Commission Regulation (EC) No. 665/2008. <a href="https://datacollection.jrc.ec.europa.eu/dcf-legislation">https://datacollection.jrc.ec.europa.eu/dcf-legislation</a> .</p> <p>EU DCF, National plans and annual reports. <a href="https://datacollection.jrc.ec.europa.eu/nps">https://datacollection.jrc.ec.europa.eu/nps</a>.</p> <p>Swedish National Data Collection Program. <a href="https://www.havochvatten.se/en/swam/eu--international/international-cooperation/data-collection-framework-dcf/national-programs-and-annual-reports.html">https://www.havochvatten.se/en/swam/eu--international/international-cooperation/data-collection-framework-dcf/national-programs-and-annual-reports.html</a>.</p> <p><a href="#">Commission Delegated Regulation (EU) 2018/189</a> of 23 November 2017 amending Delegated Regulation (EU) No 1395/2014 establishing a discard plan for certain small pelagic fisheries and fisheries for industrial purposes in the North Sea</p>
OVERALL PERFORMANCE INDICATOR SCORE:		95
CONDITION NUMBER (if relevant):		NA

### Evaluation Table for PI 2.3.1

PI 2.3.1		The fishery meets national and international requirements for the protection of ETP species  The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Known effects of the fishery are likely to be within limits of national and international requirements for protection of ETP species.	The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species.	There is a high degree of certainty that the effects of the fishery are within limits of national and international requirements for protection of ETP species.
	Met?	(Y)	(Y)	(N)
	Justification	<p>There are many species which qualify as ETP in the North Sea, where the fishery takes place. The list below is unlikely to be exhaustive. But includes species protected by CITES – such as:</p> <ul style="list-style-type: none"> <li>• Sei Whale <i>Balaenoptera borealis</i></li> <li>• Blue Whale <i>Balaenoptera musculus</i></li> <li>• Fin Whale <i>Balaenoptera physalus</i></li> <li>• North Atlantic Right Whale <i>Eubalaena glacialis</i></li> <li>• Sperm Whale <i>Physeter macrocephalus</i></li> <li>• Humpback whale <i>Megaptera novaeangliae</i></li> <li>• White-tailed eagle <i>Haliaeetus albicilla</i></li> <li>• Minke whale <i>Balaenoptera acutorostrata</i></li> </ul> <p>Species which are prohibited under EU annual fishing opportunities legislation:</p> <ul style="list-style-type: none"> <li>• starry ray <i>Amblyraja radiata</i></li> <li>• basking shark <i>Cetorhinus maximus</i></li> <li>• kitefin shark <i>Dalatias licha</i></li> <li>• common skate (complex) <i>Dipturus batis</i></li> <li>• tope shark <i>Galeorhinus galeus</i></li> <li>• porbeagle <i>Lamna nasus</i></li> <li>• Norwegian skate <i>Dipturus nidarosiensis</i></li> <li>• picked dogfish <i>Squalus acanthias</i></li> </ul> <p>The effects of the fishery are known – as described in 2.3.1b and in 2.3.3. CITES Appendix 1 prohibits international trade in listed ETP species; Likewise, EU 127/2017 states that catches of listed species are prohibited and “when accidentally caught, species ..... shall not be harmed. Specimens shall be promptly released”.</p> <p>The fishery operates within these ‘limits’ in so far as it does not deliberately catch and does not land or sell any ETP species. SG60 and 80 are met. However, given the lower level of current monitoring SG100 is not met. The intent of PI 2.3.1 is that ETP mortality is compared to limits defined for the population. This question is further addressed in scoring issue B (below).</p>		

<b>PI 2.3.1</b>		<b>The fishery meets national and international requirements for the protection of ETP species</b> <b>The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species</b>		
<b>b</b>	<b>Guidepost</b>	Known direct effects are unlikely to create unacceptable impacts to ETP species.	Direct effects are highly unlikely to create unacceptable impacts to ETP species.	There is a high degree of confidence that there are no significant detrimental direct effects of the fishery on ETP species.
	<b>Met?</b>	(Y)	(Y)	(N)

PI 2.3.1	<p><b>The fishery meets national and international requirements for the protection of ETP species</b></p> <p><b>The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species</b></p>
Justification	<p>The direct effects of the fishery on these species would be direct mortality in event of capture. Understanding of the amount of direct impact is informed by qualitative information and plausible argument derived from an understanding of the fishery and gear characteristics (i.e. expert judgement) and direct accounts from fishermen. This is augmented by some direct studies, research work and monitoring. A number of ICES working groups have direct oversight:</p> <ul style="list-style-type: none"> <li>• ICES Working Group on Seabird Ecology (WGSE)</li> <li>• ICES Working Group on Bycatch of Protected Species (WGBYC)</li> <li>• ICES Working Group on Marine Mammal Ecology (WGMME)</li> </ul> <p>EU regulation 812/2004, required a minimum level of monitoring in order to improve estimates of bycatch of ETP species in certain fisheries – including pelagic fisheries in the North Sea. In October 2006 Sweden implemented an observation scheme which covered 2.8 % of the total fishing effort over a 2-year period, with slightly higher observer coverage in the Skagerrak and Kattegat. No bycatch of ETP species was reported from the North Sea herring Swedish fisheries and from on board records. As a result, the monitoring program has been discontinued due to low risk of encountering of ETP species in the herring pelagic fishery and Swedish sampling effort is now focused on other higher risk fisheries. This is summarised in past reports to the ICES WGBYC. An additional summary of ETP bycatch issues in the North Sea herring fisheries is available in the annual ICES Stock Annex (ICES 2016a). This states that:</p> <p>“Interactions between the directed North Sea herring fishery with PETS (i.e. ETP) species are, in general, considered to be low”.</p> <p>ICES WGBYC 2015 presents a summary of ETP interactions from North Sea Pelagic Fisheries across all Member States. This shows that in ICES areas Iva, IVb, IVc and VIId (the 4 divisions covered by this assessment) that there were 99 Observed Days at Sea in 2013 (out of 1166 days in total – i.e. 8.5% coverage) showing zero ETP interaction.</p> <p>For a time, on-board log books of ETP interactions have been kept on-board vessels. These have also shown zero interaction.</p> <p>In addition, information is available about the abundance of ETP species in the UoA region of operation. There is a European Atlas of Cetacean distribution although this is now a relatively old publication (Reid <i>et al</i> 2003). More recently the results from the periodically updated SCANS project now present a time series of large-scale multinational surveys of cetaceans in European Atlantic waters. This is now in its 3rd iteration (Hammond <i>et al</i> 2016). Additionally, the annual reports to ICES WGBYC report on a wide range of studies for various species in various areas. These studies do not attribute any changes in the abundance and distribution of ETP species to the impacts of the pelagic trawl fishery in the North Sea (most of the impacts are associated with static net fisheries and climate change). It can therefore be concluded that Direct effects are highly unlikely to create unacceptable impacts to ETP species and SG 60 and 80 are met. More up to date fleet-specific monitoring could have supported scoring at the SG100 level.</p>

<b>PI 2.3.1</b>		<b>The fishery meets national and international requirements for the protection of ETP species</b> <b>The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species</b>		
<b>c</b>	<b>Guidepost</b>		Indirect effects have been considered and are thought to be unlikely to create unacceptable impacts.	There is a high degree of confidence that there are no significant detrimental indirect effects of the fishery on ETP species.
	<b>Met?</b>		(Y)	(N)
	<b>Justification</b>	Indirect effects of a fishery on ETP species could include impacts from vessel movements and noise or pollution or competition for food resources. The assessment team have considered these and in their expert opinion consider that these are unlikely to create unacceptable impact and SG 80 is met. However, it is also important to detail any consideration on the part of the management authority of such indirect impacts. The main focus at the EU level has been on direct effects, while indirect effects are less well known. Considering that the herring stock has fluctuated over $B_{pa}$ in recent years, indirect effects linked to a very low level of herring biomass in the ecosystem are thought to be unlikely to create unacceptable impacts. Also, there are on-board waste management procedures in place that would minimise the indirect effect of waste on ETP species. The ICES Working Group on Marine Mammal Ecology (WGMME) do consider the impacts of persistent organic pollutants and toxic elements and plastics and other marine debris on marine mammal ecology. SG 100 is not met.		
<b>References</b>		» Hammond <i>et al</i> (2016); ICES 2017c; ICES WGBC (2017); ICES WGMME (2017); Reid <i>et al</i> (2003); SCANS-II (2008).		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				<b>80</b>
<b>CONDITION NUMBER (if relevant):</b>				<b>n/a</b>

### Evaluation Table for PI 2.3.2

<b>PI 2.3.2</b>		<b>The fishery has in place precautionary management strategies designed to:</b> <ul style="list-style-type: none"> <li>• <b>Meet national and international requirements;</b></li> <li>• <b>Ensure the fishery does not pose a risk of serious harm to ETP species;</b></li> <li>• <b>Ensure the fishery does not hinder recovery of ETP species; and</b></li> <li>• <b>Minimise mortality of ETP species.</b></li> </ul>		
<b>Scoring Issue</b>		SG 60	SG 80	SG 100
<b>a</b>	<b>Guidepost</b>	There are measures in place that minimise mortality of ETP species, and are expected to be highly likely to achieve national and international requirements for the protection of ETP species.	There is a strategy in place for managing the fishery's impact on ETP species, including measures to minimise mortality, which is designed to be highly likely to achieve national and international requirements for the protection of ETP species.	There is a comprehensive strategy in place for managing the fishery's impact on ETP species, including measures to minimise mortality, which is designed to achieve above national and international requirements for the protection of ETP species.
		<b>Met?</b>	(Y)	(Y)
	<b>Justification</b>	<p>As described above in 2.3.1 interactions between the North Sea herring fishery with ETP species are considered to be low. However, given the scale and intensity of the fishery some ETP management strategy is still required. Several strategies are in place at EU level for protecting ETP species and managing the fishery's impact on ETP species. These are:</p> <ul style="list-style-type: none"> <li>• The Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora, which includes a specific requirement to safeguard the habitats of annex listed species;</li> <li>• Directive 2009/147/EC on the Conservation of Wild Birds;</li> <li>• Council Regulation No. 812/2004 laying down measures concerning incidental catches of cetaceans in fisheries.</li> </ul> <p>Strategies are also in-use at a fleet level. The client group avoids ETP interactions by use of fishing gear that has a low risk of catching ETP species and fishing away from inshore areas. SG 60 and 80 are met. At the time of previous certification, the client group also introduced dedicated forms for recording interactions with ETP species, although it is unclear if this remains in place across the whole fleet. Although members of the client group welcome the presence of ETP observers onboard, the lack of observers on board since 2008 (the program has been discontinued due to low risk of encountering of ETP species in the fishery and economic cost-benefit considerations), precluded the fishery from achieving SG 100.</p>		



<b>PI 2.3.2</b>		<b>The fishery has in place precautionary management strategies designed to:</b> <ul style="list-style-type: none"> <li>• <b>Meet national and international requirements;</b></li> <li>• <b>Ensure the fishery does not pose a risk of serious harm to ETP species;</b></li> <li>• <b>Ensure the fishery does not hinder recovery of ETP species; and</b></li> <li>• <b>Minimise mortality of ETP species.</b></li> </ul>		
<b>b</b>	<b>Guidepost</b>	The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/species).	There is an objective basis for confidence that the strategy will work, based on information directly about the fishery and/or the species involved.	The strategy is mainly based on information directly about the fishery and/or species involved, and a quantitative analysis supports high confidence that the strategy will work.
	<b>Met?</b>	(Y)	(Y)	(N)
	<b>Justification</b>	<p>Objective basis for confidence in the Strategy comes from the oversight provided by ICES Working groups – notably WGBYC:</p> <p><i>“The Working Group on Bycatch of Protected Species (WGBYC) collates and assesses information on bycatch monitoring and assessment for protected species, including mammals, birds, turtles, and rare fish. The WG reviews EU Member States’ actions under Regulation 812/2004 ..... and provides advice ..... on how the monitoring of protected species bycatch can be improved”.</i></p> <p>Over the years the reporting to this Working Group from Sweden and from the North Sea Pelagic Fleet more generally has clearly demonstrated the level of interaction from this fleet is low – thus providing clear objective basis for confidence – meeting the requirements of SG 60 and 80, but not SG 100.</p>		
<b>c</b>	<b>Guidepost<sub>t</sub></b>		There is evidence that the strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	<b>Met?</b>		(Y)	(N)
	<b>Justification</b>	<p>In previous years Sweden reported an observed fishing effort above the levels required under the EU 812/2004 regulation. ICES has also stated that EU 812/2004 “succeeded in providing a much more comprehensive picture of cetacean bycatch in European fisheries”, which has allowed Member States to streamline the need for research and protection of cetaceans and improved the implementation of the Regulation. Assessors have previously seen evidence of the ETP reporting log in use in the wheel house of previously certified vessel. SG 80 is met but the lack of observers or remote electronic monitoring precludes scoring at the SG100 level.</p>		
<b>d</b>	<b>Guidepost<sub>t</sub></b>			There is evidence that the strategy is achieving its objective.
	<b>Met?</b>			(N)

<b>PI 2.3.2</b>		<p>The fishery has in place precautionary management strategies designed to:</p> <ul style="list-style-type: none"> <li>• Meet national and international requirements;</li> <li>• Ensure the fishery does not pose a risk of serious harm to ETP species;</li> <li>• Ensure the fishery does not hinder recovery of ETP species; and</li> <li>• Minimise mortality of ETP species.</li> </ul>
	<b>Justification</b>	<p>The ultimate objective of the EU legislation in relation to endangered &amp; protected species, coupled with the objective of the level of oversight of these issues applied at the ICES level is to rebuild all relevant ETP populations to above biologically based limits. Whilst the available evidence shows that considerable progress has been made in recent years – identifying key fishery threats, implementing mitigation measures, establishing a network of protected areas – and that some ETP populations are indeed beginning to show signs of recovery, it remains too soon to conclude that the overall objective of the strategy has been achieved. SG 100 is not met.</p>
<b>References</b>		<p>» ICES WGBC (2017); ICES 2016a</p> <p>» Vessel skippers <i>Pers. comms</i> .....</p>
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>		<b>80</b>
<b>CONDITION NUMBER (if relevant):</b>		<b>N/A</b>

Evaluation Table for PI 2.3.3

<b>PI 2.3.3</b>		<p>Relevant information is collected to support the management of fishery impacts on ETP species, including: Information for the development of the management strategy; Information to assess the effectiveness of the management strategy; and information to determine the outcome status of ETP species.</p>		
<b>Scoring Issue</b>		SG 60	SG 80	SG 100
<b>a</b>	<b>Guidepost</b>	Information is sufficient to qualitatively estimate the fishery related mortality of ETP species.	Sufficient information is available to allow fishery related mortality and the impact of fishing to be quantitatively estimated for ETP species.	Information is sufficient to quantitatively estimate outcome status of ETP species with a high degree of certainty.
	<b>Met?</b>	(Y)	(Y)	(N)

<b>PI 2.3.3</b>		<b>Relevant information is collected to support the management of fishery impacts on ETP species, including: Information for the development of the management strategy; Information to assess the effectiveness of the management strategy; and information to determine the outcome status of ETP species.</b>		
	<b>Justification</b>	<p>EU regulation 812/2004 which requires member states to maintain a minimum level of monitoring in order to improve estimates of bycatch of ETP species in certain fisheries has been fundamental in enabling North Sea pelagic fisheries to quantitatively estimate fishery related mortality of ETP species. Although the level of monitoring of this fishery is now reduced, it is only after early research has demonstrated a low level of risk. A number of ICES working groups also continue to have direct oversight:</p> <ul style="list-style-type: none"> <li>ICES Working Group on Seabird Ecology (WGSE)</li> <li>ICES Working Group on Bycatch of Protected Species (WGBYC)</li> <li>ICES Working Group on Marine Mammal Ecology (WGMME)</li> </ul> <p>Because the current level of direct observation is reduced a conclusion of 'high degree of certainty' is not possible and SG 100 is not met. However, the past direct observation and continuing oversight within the management system means SG60 and 80 are met.</p>		
<b>b</b>	<b>Guidepost</b>	Information is adequate to broadly understand the impact of the fishery on ETP species.	Information is sufficient to determine whether the fishery may be a threat to protection and recovery of the ETP species.	Accurate and verifiable information is available on the magnitude of all impacts, mortalities and injuries and the consequences for the status of ETP species.
	<b>Met?</b>	(Y)	(Y)	(N)
	<b>Justification</b>	As well as information on direct mortality of the fishery described above (2.3.1 SIb), there is also good information about the levels of ETP populations in the area of the fishery. For example, the results from the periodically updated SCANS project now present a time series of large-scale multinational surveys of cetaceans in European Atlantic waters. SG80 is therefore met, however, this does not meet the requirement of SG100 of accurate and verifiable information on injuries.		
<b>c</b>	<b>Guidepost</b>	Information is adequate to support measures to manage the impacts on ETP species.	Information is sufficient to measure trends and support a full strategy to manage impacts on ETP species.	Information is adequate to support a comprehensive strategy to manage impacts, minimize mortality and injury of ETP species, and evaluate with a high degree of certainty whether a strategy is achieving its objectives.
	<b>Met?</b>	(Y)	(Y)	(N)

PI 2.3.3		Relevant information is collected to support the management of fishery impacts on ETP species, including: Information for the development of the management strategy; Information to assess the effectiveness of the management strategy; and information to determine the outcome status of ETP species.
	Justification	<p>To estimate the impact of a fishery on the population of ETP species at the level of a comprehensive strategy would require the accurate figures of all ETP population sizes and a definitive quantitative ETP bycatch data. Instead for this fishery there is good information from previous studies on the level of ETP interaction and periodically updated population estimates for many ETP populations, with an understanding of potential fishery impacts. However, given the evidence of low risk of ETP capture in this fishery it is appropriate that management focuses on the management of risk and monitoring for changes in risk. The oversight demonstrated by both the EU 812/2004 regulation and the on-going oversight of the relevant ICES working groups means that information is sufficient to measure trends and support a full strategy to manage impacts on ETP species – thus SG 60 and 80 are met.</p> <p>However, the lack of observers on board since 2008 (the program has been discontinued due to low risk of encountering of ETP species in the fishery and economic cost-benefit considerations), precluded the fishery achieving SG 100. A recommendation is also raised in relation to Remote Electronic Monitoring.</p>
References		<p>» ICES WGMME (2017); ICES WGECCO (2017); ICES WGBC (2017); Reid <i>et al</i> 2003; ICES 2016a</p> <p>» Council Regulation (EC) No 812/2004</p>
OVERALL PERFORMANCE INDICATOR SCORE:		80
CONDITION NUMBER (if relevant):		n/a

### Evaluation Table for PI 2.4.1

PI 2.4.1		The fishery does not cause serious or irreversible harm to habitat structure, considered on a regional or bioregional basis, and function		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The fishery is unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.	The fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.	There is evidence that the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.
	Met?	(Y)	(Y)	(Y)
	Justification	<p>The scoring and justification is unchanged from the time of the last full assessment of this fishery. This is in line with the scoring in all other harmonised North Sea Herring Fisheries.</p> <p>The pelagic domain habitat is rarely impacted by purse seiners and pelagic trawlers activity. The likelihood of purse seiners and pelagic trawlers interacting with the seabed is considered negligible and also actively avoided by the vessels as it might damage the gears. Although purse seiners are more likely to have occasional contact with the seabed, this might happen only in case of muddy or sandy areas, and any such contact would be restricted in space (i.e. the seines has no more than 250m diameter at the surface). Thus, any contact would be light (i.e. no trawl doors or ground gear) and will not have any serious or irreversible harm on the habitat structure. Contact with hard bottoms is actively avoided by this fishery. Maps of the sensitive seabed communities exist for the North Sea (as described in 2.4.3) and can be used by SPFPO to lower the risk of encountering them during the fishing operations.</p> <p>Skippers control the position of the net in the water column through on-board technology, such as depth sounders, sonar and trawl monitoring systems. All vessels in the client group use trawl-monitoring sensors are required to carry VMS on board according to EU and Swedish legislation.</p> <p>There is an appropriate level of monitoring, including of pelagic habitats. A score of SG100 is in line with the scoring for other North Sea herring pelagic fisheries.</p>		
References		» Druon 2014		
OVERALL PERFORMANCE INDICATOR SCORE:				100
CONDITION NUMBER (if relevant):				n/a

## Evaluation Table for PI 2.4.2

PI 2.4.2		There is a strategy in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to habitat types		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are measures in place, if necessary, that are expected to achieve the Habitat Outcome 80 level of performance.	There is a partial strategy in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above.	There is a strategy in place for managing the impact of the fishery on habitat types.
	Met?	(Y)	(Y)	(Y)
	Justification	<p>Fishing for herring in the North Sea takes place in mid-water, above the seabed. Contact with the seabed is actively avoided by this fishery as it causes damage to the gears and risks large economic losses. Sophisticated technology such as sonar, sea charts, cameras, echo sounder on the gear, etc. is in place onboard vessels in order to control the performances of the net and the distance of the gear to the bottom. For example, scanning sonar discloses seabed topography and contours up to 1.5 miles ahead of the vessel. All vessels use trawl monitoring sensors attached to the net, and monitors on the bridge display data on the height and spread of the net opening, depth of footrope of the net, and clearance between footrope and seabed. Also, as part of the strategy, vulnerable seabed habitats are explicitly protected by Swedish and EU legislation (such as the Birds Directive 2009/147/EC and Special Areas of Conservation designated under the Habitats Directive 92/43/EEC). The CFP also provides a basis to protect marine habitats in addition to those protected under the Birds or Habitats Directive (Natura Network), and thus also forms part of the strategy for managing the impacts of fishing on marine habitats. Specifically, article 2 of the CFP requires that a precautionary approach be applied in taking measures to minimise the impact of fishing activities on marine ecosystems.</p> <p>Equivalent management safeguards are in place in Norwegian waters. The following text comes from the recently certified <a href="#">‘Norway North Sea and Skagerrak Herring MSC assessment’</a>:</p> <p>Norway maintains the MAREANO programme to map sensitive habitats and has established ‘no fishing zones’ to protect sensitive marine habitats (SMH)..... Additionally, the Marine Resources Act requires an ecosystem approach to safeguarding biodiversity in addition to managing exploited resources. All vessels that can fish in proximity to SMHs are fitted with VMS to monitor compliance”.</p>		

PI 2.4.2		There is a strategy in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to habitat types		
b	Guidepost	The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/habitats).	There is some objective basis for confidence that the partial strategy will work, based on information directly about the fishery and/or habitats involved.	Testing supports high confidence that the strategy will work, based on information directly about the fishery and/or habitats involved.
	Met?	(Y)	(Y)	(N)
	Justification	Although there is no direct testing of the likelihood of the impact of pelagic gears on the seabed, there is ample evidence from the daily operations of the fisheries and the design of the gear that interactions with the bottom is highly unlikely. Therefore, the onboard strategy to avoid bottom contacts is considered to be effective and SG 60 and 80 are met. However, the lack of observers on board precluded the fishery achieving SG 100.		
c	Guidepost		There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	Met?		(Y)	(N)
	Justification	It is generally agreed that the strategy (described in scoring issue a) used by the pelagic fisheries to avoid contact with the seabed is highly efficient to prevent this. There are no records or anecdotal information that shown events of accidental bottom contact during fishing operation or in any other vessel fishing for North Sea herring with purse seines or pelagic trawls in the North Sea. SG 80 is met.		
d	Guidepost			There is some evidence that the strategy is achieving its objective.
	Met?			(Y)
	Justification	The objective is to avoid seabed contact and therefore avoid serious or irreversible habitat impacts. VMS provides a high spatial accuracy and clearly indicates that the vessels mainly fish in the central part of the North Sea and far from the coast. On board technology as described in Sla is successful in ensuring that the net does not come into contact with the seabed – which would require expensive repairs to nets, as these are not designed for seabed contact. It can therefore be concluded that the strategy is achieving its objective and SG 100 is met.		
References		» Birds Directive 2009/147/EC; the Habitats Directive 92/43/EEC » Skippers <i>pers. comms.</i> .....		
OVERALL PERFORMANCE INDICATOR SCORE:				90



<b>PI 2.4.2</b>	<b>There is a strategy in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to habitat types</b>
<b>CONDITION NUMBER (if relevant):</b>	<b>n/a</b>

**Evaluation Table for PI 2.4.3**

<b>PI 2.4.3</b>		<b>Information is adequate to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types</b>		
<b>Scoring Issue</b>		<b>SG 60</b>	<b>SG 80</b>	<b>SG 100</b>
<b>a</b>	<b>Guidepost</b>	There is basic understanding of the types and distribution of main habitats in the area of the fishery.	The nature, distribution and vulnerability of all main habitat types in the fishery are known at a level of detail relevant to the scale and intensity of the fishery.	The distribution of habitat types is known over their range, with particular attention to the occurrence of vulnerable habitat types.
	<b>Met?</b>	(Y)	(Y)	(Y)
	<b>Justification</b>	<p>The distribution of habitat types in the North Sea, with particular attention to the occurrence of vulnerable habitat types, is mapped and information is reported through dedicated websites. The accessibility of this information is much improved in recent years and the results of different projects are increasingly pooled in central data portals to provide a more complete picture. For example:</p> <ul style="list-style-type: none"> <li><a href="http://www.emodnet.eu/">http://www.emodnet.eu/</a> "The European Marine Observation and Data Network (EMODnet) is a network of organisations supported by the EU's integrated maritime policy. These organisations work together to observe the sea, process the data according to international standards and make that information freely available as interoperable data layers and data products".</li> </ul> <p>Vulnerable habitats are mapped by OSPAR. These are now viewable on the EMODnet on-line portal in the link provided above. SG 60, 80 and 100 are met.</p>		
<b>b</b>	<b>Guidepost</b>	Information is adequate to broadly understand the nature of the main impacts of gear use on the main habitats, including spatial overlap of habitat with fishing gear.	Sufficient data are available to allow the nature of the impacts of the fishery on habitat types to be identified and there is reliable information on the spatial extent of interaction, and the timing and location of use of the fishing gear.	The physical impacts of the gear on the habitat types have been quantified fully.
	<b>Met?</b>	(Y)	(Y)	(N)

PI 2.4.3		Information is adequate to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types		
	Justification	The assessment team considers that the pelagic fisheries have no physical impact on the pelagic environment and a negligible one on the seabed. Moreover, information exists and continue to be collected to allow monitoring the locations where the vessels fish (i.e. VMS data, catches and fishing effort), and the habitats over which they operate to be accurately mapped. SG 60 and 80 are met. However, SG100 is not met due to the lack of fishery-specific quantifiable information about habitat impacts.		
c	Guidepost		Sufficient data continue to be collected to detect any increase in risk to habitat (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).	Changes in habitat distributions over time are measured.
	Met?		(Y)	(N)
	Justification	<p>There is no regular monitoring of the bottom habitat distributions in the North Sea. Available information is collected during dedicated but sporadic projects (see OSPAR website). However, the information is sufficient to detect any increase in risk to habitat but not for detecting changes of the habitat distribution over time.</p> <p>Additionally, fishery monitoring (described elsewhere in relation of other PIs) also serve to indicate any changes in the risk to habitat such as:</p> <ul style="list-style-type: none"> <li>Monitoring the location of fishing vessels (VMS)</li> <li>Monitoring catch composition (so that the sudden appearance of demersal species in the catch would be detected).</li> </ul> <p>SG 80 is therefore met. As monitoring is not regular SG 100 is not met.</p>		
References		» OSPAR Commission (2017), (Druon, 2014).....		
OVERALL PERFORMANCE INDICATOR SCORE:				90
CONDITION NUMBER (if relevant):				n/a

### Evaluation Table for PI 2.5.1

PI 2.5.1		The fishery does not cause serious or irreversible harm to the key elements of ecosystem structure and function		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The fishery is unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	The fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	There is evidence that the fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.
	Met?	(Y)	(Y)	(N)
	Justification	<p>The key ecosystem element most crucial to giving the ecosystem its characteristic nature and dynamics is the oceanographic regime and the nutrient cycles in the North Sea. This provides the underlying productivity for the whole ecosystem. Pelagic trawling or purse seining for herring does not interfere with large-scale oceanographic processes in the North Sea or prevent them from providing these ecosystem services. The most significant potential ecosystem impact of the North Sea herring fishery is the removal of herring biomass. However, herring is not concluded to be a key low trophic species, so the stock management scored in Principle 1 is considered appropriate.</p> <p>ICES have launched an on-line ecosystem overview for the North Sea <a href="http://www.ices.dk/explore-us/Action%20Areas/ESD/Pages/Greater-North-Sea.aspx?diagramid=8">http://www.ices.dk/explore-us/Action%20Areas/ESD/Pages/Greater-North-Sea.aspx?diagramid=8</a></p> <p>This provides considerable useful ecosystem information and provides a link to the latest Greater North Sea Ecoregion – Ecosystem overview (ICES 2016d). This includes consideration of how the pressures from fishing sit alongside impacts from other anthropogenic and natural process. More detailed understanding and analysis of the pressures from fishing come via a dedicated ICES Working Group on Ecosystem Effects of Fishing Activities <a href="http://www.ices.dk/community/groups/Pages/WGECO.aspx">http://www.ices.dk/community/groups/Pages/WGECO.aspx</a> which publishes annual reports.</p> <p>And further fishery-specific detail is provided by the ICES Herring Assessment Working Group in its stock annex for North Sea Herring (ICES 2016a). This specifically considers the Ecosystem Aspects of both the stock and the fishery upon that stock – including consideration of issues such as impacts of herring removal, removal of bycatch species and ETP species (impacts on habitats is less of a focus given that these are pelagic fisheries). These assessments support the conclusion that “The fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm”, at the SG 80 level.</p>		
References		» ICES (2016)a; ICES (2016)d; ICES (2017)c; ICES WGECO (2017).		
OVERALL PERFORMANCE INDICATOR SCORE:				80
CONDITION NUMBER (if relevant):				n/a

## Evaluation Table for PI 2.5.2

PI 2.5.2		There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are measures in place, if necessary.	There is a partial strategy in place, if necessary.	There is a strategy that consists of a plan, in place.
	Met?	(Y)	(Y)	(N)
	Justification	<p>The process described above in relation to 2.5.1 demonstrates clear and regular oversight of Ecosystem issues through the ICES Advisory Process, which ultimately feeds through to ecosystem considerations being clearly highlighted in the annual fishery specific advice. ICES is now committed to developing the science around integrated ecosystem understanding to allow the implementation of the Ecosystem Based Approach to Fisheries Management: <a href="http://www.ices.dk/news-and-events/news-archive/news/Pages/Explaining-ICES-approach-to-ecosystem-based-management.aspx">http://www.ices.dk/news-and-events/news-archive/news/Pages/Explaining-ICES-approach-to-ecosystem-based-management.aspx</a></p> <p>European Commission over-arching legislation (such as the Common Fisheries Policy and the European Marine Strategy Directive) explicitly enshrines ecosystem objectives (see scoring for PI 3.1.3 for an explanation of these), meaning that these apply to all subsidiary legislation. Furthermore, considerable ecosystem monitoring is in place (as described below for PI 2.5.3). Collectively, this demonstrates clear strategic oversight of ecosystem issues and priorities within the EU fisheries management framework which applies directly to the North Sea Herring Fishery. That said, a complete adoption of the Ecosystem Approach to Fisheries Management, where modelling and resulting advice moves away from individual species, is not yet fully implemented. ICES are beginning to issue mixed fisheries advice based on the single stock assessments, combined with information on the average catch composition and fishing effort (with a number of under-lying assumptions) – but as yet, in the North Sea this is only for demersal fisheries.</p> <p>SG 60 and 80 are met because of the clear strategic over-sight and increasing prioritisation of ecosystem issues in fisheries management decision-making. However, there is not an “Ecosystem Strategy”, as such, for the North Sea nor is the Ecosystem Based Approach to fisheries management fully implemented so SG100 is not met.</p>		

PI 2.5.2		There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function		
b	Guidepost	The measures take into account potential impacts of the fishery on key elements of the ecosystem.	The partial strategy takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance.	The strategy, which consists of a plan, contains measures to address all main impacts of the fishery on the ecosystem, and at least some of these measures are in place. The plan and measures are based on well-understood functional relationships between the fishery and the Components and elements of the ecosystem.  This plan provides for development of a full strategy that restrains impacts on the ecosystem to ensure the fishery does not cause serious or irreversible harm.
	Met?	(Y)	(Y)	(N)
	Justification	The degree to which management “takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance” is best illustrated by reviewing the Herring Assessment Group Stock Annex (ICES 2016c). This clearly shows how the annual advice which shapes the operations of the herring fishery takes into account the work carried out by other ICES working groups, such as those focused on the ecosystem impacts of fisheries (WGECO) and those looking at the impacts on Marine mammals (WGBYC). This provides confidence that the impacts of the fishery on the ecosystem are, and will continue to be, restrained so as to achieve SG 60 and 80.		
c	Guidepost	The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems).	The partial strategy is considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems).	The measures are considered likely to work based on prior experience, plausible argument or information directly from the fishery/ecosystems involved.
	Met?	(Y)	(Y)	(N)

PI 2.5.2		There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function		
	Justification	<p>The information detailed in all of the Principle 2 'information' Performance Indicators (i.e. 2.1.3, 2.2.3, 2.3.3, 2.4.3 &amp; 2.5.3) provides contextual information (directly from the fishery / ecosystems involved) about the status and ecosystem impacts of the fishery, which gives confidence that the ecosystem management that is in place is likely to work. Furthermore, reflecting on prior experience, the North Sea Herring Fisheries have recovered from depletion in the 1970s and the management constraints that are now in place (which were much less evident at that time) should prevent such a situation from arising again (i.e. fleet restructuring, improved advice, increased adherence to scientific advice, greater protections for habitats and ETP species, improved ecosystem modelling, greater consideration of ecosystem objectives). SG 60 and SG 80 are met.</p> <p>Ideally an evaluation of the success of adopting Ecosystem Based Fisheries Management (EBM) in the North Sea would be available, but suitable indicators and evaluation techniques for EBM are still being developed, perhaps hampered by a wide range of interpretations of the definition of EBM (Fulton <i>et al</i> 2014; Trochta <i>et al</i> 2018). SG 100 is not met.</p>		
d	Guidepost		There is some evidence that the measures comprising the partial strategy are being implemented successfully.	There is evidence that the measures are being implemented successfully.
	Met?		(Y)	(N)
	Justification	<p>The process described above in relation to 2.5.1 demonstrates the ecosystem objectives are enshrined into the routine operations of fisheries management via the relevant ICES working groups and the explicit consideration of ecosystem considerations in the fisheries specific advice. The following are all successfully implemented:</p> <ul style="list-style-type: none"> <li>• relevant ICES ecosystem working groups,</li> <li>• explicit ecosystem considerations of the fishery in the herring stock annex,</li> <li>• ecosystem consideration being highlighted in the herring stock advice</li> <li>• ecosystem objectives being enshrined in high level laws (such as the CFP) and subsidiary laws,</li> <li>• relevant ecosystem monitoring (as described below in 2.5.1)</li> <li>• Appropriate monitoring of other fisheries regulations (as described in 3.2.3) which ensure that ecosystem considerations applied at the advisory and management level are implemented as intended at the fleet level.</li> </ul>		
References		» REGULATION (EU) No 1380/2013; ICES WGECCO (2017); ICES (2016)a; Fulton <i>et al</i> 2014 Trochta <i>et al</i> 2018.....		
OVERALL PERFORMANCE INDICATOR SCORE:				80
CONDITION NUMBER (if relevant):				n/a



### Evaluation Table for PI 2.5.3

PI 2.5.3		There is adequate knowledge of the impacts of the fishery on the ecosystem		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Information is adequate to identify the key elements of the ecosystem (e.g., trophic structure and function, community composition, productivity pattern and biodiversity).	Information is adequate to broadly understand the key elements of the ecosystem.	
	Met?	(Y)	(Y)	
	Justification	<p>The ICES Greater North Sea Ecosystem Overview clearly demonstrates adequate information to broadly understand the key elements of the ecosystem. This includes detail about key elements of the ecosystem – namely oceanographic regime and the nutrient cycles in the North Sea. SG 60 and 80 is therefore met.</p> <p><a href="http://www.ices.dk/explore-us/Action%20Areas/ESD/Pages/Greater-North-Sea.aspx?diagramid=8">http://www.ices.dk/explore-us/Action%20Areas/ESD/Pages/Greater-North-Sea.aspx?diagramid=8</a></p> <p><a href="http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2016/2016/Greater_North_Sea_Ecoregion-Ecosystem_overview.pdf">http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2016/2016/Greater_North_Sea_Ecoregion-Ecosystem_overview.pdf</a></p>		
b	Guidepost	Main impacts of the fishery on these key ecosystem elements can be inferred from existing information, and have not been investigated in detail.	Main impacts of the fishery on these key ecosystem elements can be inferred from existing information and some have been investigated in detail.	Main interactions between the fishery and these ecosystem elements can be inferred from existing information, and have been investigated in detail.
	Met?	(Y)	(Y)	(N)
	Justification	<p>The main impacts from the herring fishery on these ecosystem elements is described in the Herring Stock Annex (ICES 2016a). Impacts on ETP species have been explored in detail, as described in 2.3.1. Impacts on other elements of the ecosystem from predator prey relationships have also been explored in detail (Dickey-Collas <i>et al</i> 2010).</p> <p>North Sea ecosystem as a whole was modelled by Mackinson &amp; Daskalov (2007) and for the impact of the fisheries in the North Sea see Daan <i>et al.</i> 2005. So, the main impacts of the fishery and the ecosystem elements can be inferred. SG80 is met. Interactions cannot be inferred and SG 100 is not met.</p>		
c	Guidepost		The main functions of the Components (i.e., target, Bycatch, Retained and ETP species and Habitats) in the ecosystem are known.	The impacts of the fishery on target, Bycatch, Retained and ETP species are identified and the main functions of these Components in the ecosystem are understood.



PI 2.5.3		There is adequate knowledge of the impacts of the fishery on the ecosystem		
	Met?		(Y)	(Y)
	Justification	The impacts of the fishery on target, Bycatch, Retained and ETP species are identified and explored in the herring ICES stock annex (ICES 2016a). The functions of these species are sufficiently understood and included in ecosystem modelling (albeit with the inevitable underlying assumptions). SG 80 and 100 are met.		
d	Guidepost		Sufficient information is available on the impacts of the fishery on these Components to allow some of the main consequences for the ecosystem to be inferred.	Sufficient information is available on the impacts of the fishery on the Components and elements to allow the main consequences for the ecosystem to be inferred.
	Met?		(Y)	(Y)
	Justification	<p>The stock annex (ICES 2016a) also infers what the main consequences of the fishery on the ecosystem components and elements is. This stock annex considers species specific impacts (i.e. at the elemental level not just at the component level). The following direct quotes from the stock annex provide supporting evidence of this:</p> <ul style="list-style-type: none"> <li>• “The incidental catch of non-target species in the North Sea pelagic herring fishery in general is considered to be low”</li> <li>• A potential ecosystem impact of the North Sea herring fishery is the removal of fish that could provide other “ecosystem services”.</li> <li>• It is highly likely that, for Good Environmental Status (GES), the North Sea requires a certain threshold of herring biomass.</li> <li>• Interactions between the directed North Sea herring fishery with PETS species are, in general, considered to be low.</li> </ul> <p>Below each of these summary quotes, species specific detail is provided. SG100 is met.</p>		
e	Guidepost		Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).	Information is sufficient to support the development of strategies to manage ecosystem impacts.
	Met?		(Y)	(Y)

PI 2.5.3		There is adequate knowledge of the impacts of the fishery on the ecosystem
	Justification	<p>Sufficient data continue to be collected to detect any increase in risk level through both fleet level and ecosystem monitoring programs:</p> <ul style="list-style-type: none"> <li>• Robust and reliable landings data from the fleet</li> <li>• Robust and reliable catch sampling programme (Both of which are described in detail in the ICES annual herring stock annex (ICES 2016a) The ICES herring advice states: "Input data from sampling and monitoring programmes are considered to be of good quality".</li> <li>• An appropriate level of ETP monitoring (although the level of this monitoring is now reduced since the low risk of impact was demonstrated).</li> <li>• VMS monitoring of vessels to detect infringements into closed areas, or significant changes in areas of operation or area misreporting.</li> </ul> <p>ICES is also considering how the various data being collected can be better coordinated to meet the requirements of Ecosystem Based Fisheries Management. <a href="http://www.ices.dk/community/groups/Pages/WGISUR.aspx">http://www.ices.dk/community/groups/Pages/WGISUR.aspx</a></p>
References		» ICES 2016d; ICES 2016a; ICES WKPIMP (2016); ICES WGISUR (2017); Mackinson & Daskalov (2007); Daan <i>et al</i> (2005)
OVERALL PERFORMANCE INDICATOR SCORE:		95
CONDITION NUMBER (if relevant):		n/a

## Appendix 1.3 Principle 3 Scoring

### Evaluation Table for PI 3.1.1

<b>PI 3.1.1</b>		<p>The management system exists within an appropriate legal and/or customary framework which ensures that it:</p> <ul style="list-style-type: none"> <li>• Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2; and</li> <li>• Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and</li> <li>• Incorporates an appropriate dispute resolution framework.</li> </ul>		
<b>Scoring Issue</b>		SG 60	SG 80	SG 100
<b>a</b>	<b>Guidepost</b>	There is an effective national legal system and <u>a framework for cooperation</u> with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2	There is an effective national legal system and <u>organised and effective cooperation</u> with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2.	There is an effective national legal system and <u>binding procedures governing cooperation with other parties</u> which delivers management outcomes consistent with MSC Principles 1 and 2.
	<b>Met?</b>	(Y)	(Y)	(Y)

<p><b>PI 3.1.1</b></p>	<p><b>The management system exists within an appropriate legal and/or customary framework which ensures that it:</b></p> <ul style="list-style-type: none"> <li><b>Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2; and</b></li> <li><b>Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and</b></li> <li><b>Incorporates an appropriate dispute resolution framework.</b></li> </ul>
<p><b>Justification</b></p>	<p>At level of international law, the Sweden has ratified the United Nations Convention on the Law of the Sea (UNCLOS) convention. The principle legislative instrument for fisheries management in the EU is the Common Fisheries Policy (REGULATION (EU) No 1380/2013), which aims at achieving sustainable fisheries management across the EU. This clearly aims to achieve both P1 (stock management) and P2 (wider ecosystem impacts). For example, the regulation states</p> <p><i>The scope of the CFP extends to conservation, management and exploitation of living aquatic resources ..... bearing in mind .....UNCLOS. The objective of the CFP should therefore be to provide for sustainable exploitation of living aquatic resources ..... in the context of sustainable development, taking account of the environmental, economic and social aspects in a balanced manner.</i></p> <p>Underneath the umbrella of the EU CFP, there are many binding regulations covering all aspects of fisheries, which are amended and updated as required. For example, some of the key recent pieces of legislation include the regulations on IUU and on control &amp; enforcement.</p> <p>Swedish national legislation implements all aspects of the reformed EU Common Fisheries Policy and establishes licensing, MCS and penalty procedures and as such aims at achieving sustainable fisheries in accordance to MSC P1 and P2.</p> <p>» The Fisheries law (Fiskelag) SFS 1993:787 on rights to fisheries, including fisheries within Sweden's sea territory and Sweden's economic zone, and;</p> <p>» The law concerning EC Regulations on the CFP (Lag om EG:s förordningar om dengemensamma fiskeripolitiken) SFS 1994:1709.</p> <p>The EU Common Fisheries Policy also provides binding procedures governing cooperation with other parties – namely other member states. There is a formal and binding bilateral fisheries agreement between the EU and Norway (EC Reg 2214/80). This is extended every six years. Specifically in relation to this and other relevant fisheries, effective and organised cooperation between the EU and Norway is achieved through the annual Coastal States negotiations and EU-Norway negotiations (EU–Norway 2016). In addition, scientists from EU member states and Norway collaborate effectively in the provision of ICES stock assessments and advice which underpins management.</p> <p>Within Norwegian waters, fisheries management is legislated in the Marine Living Resources Act 2009 with an objective to “ensure sustainable and economically profitable management of wild living marine resources”. Subsidiary legislation is used to apply regulation to Norwegian fisheries and fisheries in Norwegian waters some of which is relevant to the fishery under assessment. SG 60, 80 and 100 are met.</p>

<b>PI 3.1.1</b>		<b>The management system exists within an appropriate legal and/or customary framework which ensures that it:</b> <ul style="list-style-type: none"> <li><b>Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2; and</b></li> <li><b>Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and</b></li> <li><b>Incorporates an appropriate dispute resolution framework.</b></li> </ul>		
<b>b</b>	<b>Guidepost</b>	The management system incorporates or is subject by law to a mechanism for the resolution of legal disputes arising within the system.	The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes which is considered to be effective in dealing with most issues and that is appropriate to the context of the fishery.	The management system incorporates or subject by law to a transparent mechanism for the resolution of legal disputes that is appropriate to the context of the fishery and has been tested and proven to be effective.
	<b>Met?</b>	(Y)	(Y)	(Y)
	<b>Justification</b>	<p>The main mechanism for the resolution of legal disputes is the Swedish judicial system. Fishermen or industry representatives can appeal to the full judicial process.</p> <p>Within EU Pelagic fisheries there is a good record of unity, enhanced by the establishment of Regional Advisory Councils at an earlier round of CFP reform (2002). Since then the Pelagic RAC has proven effective at providing opportunities for the industry and managers to collaborate, typically via Producer Organisations, in a proactive manner to avoid disputes arising.</p> <p>More generally in Sweden, there is an effective engagement between industry and regulators / enforcement officers, and helps to ensure good understanding of changing regulations. SG 60, 80 and 100 are met.</p>		
<b>d</b>	<b>Guidepost</b>	The management system has a mechanism to generally respect the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.	The management system has a mechanism to observe the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.	The management system has a mechanism to formally commit to the legal rights created explicitly or established by custom of people dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.
	<b>Met?</b>	(Y)	(Y)	(Y)

PI 3.1.1		<p>The management system exists within an appropriate legal and/or customary framework which ensures that it:</p> <ul style="list-style-type: none"><li>• Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2; and</li><li>• Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and</li><li>• Incorporates an appropriate dispute resolution framework.</li></ul>
	Justification	<p>The EU CFP sets out a formal commitment to the legal and customary rights of people dependent on fishing, through a commitment to relative stability (meaning Member States are consistently allocated the same proportion of particular stocks):</p> <p>“In view of the precarious economic state of the fishing industry and the dependence of certain coastal communities on fishing, it is necessary to ensure relative stability of fishing activities by the allocation of fishing opportunities among the Member States, based upon a predictable share of the stocks for each Member State.”</p> <p>The Swedish management system also includes special quota provisions for coastal vessels less than 12 m with a regional quota for Baltic Sea vessels and a quota for the Gulf of Bothnia. Additionally, the management system includes Territorial use rights in fisheries (TURF), and in particular when used in public fisheries these have been piloted as co-management approaches to safeguard the interests of small scale coastal fishermen.</p> <p>The Norwegian Marine Resources Act makes a similar formal commitment:</p> <p><i>“The Fisheries policy shall contribute to establish a sound basis for an economically viable development of the fisheries industry. A sustainable management of the living marine resources is pre-conditional. Through marked orientation and increased value adding, the fisheries sector shall contribute to good employment and living opportunities in the coastal communities.”</i></p> <p>SG 60, 80 and 100 are met.</p>
References		» REGULATION (EU) No 1380/2013; EC Reg 2214/80; EU–Norway 2016 .....
OVERALL PERFORMANCE INDICATOR SCORE:		100
CONDITION NUMBER (if relevant):		n/a

### Evaluation Table for PI 3.1.2

PI 3.1.2		<p>The management system has effective consultation processes that are open to interested and affected parties.</p> <p>The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties</p>		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are generally understood.	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for key areas of responsibility and interaction.	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for all areas of responsibility and interaction.
	Met?	(Y)	(Y)	(Y)



PI 3.1.2		<p>The management system has effective consultation processes that are open to interested and affected parties.</p> <p>The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties</p>		
	Justification	<p>Functions, roles and responsibilities are explicitly defined and well understood for all areas of responsibility and interaction as detailed below:</p> <p>European Level policies for Maritime affairs and fisheries is coordinated at DG MARE, under the management of Commissioner Karmenu Vella and Director General João Aguiar Machado. Information about DG Mare details the roles, functions and organisational structure. <a href="https://ec.europa.eu/info/departments/maritime-affairs-and-fisheries_en">https://ec.europa.eu/info/departments/maritime-affairs-and-fisheries_en</a></p> <p>The Swedish Agency for Marine and Water Management, and its component parts such as the Fisheries Monitoring Center (FMC) and fisheries policy, play the central role for fisheries management in Sweden. Indeed, the website even details individuals playing key roles. <a href="https://www.havochvatten.se/en/swam/policy--regulation/commercial-fishing.html">https://www.havochvatten.se/en/swam/policy--regulation/commercial-fishing.html</a></p> <p>The Institute of Marine Research, part of Swedish University of Agricultural Sciences (SLU) which is primarily responsible for fisheries data collection under the EU Data Collection Framework (EC No 199/2008). <a href="http://www.slu.se/en/departments/aquatic-resources1/contact/institute-of-marine-research/">http://www.slu.se/en/departments/aquatic-resources1/contact/institute-of-marine-research/</a></p> <p>Control &amp; Enforcement: EU Community Fisheries Control Agency (CFCA), The Swedish Agency for Marine and Water Management (SwAM) &amp; the Swedish Coast Guard (<a href="http://www.kustbevakningen.se/en">www.kustbevakningen.se/en</a>). Or (of relevance when vessels are operating in Norwegian waters: Norwegian Directorate of Fisheries <a href="https://www.fiskeridir.no/English">https://www.fiskeridir.no/English</a> &amp; Norwegian Coastguard.</p> <p>In addition, considerable work takes place in the management of this fishery at the international level. This includes in the scientific work to assess the stock status and undertake research on the ecosystem and wider impacts of the fishery by ICES. <a href="http://www.ices.dk/explore-us/who-we-are/Pages/Who-we-are.aspx">http://www.ices.dk/explore-us/who-we-are/Pages/Who-we-are.aspx</a></p> <p>Although there is perhaps less understanding (at an industry level) of the roles of some of the EU institutions that play a role in determining quota although the outcomes of these processes are well covered in the industry press.</p> <p>SG 60, 80 and 100 are met.</p>		
b		Guidepost	<p>The management system includes consultation processes that obtain relevant information from the main affected parties, including local knowledge, to inform the management system.</p>	<p>The management system includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information obtained.</p>

<b>PI 3.1.2</b>		<b>The management system has effective consultation processes that are open to interested and affected parties.</b> <b>The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties</b>		
	<b>Met?</b>	(Y)	(Y)	(N)
	<b>Justification</b>	<p>Examples of consultative systems are evident at EU level through the work of the Pelagic Advisory Council which is a formalised industry consultation process which has contributed much in recent years to the development of multi-annual plans for a number of fisheries, and there is clear evidence of the work of the Advisory Council being used by the EU. These meetings are regular and provide an effective conduit for local knowledge into the management system.</p> <p>In addition, the EU regularly consults on key pieces of legislation, such as reform of the CFP of even on the annual fisheries opportunities legislation. Various examples of these consultations are available on the EU Maritime and Fisheries Affairs webpages, including submissions to these consultations: <a href="https://ec.europa.eu/info/consultations/fishing-opportunities-2017-under-common-fisheries-policy_en">https://ec.europa.eu/info/consultations/fishing-opportunities-2017-under-common-fisheries-policy_en</a> SG 60 and 80 are met.</p> <p>However, in the case of some of the EU consultations, there is not always a clear explanation provided (minted outputs or summaries) of how the information is used or not used. On this basis SG 100 is not met.</p>		
<b>c</b>	<b>Guidepost</b>		The consultation process provides opportunity for all interested and affected parties to be involved.	The consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement.
	<b>Met?</b>		(Y)	(Y)

PI 3.1.2		<p>The management system has effective consultation processes that are open to interested and affected parties.</p> <p>The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties</p>	
Justification		<p>The Better Regulation guidelines (<a href="https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en">https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en</a> ) requires the European Commission to consult on any policies and regulations and follow effective consultation processes.</p> <p>The 2009 process on the European Commission consultation on the way EU fisheries are managed, to inform the reform of the Common Fisheries Policy provides a useful blue print. This began with a Green paper which outlined the challenges facing Europe's fisheries. Followed by a public consultation, followed by a synthesis report of consultation responses (EC 2010). The range of respondents to the consultation ranging from members of the public to industry organisations and governments, provides an indication that interested and affected parties were encouraged and facilitated to enable effective engagement. The synthesis report also lists the range of consultation meetings that were held.</p> <p>There is an annual consultation on fishing opportunities – i.e. the level of quota each year. The EU on-line consultation gateway states that it is intended to “allow all European citizens to express an opinion on the way in which levels of fishing effort and quotas are set according to the new common fisheries policy and on the basis of scientific advice”. <a href="https://ec.europa.eu/info/consultations/fishing-opportunities-2018-under-common-fisheries-policy_en">https://ec.europa.eu/info/consultations/fishing-opportunities-2018-under-common-fisheries-policy_en</a></p> <p>Further examples to support scoring at the SG100 level include consultation being facilitated by the Pelagic AC, which encourages participation of member associations and associates including the active involvement of Environmental NGOs. Industry organisations also participate in the consultation processes of the EU Advisory Committee on Fisheries and Aquaculture (ACFA), a cross-cutting mechanism established under the European Commission.</p>	
	References	» EC (2010); EC (2009). EC (2017)	
OVERALL PERFORMANCE INDICATOR SCORE:			95
CONDITION NUMBER (if relevant):			n/a

### Evaluation Table for PI 3.1.3

PI 3.1.3		The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Principles and Criteria, and incorporates the precautionary approach		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Long-term objectives to guide decision-making, consistent with the MSC Principles and Criteria and the precautionary approach, are implicit within management policy	Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach are explicit within management policy.	Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are explicit within and required by management policy.
	Met?	(Y)	(Y)	(Y)

PI 3.1.3	The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Principles and Criteria, and incorporates the precautionary approach
Justification	<p>At the governance and policy level, clear over-arching long term objectives are set out in the EU common fisheries policy, which guides all European fisheries decision-making. The CFP is periodically reformed and over the years the high-level objectives have become more clearly defined. These now include numerous references to objectives in the pre-ambles which are in line with the MSC Principles and Criteria. For example:</p> <p>(4) The CFP should ensure that fishing and aquaculture activities contribute to long-term environmental, economic and social sustainability.</p> <p>(6) .....obligations to take conservation and management measures designed to maintain or restore marine resources at levels which can produce the maximum sustainable yield.</p> <p>(10) Sustainable exploitation of marine biological resources should be based on the precautionary approach, which derives from the precautionary principle.</p> <p>(13) An ecosystem-based approach to fisheries management needs to be implemented.</p> <p>Article 2 of the CFP gives a full description of these objectives. These are explicit. For example:</p> <p>1. The CFP shall ensure that fishing and aquaculture activities are environmentally sustainable in the long-term.</p> <p>2. The CFP shall apply the precautionary approach to fisheries management, and shall aim to ensure that exploitation of living marine biological resources restores and maintains populations of harvested species above levels which can produce the maximum sustainable yield.</p> <p>3. The CFP shall implement the ecosystem-based approach to fisheries management so as to ensure that negative impacts of fishing activities on the marine ecosystem are minimised, and shall endeavour to ensure that aquaculture and fisheries activities avoid the degradation of the marine environment.</p> <p>This therefore meets SG80.</p> <p>Similar high level objectives apply within Norwegian waters, where fisheries management is legislated in the Marine Living Resources Act 2009 with an objective to “ensure sustainable and economically profitable management of wild living marine resources”.</p> <p>In order to meet SG100 it must be demonstrated that these objectives are “required by management policy”. The Treaty on the Functioning of the European Union requires that:</p> <p>“Environmental protection requirements must be integrated into the definition and implementation of the Union’s policies and activities, in particular with a view to promoting sustainable development”.</p> <p>This may be seen as a high-level requirement to set these objectives, thus meeting SG100. A score of SG100 is in-line with the scoring of other MSC certified North Sea Herring fisheries subject to the same management regime.</p>

<b>PI 3.1.3</b>	<b>The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Principles and Criteria, and incorporates the precautionary approach</b>	
<b>References</b>	» REGULATION (EU) No 1380/2013 » Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union 2012/C 326/01	
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>		<b>100</b>
<b>CONDITION NUMBER (if relevant):</b>		<b>n/a</b>

#### Evaluation Table for PI 3.1.4

PI 3.1.4		The management system provides economic and social incentives for sustainable fishing and does not operate with subsidies that contribute to unsustainable fishing		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and seeks to ensure that perverse incentives do not arise.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and explicitly considers incentives in a regular review of management policy or procedures to ensure they do not contribute to unsustainable fishing practices.
	Met?	(Y)	(Y)	(N)



Justification	<p>This performance indicator has been dropped from the latest version of the MSC standard, however, it still applies in this case because of the version which is being used for this assessment (v1.3). The justification and scoring are largely unchanged from the previous Public Certification Report for this fishery:</p> <p>Since the 2002 revision of the CFP, subsidies that contribute to unsustainable fishing have stopped. There is no support to increase capacity, or to compensate for low catches.</p> <p>There are some minor forms of subsidy which could be identified for this fishery, however, in the opinion of the assessment team these do not contribute to unsustainable fishing and are consistent with MSC principles 1 and 2. These are:</p> <ul style="list-style-type: none"> <li>» The industry does not pay directly for management or science (although this is funded through taxation) which could be construed as effective subsidy.</li> <li>» A preferential tax system is applied to diesel across all EU primary production sectors, which could be considered a subsidy relative to other economic sectors, but this is difficult to argue for fisheries as a whole, as European countries apply a far higher level of taxation on fuel than any other economic block in the world (with the exception of Japan).</li> <li>» The EC's structural funding mechanisms to the fishery sector –the European Maritime and Fisheries Fund (EMFF) – provides targeted financial support to the sector, but funding restrictions have been significantly tightened (focus on improvements in safety and environmental impact).</li> </ul> <p>Therefore, no detrimental subsidies, which contribute to unsustainable fishing practices have been identified for this fishery. At national level, the management system provides economic and social incentives for sustainable fishing. These include:</p> <ul style="list-style-type: none"> <li>» Significant penalties exist for overshoot of member quota share, including immediate criminal proceedings. Such penalties act as an economic and social incentive for compliance.</li> <li>» International responsible fishing schemes demonstrate positive environmental awareness and sustainable activity that provides economic incentive via produce certification and market share security.</li> </ul> <p>The most recent review of the CFP does address the question of incentives much more explicitly in particular with regard to selective fishing gear, stating:</p> <p>“Access to a fishery should be based on transparent and objective criteria including those of an environmental, social and economic nature. Member States should promote responsible fishing by providing incentives to those operators who fish in the least environmentally damaging way and who provide the greatest benefits for society.”.</p> <p>However, overall, within the context of the EU CFP it is concluded that explicit consideration of incentives is not yet included in regular review although the assessors do conclude that the management system provides for incentives and seeks to ensure that negative incentives do not arise. Therefore, SG80 is met but not SG100.</p>
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PI 3.1.4		The management system provides economic and social incentives for sustainable fishing and does not operate with subsidies that contribute to unsustainable fishing
		<p>For Norwegian fisheries, reference is made to the justification provided in the recent Norway North Sea and Skagerrak herring fishery. This fishery scores this SI at SG100, however, due to the limitations identified above in an EU context, the score in this case remains at SG80 for this scoring issue.</p> <p><i>“Positive incentives include support for research on e.g. gear improvements ..... The management system does not include any subsidies that contribute to unsustainable fishing or ecosystem degradation. Subsidies to the fishing fleet were terminated in 1990 following the agreement between the European Free Trade Area signatories, negotiated in preparation of the European Economic Area Agreement”.</i></p>
References		» REGULATION (EU) No 1380/2013
OVERALL PERFORMANCE INDICATOR SCORE:		80
CONDITION NUMBER (if relevant):		n/a

Evaluation Table for PI 3.2.1

PI 3.2.1		The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Objectives, which are broadly consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are implicit within the fishery's management system	Short and long-term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.	Well defined and measurable short and long-term objectives, which are demonstrably consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.
	Met?	(Y)	(Y)	(Partial)

PI 3.2.1		The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2
	Justification	<p>There is no fishery specific EU regulation setting out the short and long-term objectives for this fishery. Instead management is based upon the Long-term Management Plan which is included in the EU-Norway agreement. This agreement clearly states the management parameters in terms of reference points. More generally, by way of introduction the agreement states that it is intended to be "consistent with a precautionary approach and designed to ensure a rational exploitation pattern and provide for stable and long-term yields". More recently, ICES have concluded that this is consistent with both the precautionary and MSY approach. Long term objectives are reflected in the fact that the agreement is a long-term management plan, with a constraint on inter-annual variation in TAC. The short-term objectives are reflected in a clear rule to set catch limits designed to exploit the fishery at MSY.</p> <p>There is however a lack of well-defined P2 objectives, such as reflecting the role of herring in the ecosystem or minimizing the fisheries impacts on other components of the ecosystem. However, in practice management does include a consideration of P2 impacts, such as impacts on bycatch or ETP and these are clearly highlighted in annual ICES advice which shapes management decisions. Furthermore, higher level regulations do contain relevant ecosystem objectives, such as those contained in the CFP regulation (see 3.1.3) and these serve as binding objectives for all relevant EU fisheries including this one.</p> <p>P1 objectives are concluded to be well defined and measurable (i.e. SG100) whereas fishery specific P2 objectives are not well-defined or measurable so SG80 is met for P2. Partial scoring is allowed with a single scoring issue, therefore the overall PI score is 90.</p>
References		» ICES 2015; EU-Norway 2016; ICES (2016)a;
OVERALL PERFORMANCE INDICATOR SCORE:		90
CONDITION NUMBER (if relevant):		n/a

Evaluation Table for PI 3.2.2

PI 3.2.2		The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives, and has an appropriate approach to actual disputes in the fishery under assessment.		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are some decision-making processes in place that result in measures and strategies to achieve the fishery-specific objectives.	There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.	
	Met?	(Y)	(Y)	

<b>PI 3.2.2</b>		<b>The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives, and has an appropriate approach to actual disputes in the fishery under assessment.</b>		
	<b>Justification</b>	The existence of the binding management plan helps to ensure that outcomes of decisions from firstly the EU-Norway negotiations and secondly the EU Council are both predictable and understandable – removing much of the doubt that was often characteristic of decisions prior to the adoption of a management plan. The fishing industry is extremely well informed about this decision-making process.		
<b>b</b>	<b>Guidepost</b>	Decision-making processes respond to serious issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take some account of the wider implications of decisions.	Decision-making processes respond to serious and other important issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.	Decision-making processes respond to all issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.
	<b>Met?</b>	(Y)	(Y)	(N)
	<b>Justification</b>	The EU –Norway management plan is informed by science and evaluated by science before adoption. During revision of the plan, EU and Norwegian scientists and industry play a key role in highlighting serious issues for conclusion or consideration. For example, where monitoring (and to a certain extent science) identified a known risk in relation to illegal landings from pelagic fisheries, the management authority (EU) responded accordingly by increasing the binding stipulation for weighting and inspection requirements. In particular the industry plays a key part in contributing to management proposals, and it is clear from resulting management decisions, that the proposals of industry – where merited and supported by precautionary science – have been given serious consideration by management decision makers. In particular the role of the pelagic RAC is crucial in enabling the industry to effectively engage with management in a positive and proactive way. Representatives of this fishery play a key role in the pelagic RAC and in shaping management proposals that are put to the EU, which decision makers in turn respond to appropriately.		
<b>c</b>	<b>Guidepost</b>		Decision-making processes use the precautionary approach and are based on best available information.	
	<b>Met?</b>		(Y)	

PI 3.2.2		The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives, and has an appropriate approach to actual disputes in the fishery under assessment.		
	Justification	Decision-making processes are set out in the EU Norway Management Plan. These clearly state that decisions will be informed by a scientific understanding of stock status and fishing mortality (provided by annual ICES advice). This management plan was reviewed by ICES who concluded that it was precautionary. Wider decision-making on other fisheries, fleet and ecosystem decisions are taken at a European level. As described in 3.1.3 this decision-making process is clearly guided by a binding commitment to the Precautionary Principle. The ICES advisory process is at the core of the European decision-making process, in this way, the best available information is provided within the decision-making process.		
d	Guidepost	Some information on fishery performance and management action is generally available on request to stakeholders.	Information on fishery performance and management action is available on request, and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.	Formal reporting to all interested stakeholders provides comprehensive information on fishery performance and management actions and describes how the management system responded to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.
		Met?	(Y)	(Y)
	Justification	The annual ICES advice and in particular the stock summary provides excellent information about the performance of the fishery. This is relatively easily accessible on the ICES website. Information on fleet capacity, effort and economic performance is collected as a requirement of the Data Collection Framework and collated by the Joint Research Center (JRC) <a href="https://datacollection.jrc.ec.europa.eu/index.html">https://datacollection.jrc.ec.europa.eu/index.html</a> . This landings data is also readily accessible on the Swedish Agency for Marine and Water Management statistical database portal: <a href="https://havbi.havochvatten.se/analytics/saw.dll?PortalPages">https://havbi.havochvatten.se/analytics/saw.dll?PortalPages</a> This meets the requirement of SG80. However, the area with least by way of formal reporting describing how the management system responded to findings is in relation to the reporting of the EU-Norway annual negotiations. SG100 is therefore not met.		

PI 3.2.2		The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives, and has an appropriate approach to actual disputes in the fishery under assessment.		
e	Guidepost	Although the management authority or fishery may be subject to continuing court challenges, it is not indicating a disrespect or defiance of the law by repeatedly violating the same law or regulation necessary for the sustainability for the fishery.	The management system or fishery is attempting to comply in a timely fashion with judicial decisions arising from any legal challenges.	The management system or fishery acts proactively to avoid legal disputes or rapidly implements judicial decisions arising from legal challenges.
	Met?	(Y)	(Y)	(Y)
	Justification	<p>There are no outstanding judicial decisions arising from legal challenge. If there were, it is expected that these would be complied with in a timely manner. SG80 is therefore met.</p> <p>SG100 is also met because the Management System (i.e. the EU-Norway Agreement and the EU fisheries Management legislative structures proactively act to avoid legal dispute. A key pillar of this has been proactive engagement between management and stakeholders – notably the fishing industry underpinned by effective consultation (previously described in PI3.1.2) which seeks to identify potential problems before implementation of new legislation. This is well illustrated by the Regional Advisory Councils (RACs), which were created during the 2002 reform of the Common Fisheries Policy to provide a more effective mechanism for industry stakeholders (including fishermen, vessel owners and processors) to make proactive contributions to development of management policy.</p> <p>This includes the Pelagic Advisory Council: <a href="http://www.pelagic-ac.org/">http://www.pelagic-ac.org/</a> . As noted on the Pelagic Advisory Council's website:</p> <p><i>"The Pelagic AC provides advice on a variety of topics upon request by the European Commission, Member States and on its own initiative. Every year recommendations are given regarding fishing opportunities for pelagic stocks for the subsequent year as well as recommendations on technical measures and other issues of common interest, such as the role of the ACs in the new Common Fisheries Policy (CFP)".</i></p> <p>The creation of, and the engagement of the European Management authority with the Pelagic Advisory Council provides evidence that SG100 is met.</p>		
References		<p>» EU-Norway 2016; ICES 2015;</p> <p>» Regional Advisory Council Fact Sheet: <a href="https://ec.europa.eu/fisheries/sites/fisheries/files/docs/publications/pcp_2008_factsheets_en.pdf">https://ec.europa.eu/fisheries/sites/fisheries/files/docs/publications/pcp_2008_factsheets_en.pdf</a></p>		

<b>PI 3.2.2</b>	<b>The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives, and has an appropriate approach to actual disputes in the fishery under assessment.</b>	
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>		<b>85</b>
<b>CONDITION NUMBER (if relevant):</b>		<b>n/a</b>



### Evaluation Table for PI 3.2.3

PI 3.2.3		Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Monitoring, control and surveillance mechanisms exist, are implemented in the fishery under assessment and there is a reasonable expectation that they are effective.	A monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated an ability to enforce relevant management measures, strategies and/or rules.	A comprehensive monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules.
	Met?	(Y)	(Y)	(Y)
	Justification	<p>This scoring justification is unchanged from the time of the last assessment of this fishery:</p> <p>The system of monitoring, control and surveillance in place for the Swedish RSW fishery is comprehensive providing tight control of quota uptake, through inspections at sea, on landing and via spotter planes. All vessels covered by this assessment have tamper proof VMS, are only able to land at designated ports, must give prior notification of landing, are subject to strict landings tolerance margins of 10%. In addition, all fish buyers / processors are registered and subject to inspection. There are strict pelagic weighing requirements, sales record requirements and other traceability requirements. Commission Regulation 1542/2007 has led to a substantial tightening in the control requirements for landings of herring. Although this has now lapsed, the measures contained in the new EU Control regulations (1224/2009) continue the requirement for similar rigor. Recent regulatory changes, such as the advent of e-log books only further strengthen the enforcement system and add confidence of its efficacy.</p> <p>This comprehensive system is mirrored across the EU member states where North Sea herring is landed, and indeed in Norway (where the Directorate of Fisheries, the Coast Guard have primary responsibility). Norwegian enforcement officers may board any EU vessel in Norwegian waters and carry out inspections. The level of cooperation between member state enforcement agencies (and Norway) has greatly improved in recent years, meaning that a Swedish Pelagic vessel fishing Swedish quota in UK waters and landing into Norway, is subject to as effective and integrated an enforcement system as would be the case if it was fishing in Swedish waters and landing into Sweden.</p> <p>SG 60, 80 and 100 are met.</p>		
b	Guidepost	Sanctions to deal with non-compliance exist and there is some evidence that they are applied.	Sanctions to deal with non-compliance exist, are consistently applied and thought to provide effective deterrence.	Sanctions to deal with non-compliance exist, are consistently applied and demonstrably provide effective deterrence.

PI 3.2.3		Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with		
	Met?	(Y)	(Y)	(Y)
	Justification	<p>This scoring justification is unchanged from the time of the last assessment of this fishery:</p> <p>Much has changed in enforcement and control of European pelagic fisheries, and in particular North Sea Pelagic fisheries in the last decade or so. Large scale IUU catches were discovered in the middle of the last decade – in particular in Scotland and Ireland, and this led to tighter controls and specific EU regulations focusing on pelagic catches. This has greatly improved the record of compliance and the ICES assessment no longer highlights a large unaccounted mortality (associated with illegal landings). At no time has the Swedish fishery been shown to have engaged in large scale IUU of pelagic fisheries and consequently there has been no requirement to 'pay back' nation quota, as some member states are still required to do. This suggests that the level of enforcement in the past may even have provided effective deterrence, and since systems have tightened further in the last 5 years, the system can now certainly be described as providing effective deterrence.</p> <p>SG 60, 80 and 100 are met.</p>		
c	Guidepost	Fishers are generally thought to comply with the management system for the fishery under assessment, including, when required, providing information of importance to the effective management of the fishery.	Some evidence exists to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery.	There is a high degree of confidence that fishers comply with the management system under assessment, including, providing information of importance to the effective management of the fishery.
	Met?	(Y)	(Y)	(N)
	Justification	<p>Some evidence of good compliance comes in the form of verification from The Swedish Agency for Marine and Water Management that the fleet under assessment has a good compliance record. There is no contrary evidence in the form of sanctions. Overall the level of compliance in the North Sea herring fishery is much improved. The ICES herring assessment working group no longer raises the issue of over quota landings or unaccounted mortality, as was the case in recent years. SG 60 and 80 are met. However, given the low level of observer coverage and the fact that Remote Electronic Monitoring has not been adopted SG100 is not met.</p>		
d	Guidepost		There is no evidence of systematic non-compliance.	
	Met?		(Y)	

<b>PI 3.2.3</b>		<b>Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with</b>
	<b>Justification</b>	There is no evidence of systematic noncompliance. This has previously been confirmed by The Swedish Agency for Marine and Water Management. Annual surveillance audits for the fishery since the last MSC assessment have not highlighted any issues on non-compliance.
<b>References</b>		» Vessel skippers <i>pers. comms</i> ; Council Regulation (EC) No 1224/2009.....
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>		<b>95</b>
<b>CONDITION NUMBER (if relevant):</b>		<b>n/a</b>

Evaluation Table for PI 3.2.4

<b>PI 3.2.4</b>		<b>The fishery has a research plan that addresses the information needs of management</b>		
<b>Scoring Issue</b>		<b>SG 60</b>	<b>SG 80</b>	<b>SG 100</b>
<b>a</b>	<b>Guidepost</b>	Research is undertaken, as required, to achieve the objectives consistent with MSC's Principles 1 and 2.	A research plan provides the management system with a strategic approach to research and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principles 1 and 2.	A comprehensive research plan provides the management system with a coherent and strategic approach to research across P1, P2 and P3, and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principles 1 and 2.
		<b>Met?</b>	<b>Met?</b>	<b>Met?</b>
		(Y)	(Y)	(N)

PI 3.2.4		The fishery has a research plan that addresses the information needs of management		
	Justification	<p>This performance indicator has been dropped from the latest version of the MSC standard, however, it still applies in this case because of the version which is being used for this assessment (v1.3). The justification and scoring are largely unchanged from the previous Public Certification Report for this fishery (which in turn is closely aligned to other fisheries which fall under the European ICES framework):</p> <p>ICES strategically establish study groups based on information requirements identified by national delegates, including through industrial representations. Members of various ICES Working Groups focused on such elements as climate change, plankton, multi-species fisheries (ecosystem), etc. All review research, identify research requirements and undertake appropriate work. There is good communication between Working Groups (via ACOM), and between researchers through their specialist interests. The Key working group in relation to this fishery is the Herring Assessment Working Group (HAWG).</p> <p>Research / investigation are undertaken in relation to specific requirements, which generally come from the recommendations of the Stock Assessment Working Group. Members of the ICES community keep abreast of developments within the scientific community of relevance to the fishery under consideration. This ICES community is wider than Europe and includes relevant research elsewhere. Research contracts are left to other organisations, including Universities, (e.g. through the EC) to supplement scientific understanding relevant to the fishery and related ecosystem. Scientists from the Swedish University of Agricultural Science (<a href="http://www.slu.se">www.slu.se</a>) are integral players in this research community, contributing significant resources and expertise to relevant research. All protocols for data collection and analysis of fisheries data to support fishery management decision-making are clearly laid out in Annex 5 of the HAWG working group report and this provides a clear guide and plan for routine on-going targeted fisheries research. Where specific need arises, HAWG will also highlight recommendations for research (e.g. recently for work on the recruitment index), and there is evidence that this is followed up on by research institutions – Swedish University of Agricultural Science (<a href="http://www.slu.se">www.slu.se</a>).</p>		
b	Guidepost	Research results are available to interested parties.	Research results are disseminated to all interested parties in a timely fashion.	Research plan and results are disseminated to all interested parties in a timely fashion and are widely and publicly available.
	Met?	(Y)	(Y)	(N)
	Justification	<p>These ICES working groups provide reliable and timely information of research results which is disseminated to all interested parties in a timely fashion and is widely and publicly available (for example via the ICES website). ICES also publish the peer reviewed periodical journal, the ICES Journal of Marine Science, which is another way for disseminating research findings. In addition, the findings of Swedish University of Agricultural Science (<a href="http://www.slu.se">www.slu.se</a>) work are widely published – where possible in peer review format.</p>		
References		» <a href="http://www.ices.dk/publications/library/Pages/default.aspx">http://www.ices.dk/publications/library/Pages/default.aspx</a> .....		

PI 3.2.4	The fishery has a research plan that addresses the information needs of management			
OVERALL PERFORMANCE INDICATOR SCORE:				80
CONDITION NUMBER (if relevant):				n/a

**Evaluation Table for PI 3.2.5**

<b>PI 3.2.5</b>		<b>There is a system of monitoring and evaluating the performance of the fishery-specific management system against its objectives</b> <b>There is effective and timely review of the fishery-specific management system</b>		
<b>Scoring Issue</b>		SG 60	SG 80	SG 100
<b>a</b>	<b>Guidepost</b>	The fishery has in place mechanisms to evaluate some parts of the management system.	The fishery has in place mechanisms to evaluate key parts of the management system	The fishery has in place mechanisms to evaluate all parts of the management system.
	<b>Met?</b>	(Y)	(Y)	(N)
	<b>Justification</b>	Key parts of the management system are evaluated. Such as: <ul style="list-style-type: none"> <li>• Periodic Reviews (&amp; Reform) of the Common Fisheries Policy</li> <li>• Evaluation Member States Reports &amp; Data Transmission under the obligations of the Data Collection Framework. (STECF 2015)</li> <li>• Evaluations of key Control &amp; Enforcement Legislation (DGMARE 2017)</li> <li>• Evaluations of the European Fisheries Control Agency. (Blomeyer &amp; Sanz 2017)</li> <li>• Evaluations of EU-Norway Management Plan (ICES 2015)</li> <li>• Evaluation of the implementation of OSPAR measures in Sweden (Emmerson 2016).</li> <li>• Evaluations in relation to the Landings Obligation: (STECF 2016)</li> <li>• The ICES Working Groups (referred to in 3.2.4) also effectively serve as routine evaluations of management performance, by comparing fishery performance to pre-determined targets.</li> </ul> SG 80 is clearly met.		
<b>b</b>	<b>Guidepost</b>	The fishery-specific management system is subject to occasional internal review.	The fishery-specific management system is subject to regular internal and occasional external review.	The fishery-specific management system is subject to regular internal and external review.
	<b>Met?</b>	(Y)	(Y)	(N)

<b>PI 3.2.5</b>	<p><b>There is a system of monitoring and evaluating the performance of the fishery-specific management system against its objectives</b></p> <p><b>There is effective and timely review of the fishery-specific management system</b></p>	
	<b>Justification</b>	<p>The process of fishery-specific evaluation implies a holistic review of the management system surrounding North Sea Herring. This process of review is best described as the process by which:</p> <ul style="list-style-type: none"> <li>the ICES Herring Assessment Working Group produces an annual overview of the fishery, undertakes stock assessment and provides advice. In doing so HAWG “reviews scientific findings pertaining to herring ..... and applies these findings when evaluating the state of the related stocks”.</li> <li>The outputs of the Working Group are reviewed by the ICES Advisory Committee (ACOM) to produce advice.</li> <li>This is turn is reviewed by European Commission Scientific, Technical and Economic Committee for Fisheries <a href="https://stecf.jrc.ec.europa.eu/">https://stecf.jrc.ec.europa.eu/</a></li> <li>And in turn this is reviewed by the EU-Norway meeting, who follow the decision-making process enshrined in the Long-term Management Plan, which has itself been reviewed by ICES.</li> </ul> <p>As a result, the Fishery Specific Management System is subject to regular review. However, the majority of the evaluations undertaken are ‘internal’ either within ICES or the EC. However, ICES work brings together a wide range of national scientists, in so doing so builds external perspectives into the assessments. Additionally, most ICES work is periodically externally reviewed. One way in which this is done is by inviting visiting scientists (from outside of the Europe) to attend benchmarking evaluation exercises. SG 60 and 80 are met. SG 100 is not met.</p>
<b>References</b>	STECF 2015; STECF 2016; Blomeyer & Sanz 2017; Emmerson 2016; ICES 2015	
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>		<b>80</b>
<b>CONDITION NUMBER (if relevant):</b>		<b>n/a</b>

## **Appendix 1.4 Risk Based Framework (RBF) Outputs**

The MSCs Risk Based Framework was not used in this assessment

## **Appendix 1.5 Conditions**

No Conditions are raised in this assessment.



## Appendix 2. Peer Review Reports

### Appendix 2.1 Peer Reviewer A

<b><i>Has the assessment team arrived at an appropriate conclusion based on the evidence presented in the assessment report?</i></b>	<b>Yes</b>	<b>CAB Response</b>
<b><u>Justification:</u></b>  <b>The fishery has passed without conditions and that is appropriate. In some sections a justification for the scoring needs to be provided (see comments in Table 1). The text in the scoring tables is generally clear although some editing may be required in some cases (see first sentence in the last paragraph of PI 3.2.5 as an example).</b>		<p>Issues raised addressed with responses provided in main table below.</p> <p>Based on the comments from both peer reviewers some minor score changes have occurred. This results in a slight increase in scores in Principle 1 &amp; 3 (in both cases due to the change in a single performance indicator score) and a slight decrease in the score for Principle 2. These changes do not effect the overall outcome nor do they result in the addition of conditions of certification.</p>

<b><i>Do you think the condition(s) raised are appropriately written to achieve the SG80 outcome within the specified timeframe?</i></b>  <b><i>[Reference: FCR 7.11.1 and sub-clauses]</i></b>	<b><u>N/A</u></b>	<b>CAB Response</b>
<b><u>Justification:</u></b>		

If included:

<b><i>Do you think the client action plan is sufficient to close the conditions raised?</i></b>  <b><i>[Reference FCR 7.11.2-7.11.3 and sub-clauses]</i></b>	<b><u>N/A</u></b>	<b>CAB Response</b>
<b><u>Justification:</u></b>		

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
1.1.1	Yes	Yes	N/A		
1.1.2	No	No	NA	<p><i>The certifier gave a score of 80 for this PI. PI 1.1.2 b). The North Sea herring stock has gone through two major collapses from which the breakpoint, at which impaired recruitment can be expected, can be estimated reasonably well. A longer time-series was used in 2016, in agreement with WKHELP (ICES 2012) guidelines for estimation of Blim to ensure that variability in population dynamics and state were covered (ICES 2016C). As a precautionary consideration, the Stock and Recruitment Relationship used in the simulations was estimated on the basis of data from 2002, the onset of the low recruitment phase. SG 100 is met. <i>The resulting score for the PI should be 90.</i> Some of the references quoted are not shown in the complete references section.</i></p> <p>PI 1.1.2 c). MSY Btrigger is appropriate as an MSY surrogate as it was selected by simulation on the basis of maximising long term yields while still complying with the precautionary approach (ICES 2012).</p>	<p>The reason why 80 and not 100 was given for PI 1.1.2c was not because MSY Btrigger is not considered appropriate as an MSY surrogate but because when estimating MSY Btrigger the ecological role of the stock is not taken explicitly into account with a high degree of certainty. Thus, the 80 score is considered appropriate by the assessment team and no changes has been made to the report.</p>

<b>Performance Indicator</b>	<b>Has all available relevant information been used to score this Indicator? (Yes/No)</b>	<b>Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)</b>	<b>Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)</b>	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	<b>CAB Response</b>
1.2.1	Yes	Yes	N/A		

1.2.2	No	No	N/A	<p>PI 1.2.2 b). Based on the Report from WKHerTAC 2015 (ICES CM 2015/ACOM: 47), the harvest control rules in place were tested by means of Management Strategy Evaluation (MSE) which considers four components. The biological stock units of herring in the North Sea and Western Baltic [1], the five fisheries tar-geting the stock unit(s) [2], the fisheries-independent surveys [3], the stock assessment procedure to obtain a perceived status of the stock unit(s) and is used to set management targets [4]. The framework includes feedback loops, where over time, the result of setting management targets affect the stock unit(s) the year after, and thereby also affect the fisheries and management. Recruitment is generated by drawing from a log-normal distribution derived from fitting the 2003 to 2013 recruit numbers as estimated from the 2014 assessment. This approach takes into account current productivity of the stock and, implicitly, the impact of the environment in recent years. In my view the design of the harvest control rules is state of the art and takes into account a wide range of uncertainties. SG100 is met.</p> <p>PI 1.2.2c. Note that the TAC corresponds to the A fleet only while the ICES advice corresponds to the total catch. Further, the ICES catch of autumn spawners includes the transfer from 3a into the North Sea (agreed TAC-setting procedure, EU-Norway 2016). The transfer is subtracted from the spring spawners TAC and effectively results in an increase in autumn spawners catch above the ICES catch advice (ICES Advice 2017 her 27.20-24). The above explains the differences noted by the Team. Fishing mortality has been smaller than the F<sub>mt</sub> (since 2006) and F<sub>msy</sub> (since 1996) so the tools are effective in achieving the exploitation required by the HCR and SG100 is met. Overall PI score is 100.</p>	<p>PI 1.2.2b. As highlighted by the reviewer, the assessment team also recognised that several sources of uncertainties were taken into account during the MSE. However, the assessment team considers that a wide range of uncertainties was not considered such as the environment effect on recruitment or on other biological parameters (e.g. growth, maturity and natural mortality). Thus, the 80 score is considered appropriate by the assessment team and no changes has ben made to the report.</p> <p>PI 1.2.2c. The reviewer is correct here and therefore the text and the scoring (i.e. from 80 to 100) has been changed accordingly.</p>
1.2.3	Yes	Yes	N/A		
1.2.4	Yes	Yes	N/A		
2.1.1	Yes	Yes	N/A		

<b>Performance Indicator</b>	<b>Has all available relevant information been used to score this Indicator? (Yes/No)</b>	<b>Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)</b>	<b>Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)</b>	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	<b>CAB Response</b>
2.1.2	Yes	Yes	N/A		
2.1.3	Yes	Yes	N/A	I agree with the assessment team that information on the catch of all retained species is accurate but not always verifiable. The information available to assess the impact on retained species is adequate and evaluation of the strategy can be achieved with a high degree of certainty, I agree with the AT.	
2.2.1	Yes	Yes	N/A	I agree with the AT that the fishery does not pose a risk of serious or irreversible harm to the bycatch species since there is no by catch species as 100% of the catch is reported as herring.	

<b>Performance Indicator</b>	<b>Has all available relevant information been used to score this Indicator? (Yes/No)</b>	<b>Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)</b>	<b>Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)</b>	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	<b>CAB Response</b>
2.2.2	Yes	Yes	N/A	I agree with AT that there is a strategy in place for managing bycatch. Bycatch is negligible and the fleet has in place highly sophisticated fishing procedures that result in clean catches of herring. Independent observers and CCTV would provide clear evidence that the strategy is implemented successfully. The 90 score is justified.	
2.2.3	Yes	Yes	N/A		
2.3.1	Yes	No	N/A	The rationale used to evaluate the indirect effects of the fishery on the ETP species is not conclusive.	This score has been reduced to 80 on the basis of comments from the other peer reviewer.
2.3.2	Yes	No	N/A	There is a comprehensive strategy in place both at the EU and the fleet level. The lack of observers on board is taken into account in subsequent SIs. SIa scores 100. There is no quantitative analysis supporting with high confidence that the strategy would work and the lack of observers or remote electronic monitoring precludes from scoring 100 in the remaining SIs.	The fact that the on-board ETP strategy appears to be in less prominent use (albeit it is argued that this is the result of long periods of zero ETP interaction) means that the 'comprehensive' strategy is not met. Scores therefore remain unchanged.

<b>Performance Indicator</b>	<b>Has all available relevant information been used to score this Indicator? (Yes/No)</b>	<b>Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)</b>	<b>Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)</b>	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	<b>CAB Response</b>
2.3.3	Yes	Yes	N/A		
2.4.1	Yes	Yes	N/A		
2.4.2	Yes	No	N/A	In my view the information presented by the Assessment Team (AT) provides clear evidence that the strategy is being implemented successfully. Slc scores 100.	Peer Reviewer B advocates lowering the score. We have sought to improve the justification on the basis of Peer Reviewer Bs comments, but the scores are unchanged.
2.4.3	Yes	Yes	N/A		
2.5.1	Yes	Yes	N/A		



Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
2.5.2	No	Yes	N/A	The ICES Strategic Plan (2014 – 2018) which confronts the challenges of protecting and restoring the health and productivity of the oceans may also be taken into account when scoring PI 2.5.2 a). This plan supports the sustainable management of the seas and details the actions required to carry out the supporting activities of the strategy. See: <a href="#">Implementing the ICES Strategic Plan: Linking Science, Advice, Data and Information, and the Secretariat (ICES website)</a> . To my understanding, there is a strategy that consists of a plan, in place.	Again Peer Reviewer B advocates lowering the score. The score has been reduced to 80.

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
2.5.3	No	No	N/A	The quote of ICES Stock Annex in issue c) may not be appropriate. Not surprising ecosystem models are sensitive to assumptions about herring as it is a main forage fish in the North Sea together with sandeel, sprat and Norway pout. However, the interactions between the fishery and the ecosystem elements have been the focus of many studies (impact on ETP species referred to by AT); the role of herring in the North Sea ecosystem as a whole was modelled by Mackinson, S. and Daskalov, G., (2007) and for the impact of the fisheries in the North Sea see Daan <i>et al.</i> 2005. So, the main interactions between the fishery and the ecosystem elements can be inferred. Whether the interactions have been investigated in sufficient detail is debatable so, while in doubt I may agree with the team score. The score of 100 in the following issues appears justified.	The quotation has been removed. The references provided by the peer reviewer have been added. Score unchanged.
3.1.1	Yes	No	N/A	Need to provide some reference to the RACs later becoming ACs. Provide justification for the score rather than just list a number of facts that have to be interpreted as supporting the SG.	Reference to RACs has been amended to Advisory Councils. The list of facts is intended to be the clear audit trail which supports the scoring.

<b>Performance Indicator</b>	<b>Has all available relevant information been used to score this Indicator? (Yes/No)</b>	<b>Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)</b>	<b>Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)</b>	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	<b>CAB Response</b>
3.1.2	Yes	No	N/A	What about EU and Coastal States management organisations? Again, a list of organisations does not constitute appropriate justification for the score.	DG Mare added at the beginning. The list also states what the role is and the scoring justification discusses the degree to which these roles are understood. Further example of consultaion provided for annual EU fishing opportunities. The list of facts is intended to be the clear audit trail which supports the scoring.
3.1.3	Yes	Yes	N/A		
3.1.4	Yes	Yes	N/A		
3.2.1	Yes	Yes	N/A		
3.2.2	Yes	Yes	N/A		
3.2.3	Yes	Yes	N/A		

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
3.2.4	Yes	No	N/A	No justification for not meeting SG100. In my understanding ICES does produce and make public a coherent and strategic approach to research across P1, P2 and P3. Under the umbrella of ICES strategy and at the level of the ICES working groups medium term research plans are prepared leading to Benchmark Workshops. Special short-term research requests are often posed directly by the EU to ICES who then assembles a Study Group to address the request. Scoring issue b) The rational supports an SG 100 but, the AT scoring is 80, please check.	This PI is often problematic in ICES fisheries. Given that this PI has now been removed from future assessment applying 'neutral' scoring at the 80 level seems appropriate and in-line with previous ICES scoring. Peer Reviewer B notes that the scoring is appropriate. Scoring issue B requires that the Fishery specific Research Plan is also published – hence SG100 is not met.
3.2.5	No	Yes	N/A	Any evaluation or update of the performance of the management system at the National level would be relevant. SI b) Please justify why SG100 is not met.	SIb SG100 is not met because the only review which is external is within the scientific ICES process. SG100 would be met if there was was an external (i.e. not conducted by any party which plays a role within the management system) of the fishery specific (i.e. herring) management system.

**Optional: General Comments on the Peer Review Draft Report (including comments on the adequacy of the background information if necessary) can be added below and on additional pages**

#### References

Daan, N., Gislason, H., Pope, J. G., and Rice, J. C. 2005. Changes in the North Sea fish community: evidence of indirect effects of fishing? ICES Journal of Marine Science, 62(2): 177–188. doi:10.1016/j.icesjms.2004.08.020.

Mackinson, S. and Daskalov, G., 2007. An ecosystem model of the North Sea to support an ecosystem approach to fisheries management: description and parameterisation. Sci. Ser. Tech Rep., Cefas Lowestoft, 142: 196pp.

Thank you for affording me the opportunity to review this report.

**CAB Response:** thank you for these additional references, which have both been added.

## Appendix 2.2 Peer Reviewer B

Has the assessment team arrived at an appropriate conclusion based on the evidence presented in the assessment report?	No	CAB Response
<p><u>Justification:</u></p> <p>There is very little evidence presented in the report to support the conclusions that have been drawn. The only quantitative data presented in the report are the recent TAC and Catch data and some information on stock status in PI1.1.1.</p> <p>There are no quantitative data presented to support the scoring of the Principle 2 outcome indicators.</p> <p>Whilst it is noted that the MSC template for a “Reduced Reassessment” indicates that it is possible to say that there has been no change in the circumstances of a fishery since its last assessment, the MSC also require that quantitative evidence is presented to support the scoring of outcome PIs. This has not been done.</p> <p>Very little information at all is presented in the report about the management of this fishery in Norwegian waters; the report focuses almost exclusively on the EU and Swedish management regimes, despite a catch of over 1,000t of herring each year in Norwegian waters.</p> <p>Some statement needs to be made in the report to explain the basis for presenting only one set of assessment tables for a fishery with 2 UoAs. The logic is self-evident for Principle 1 (there is only one target stock); but some evidence is required to support the view that P2 impacts of pelagic trawls and purse seines are identical; and also some consideration of why the management regime for each métier is the same.</p> <p>Whilst the assessment outcome is probably justified it requires further justification to meet the MSC’s requirements.</p>		<p>We note that the reviewer agrees with the overall outcome and score. We have addressed some of the issues raised in relation to quantitative issues, response to these are provided next to the relevant PI.</p> <p>We have sought to address the Peer Reviewers concern about the need for greater Norwegian reference. That said, we are not convinced that this is a correct interpretation. The UoA is for Swedish (i.e. EU) vessels. Therefore, the management regime which applies is the Swedish and EU regime. The fact that some catch can be taken in Norwegian waters does not change this fundamental fact. The key criteria is how are other nations included within management and how is agreement reached to allow access – i.e. what are the detailed arrangements contained in the EU-Norway agreement. This is, correctly in our view, the primary focus of the assessment. Already science and scientific advice is coordinated at an international level which includes Norway. Likewise, things like ecosystem information and descriptions are for the whole of the North Sea, not just the EU part of it. For control and enforcement what is relevant is the degree of coordination and resulting effectiveness. Simply providing further description of the Norwegian management system does not add value to the report and likely makes it less readable. For context, the harmonised North Sea herring fisheries which are from EU nations generally do not refer Norwegian management, even though they may all take herring in Norwegian waters, and the Norwegian harmonised fishery does not refer to EU management even though they may catch herring in EU waters. In general, the Norwegian herring assessment scores higher (than the EU), so referring extensively to Norwegian elements would not lead to any reduction in scores.</p> <p><u>Based on the comments from both peer reviewers some minor score changes have occurred. This results in a slight increase in scores in Principle 1 &amp; 3 (in</u></p>

	<i><u>both cases due to the change in a single performance indicator score) and a slight decrease in the score for Principle 2. These changes do not effect the overall outcome nor do they result in the addition of conditions of certification.</u></i>
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<b><i>Do you think the condition(s) raised are appropriately written to achieve the SG80 outcome within the specified timeframe?</i></b> <b><i>[Reference: FCR 7.11.1 and sub-clauses]</i></b>	<b>NA</b>	<b>CAB Response</b>
<u>Justification:</u>  No conditions of certification have been raised.		

If included:

<b><i>Do you think the client action plan is sufficient to close the conditions raised?</i></b> <b><i>[Reference FCR 7.11.2-7.11.3 and sub-clauses]</i></b>	<b>NA</b>	<b>CAB Response</b>
<u>Justification:</u>  In the absence of any conditions, there is no client action plan.		



Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
1.1.1	Yes	Yes	NA	<p>The scoring is fully justified.</p> <p>The ratio of <math>F_{current}:F_{msy}</math> seems to have been calculated the wrong way round. This value should be <math>0.26/0.33=0.79</math> (rather than the value of <math>0.33/0.26=1.27</math>).</p>	The reviewer B is correct here and the values has been corrected accordingly.
1.1.2	Yes	No	NA	<p>Slc considers that</p> <p>"<math>MSY_{trigger}</math> can be considered as a surrogate for <math>B_{MSY}</math> as it is estimated to be 188% larger than <math>B_{lim}</math>."</p> <p>The logic of this statement is not clear. <math>B_{lim}</math> is defined as the point where the stock-recruitment relationship changes. This point does not necessarily have any relationship with <math>B_{msy}</math>.</p> <p>Secondly, the MSC "Interpretation Log" informs CABs on how to regard ICES advice. Although this interpretation was provided for PI1.1.1 in CRv2.0 it is directly relevant to PI1.1.2 in CRv1.3. This interpretation states that:-</p>	The assessment team agrees with the comments made by the reviewer and the text has been revised accordingly although this did not change the scoring as also indicated the reviewer B.

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				<p>It [ICES] does define MSY Btrigger (hereafter Btrigger), <u>which should not be interpreted by CABs as a target reference point equal in intent and outcome to BMSY</u>. Rather MSY Btrigger is considered the lower bound of spawning-stock biomass fluctuation around BMSY. It is a biomass reference point that triggers a cautious response [ICES 2016]. [Emphasis added]</p> <p>The justification should be revised to take account of these points; and it should make reference to the ICES benchmarking and recent updates of reference points. This would provide better justification for a score of 80 (which is probably appropriate).</p>	
1.2.1	Yes	Yes	NA	The scoring is justified.	
1.2.2	Yes	Yes	NA	<p>The scoring is justified.</p> <p>The rationale for Slc considers the fact that the catch for the past few years has been in excess of scientific advice on the level of TAC that is appropriate for the stock. Whilst</p>	As noted by the reviewer A, the TAC corresponds to the A fleet only while the ICES advice corresponds to the total catch. Further, the ICES catch of autumn spawners includes the transfer from 3a into the North Sea (agreed

<b>Performance Indicator</b>	<b>Has all available relevant information been used to score this Indicator? (Yes/No)</b>	<b>Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)</b>	<b>Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)</b>	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	<b>CAB Response</b>
				<p>agreeing that the exploitation levels (F) required under the harvest control rules is being attained, this is nevertheless an unsatisfactory situation.</p> <p>Although a condition of certification may not be warranted here at this time, it would seem appropriate to make a recommendation to the client to encourage a realignment of the management advice with the harvest control rules and tools so that the fishery removals from the stock match the scientific advice on what the TAC should be.</p>	TAC-setting procedure, EU-Norway 2016). The transfer is subtracted from the spring spawners TAC and effectively results in an increase in autumn spawners catch above the ICES catch advice (ICES Advice 2017 her 27.20-24). The above explains the differences noted by the Team. Therefore, the text has been revised accordingly and the scoring has been changed from 80 to 100.
1.2.3	Yes	Yes	NA	The scoring is well justified.	
1.2.4	Yes	Yes	NA	The scoring is well justified.	
2.1.1	No	No	NA	<p>The first paragraph of Sla states that:-</p> <p>"According to MSC standards, main retained species are those with levels between 1 and 5% of the total catches, while minor retained species are those less than 1%. In case catches are under 1%, they are considered as negligible and not included in the</p>	The reviewer is correct about the definition of major and minor retained species, and thus the text has been revised accordingly. The reviewer is correct about the lack of observer data, which has been highlight several times also by the assessment team. However, information are available

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				<p>evaluation, unless they are ETP or out of scope species (i.e. mammals, reptiles, birds)."</p> <p>This is incorrect. Main species are those making up &gt;5% of the catch. Minor species are &lt;5%. There is no "negligible" category in the MSC standard.</p> <p>No information is presented in the report to show what the recent catch composition is in the UoA/UoC, so the assertions made here are not supported with evidence.</p> <p>Reference is made in Sla to studies of catches in Dutch and German fleets; no evidence is presented of catch composition in the UoA fleet; some rationale should be presented to explain why Dutch and German catches are the same as Swedish catches (and also why there are no data for Swedish catches but there are data for other nations).</p> <p>A strange omission here is any reference to the EU landing obligation which means that some of the species that had been legitimately discarded in the past must now</p>	<p>and presented in the report and these are constituted by the catch data of the last 3 years, when landing obligation has been in place for this fleet. According to this data, 100% of catches of the Swedish pelagic fleet are constituted by herring. Also, in the past, Swedish Pelagic vessels were covered by the observer Programme run by the Swedish authorities (i.e. the Swedish National Board of Fisheries). However, as the amount of by catch, discards and slipping was minimal or (almost invariably) absent, the Swedish authorities excluded this section of the fleet from the yearly observer programme. Since 2015, the Swedish Pelagic vessels are subject to EU landing obligation regime, which implies that all catches must be retained and landed and that discards are illegal. Thus, and considering that Swedish experts (Maria Hansson pers. comm, Swedish responsible of the EU Data Collection Framework) stated that available catch data of the Swedish pelagic fleet are reliable, the</p>

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				<p>be landed.</p> <p>Given the statements elsewhere in the report about traceability, some data should be available about landings by Swedish vessels, which under the landing obligation should be representative of catch composition.</p> <p>It is not clear how the SG100 requirements are met at SIa and SIb, since this requires that there is information available about the catch of <u>all</u> non-target species, and that there is some understanding of the status of these species relative to their target reference point.</p> <p>For SIb, the justification provided has no relevance whatsoever to the Scoring Guidepost; the justification is all about reported catch composition, whilst the SG asks about reference points.</p> <p>Overall, a score of 80 would seem more appropriate for this PI if additional information is provided.</p>	<p>assessment team considers that no retained species are present and thus the scoring is appropriate. However, following the comments from the reviewer B, the text has been revised accordingly. In particular, the reference to landing obligation has been added, the background of the Swedish observer programme and also the opinion of the Swedish responsible of the EU DCF (i.e. data collection which include the observer programme) have been integrated in the text. However, the scoring has not been changed.</p>

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
2.1.2	No	No	NA	<p>For all of the SIs the justification presented is based on (unsubstantiated) reports that catches are of 100% herring.</p> <p>This is not what the PI is testing. There should be some consideration here of the management arrangements in place (including industry practices such as the use of sonar to identify shoal composition; maybe jigging prior to shooting nets); and also some information describing management strategies including the EU Landing Obligation.</p> <p>Finally, there is no mention anywhere in this PI of the management regime in the Norwegian part of the UoA (accounting for over 1,000t of herring catches). The justification should address this.</p> <p>The score awarded is not justified by the information presented.</p>	<p>See explanation given under 2.1.1. Also, a text about management arrangements in place by the fleet to avoid by catch has been added to 2.1.2 as suggested by the reviewer and the text has been revised accordingly. However, the scoring has not been changed.</p> <p>For the management regime in the Norwegian part of the UoA, see general CAB response made above.</p>
2.1.3	Yes	No	NA	<p>The scoring is probably appropriate (though no actual data are presented in the report to provide an evidence base for the claims made).</p>	<p>The reviewer B is correct about the lack of observer data, which has been highlighted several times also by the assessment team. Thus, the text has</p>

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				<p>SI1 indicates that there could be catches of a number of non-target species in the fishery, but that quantities of less than 50kg of fish are not reported. If this is the case, then SG100 cannot be met because ongoing mortalities to retained species are not monitored.</p> <p>If sufficient information is provided to demonstrate that this information is gathered as reported, and that the catch composition is similar to that reported, then a score of 80 or more would seem appropriate for this PI.</p>	<p>been revised according to the comments of the reviewer B in order to strengthen this aspect of the evaluation. See text also of the CAB response under 2.1.1 and 2.1.2. Moreover, a recommendation has been made which states that an independent verification would be necessary to achieve SG 100. This might be obtained, for example, by the use of CCTV. However, the scoring has not been changed.</p>
2.2.1	No	No	NA	<p>The score may be justified, but the scoring comments need to be brought up to date.</p> <p>The only legislation referred to here is EC Regulation 665/2008, which is concerned with data collection.</p> <p>This PI should take account of the new CFP Regulation and the implementation of the Landing Obligation for North Sea fisheries.</p> <p>With a revision of the scoring rationales and</p>	<p>The legislation has been updated and the landing obligation, the new CFP and the discard plan of the pelagic fisheries in the North Sea has been added to the reference list. However, the scoring has not been changed.</p>



Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				supporting information to make them each up to date and relevant to the scoring guideposts, a score of 80 or more would certainly be appropriate here.	
2.2.2	No	No	NA	<p>Again, the justification is rather slack.</p> <p>Sla, for instance, starts by saying:-</p> <p>"By catch is negligible in this fishery and thus scoring should be seen in this context."</p> <p>It goes on to state that all discarding is now illegal, which would require that there is <u>no</u> discarding (as opposed to "negligible" discarding).</p> <p>Again, as with PI2.2.1, there is no consideration of the new legislation that has been put in place, only a reference to the EC data collection regulation.</p> <p>There is some useful information in this PI about fleet practices which should also have been mentioned in PI2.1.2 above.</p> <p>Finally, there is no mention anywhere in this</p>	<p>The reviewer B is correct about the lack of observer data, which has been highlight several times also by the assessment team. Thus, the text has been revised according to the comments of the reviewer B in order to strenght this aspect of the evaluation. The legislation has been updated and the landing obligation, the new CFP and the discard plan of the pelagic fisheries in the North Sea has been added to the reference list. However, the scoring has not been changed.</p> <p>For the management regime in the Norwegian part of the UoA, see general CAB response made above.</p>

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				<p>PI of the management regime in the Norwegian part of the UoA (accounting for over 1,000t of herring catches). The justification should address this.</p> <p>With appropriate revision of the justification and sources cited, a score of at least 80 would be appropriate here.</p>	
2.2.3	No	No	NA	<p>Again, the difficulty here is that there are no data presented in the report to support the claims made in the rationale.</p> <p>Given the absence of on-board observers and CCTV equipment aboard vessels; and the absence of any recent data about discarding from the client fleet, it is very hard indeed to see how a score of more than 80 is justified here.</p>	<p>The reviewer B is correct about the lack of observer data, which has been highlight several times also by the assessment team. Thus, the text has been revised according to the comments of the reviewer to strenght this aspect of the evaluation.</p> <p>Moreover, a recommendation has been made that an independent verification would be necessary to achieve SG 100. This might be also achieved, for example, by the use of CCTV. However, the scoring has not been changed.</p>

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
2.3.1	No	No	NA	<p>The scoring of this PI refers to the information presented in PI2.3.3 to support a view that there is a very low level of interaction with ETP species. However PI2.3.3 Slc indicates that there have been no studies of ETP interactions in this fleet since 2008, a point also made in PI2.3.1 Slb. More alarmingly PI2.3.3 Slb makes a circular reference to PI2.3.1 Sla which is stated to contain information on direct mortality in the fishery. The net result is that no information is presented anywhere to describe direct mortality of ETP species in this fishery.</p> <p>There is no information presented in the report to show that the UoA fleet participates in any ETP reporting programme (either voluntary or mandatory). PI2.3.2 Slc refers to assessors having previously seen evidence of an ETP reporting long in vessel wheelhouses, but no evidence is presented to indicate what these records showed, or indeed if this information is still being gathered.</p> <p>On the basis of the information presented for Sla and Slb, the best that can be said is that</p>	<p>It may be that the formatting of the scoring table meant that some of the text in scoring issue b, which specifically addresses the quantitative evidence was obscured from view. This has been corrected. Nonetheless, further reference has been added to the summary of ETP interactions from observed North Sea pelagic fishing trips in the 2015 ICES WGBY. This provides further evidence of zero interaction with pelagic North Sea fisheries.</p> <p>The reduced level of direct observation in this fleet comes only <i>after</i> a period of higher observation which showed very low or negligible levels of interaction. At the time of earlier assessments on-board logbooks were in place which showed zero interaction. For this reason, they are not referred to so prominently in this re-assessment as they appear to be in less prominent use. The rationale that the lack of direct up to date observation means that conclusions cannot be drawn with 'high degree of</p>

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				<p>there are no historical records of ETP species interactions.</p> <p>For SIc, one might expect some consideration of the ecosystem modelling that has been done for the North Sea to provide some kind of reassurance that the fishery does not have indirect effect on ETP species (this is referred to in PI2.5.1).</p> <p>Overall, with appropriate additional information, a score of 80 would seem appropriate here.</p>	certainty' is accepted and the score for the PI is reduced to 80.
2.3.2	No	No	NA	<p>Again, there is a paucity of evidence to support the claims made.</p> <p>For instance, at SIb, it is not at all clear, given that there have been no observers aboard vessels since 2008, how the Swedish reports to WGBYC can provide "an objective basis for confidence". An objective basis for confidence would require actual and current data from the fishery.</p>	<p>As peer reviewer A notes: the lack of remote sensing or on-board observer data precludes scoring at the SG100 level.</p> <p>Data from WGBYC for other member states is directly applicable as this is taking place with the same gear, in the same waters, at the same time of year, targeting the same species. Both WGBYC and ICES (2016a) conclude</p>

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				<p>Slc refers to wheelhouse logs of ETP species interactions. It is not at all clear if this is an historical or current initiative, nor whether the data from these logs provides any information that is relevant to the scoring of this SI.</p> <p>Finally, there is no mention anywhere in this PI of the management regime in the Norwegian part of the UoA (accounting for over 1,000t of herring catches). The justification should address this.</p> <p>Overall, a score of 80 is probably appropriate here, but insufficient relevant evidence has been presented to justify the scores awarded.</p>	<p>that the level of interaction is low. Furthermore the 'objective basis for confidence' that is referred to here is in relation to the strategy – which is an EU led strategy, so the assessment of efficacy is also at an EU level.</p> <p>The assessment clearly notes that “it is unclear if this (on board reporting) remains in place across the whole fleet”. For this reason no credit is given to this. Were this effectively in place then scoring at SG100 would have been reported. In the past this log has shown zero interaction, but has not been subject to proper analysis or scrutiny. We would also note here that a Recommendation is in place for Remote Electronic Monitoring. This would be a valuable addition to the fishery, but given the available evidence it's absence does not prevent SG80 being met.</p> <p>The management strategies referred to apply to the fleet (i.e. EU fleet) and the historic reporting has also been in</p>

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
					Norwegian waters, therefore the justification is the same. It is the management that applies to the fleet that is most relevant. Further description of the Norwegian management system would not change scores (the Norway North Sea and Skagerrak Herring MSC assessment scored 2.3.2 at 100).
2.3.3	No	No	NA	<p>Whilst a score of 80 may well be appropriate here, no information is presented to demonstrate that there is any current data actually being gathered to describe the interaction of the fishery with ETP species.</p> <p>SlA cites legislation that required EU Member States to gather information on cetacean catches; but no data are presented to demonstrate that this is being implemented; and given that Slc indicates that there have been no observers aboard vessels for 10 years, it is hard to see how the SG80 scoring requirements are met.</p> <p>Slb introduces a circular argument to the report, citing the information presented in</p>	<p>The focus of the information PI is on what information is available – not on what that information shows. What the information shows is detailed in the outcome PI – specifically 2.3.1b.</p> <p>The legislation that required EU member states to gather information on cetacean catches was complied with and this demonstrated a zero bycatch in this fleet sector.</p> <p>The circular argument has been addressed – this now directs to 2.3.1b which does present quantitative data.</p> <p>The SG80 level generally requires</p>

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				<p>PI2.3.1 Sla as providing evidence on the level of direct impacts; unfortunately PI2.3.1 Sla refers to PI2.3.3 as providing the information on direct impacts. The net result of these circular references is that there is no information presented in the report on direct impacts on ETP species.</p> <p>At Slc the argument that trends are measured is undermined by the absence of any observer data since 2008. Something better is required to meet the SG80 requirements.</p> <p>Overall, whilst accepting that it is quite probable that there are very few interactions with ETP species, insufficient information is presented to justify the score awarded.</p>	"sufficient" information. The assessment team have accepted that this is the case. Score is therefore unchanged (80) – indeed we note the reviewer agrees with the score.
2.4.1	Yes	No	NA	A score of 80 is appropriate. If evidence of "monitoring, including of pelagic habitats", was presented in the report then a score of 100 would be appropriate.	The most recent PFA & SPSG North Sea Herring Fishery scores this at 100. The FROM Nord North Sea and Eastern Channel pelagic trawl herring fishery scores this at 90. The DPPO and DFPO North Sea herring fishery scores this at 90 and Norway North Sea and Skagerrak herring scores this



Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
					at 95. The three that score below 100 do so because the evidence for lack of seabed habitat is "inferential". Not because of a lack of reference to pelagic habitats monitoring. Monitoring should best be addressed in 2.4.3. No change proposed and we note that Peer Reviewer A shares this view.
2.4.2	Yes	No	NA	<p>The scoring at Sla muddles the distinction between a partial strategy and a strategy.</p> <p>What is described is, at best, a "partial strategy" because it would seem that the absence of any habitat impacts is a consequence of the fishing métiers in use and the habitat in which the fishery is conducted – it is not a consequence of a deliberate strategy to minimise habitat impacts.</p> <p>If there is a strategy in place to manage the impacts of this fishery on the pelagic habitat in which it is conducted, where is it written down? That evidence would be required to meet any of the SG100 guideposts; and at SId, it should be possible to quote the</p>	<p>Again it is useful to refer to the other harmonised fisheries in response to this. The most recent PFA &amp; SPSC North Sea Herring Fishery scores this at 95. The FROM Nord North Sea and Eastern Channel pelagic trawl herring fishery scores this at 80. The DPPO and DFPO North Sea herring fishery scores this at 90 and Norway North Sea and Skagerrak herring scores this at 100. The proposed score of 90 very much harmonised with this.</p> <p>Unfortunately it is not clear why only 80 was awarded in the FROM case – reference is made to the need for VMS. Furthermore Peer Reviewer A advocates a score increase to 100. It is appropriate to set out the context</p>

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				<p>objective of this strategy (rather than indicate the consequence of the partial strategy).</p> <p>Finally, there is no mention anywhere in this PI of the management regime in the Norwegian part of the UoA (accounting for over 1,000t of herring catches). The justification should address this.</p> <p>A score of 80 would seem more appropriate.</p>	of the impact of the gear on the habitat so that the scale and intensity of the impact informs the expectation over the level of management. Further reference is added to the CFP management aims and the Natura 2000 network. Reference has also been added in relation to Norwegian management. The score is unchanged.
2.4.3	No	No	NA	<p>For Sla, it would be appropriate to refer to the work that has been carried out to monitor pelagic habitats (Druon, 2014) which is cited in the references for PI2.4.1.</p> <p>For Slb, where is the evidence that the impacts of pelagic trawls or purse seines on pelagic habitats has been quantified?</p> <p>Without evidence of quantitative data, SG100 cannot be met; the absence of impacts is a matter of common sense rather than research.</p>	The other harmonised fisheries score as follows: The most recent PFA & SPSG North Sea Herring Fishery scores this at 90. The FROM Nord North Sea and Eastern Channel pelagic trawl herring fishery scores this at 95. The DPPO and DFPO North Sea herring fishery scores this at 95 and Norway North Sea and Skagerrak herring scores this at 85. In this context the proposed score of 95 is slightly above average. The assessment team accept the rationale in relation to Slb and this has been

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				<p>At Slc, OSPAR's monitoring of benthic habitats for a fishery that is claimed not to impact the seabed is irrelevant. The data that are relevant to this SI are the observations cited elsewhere which are that the deployment of fishing gear is monitored by the vessels; that the location of fishing vessels is monitored by Governments; and that the catch composition is reported (so that the sudden appearance of demersal species in the catch would be detected). This monitoring would support SG80. Monitoring something that isn't impacted by the fishery doesn't prove anything.</p>	<p>rescored from SG100 to SG80 meaning the overall PI score reduces to 90.</p> <p>IN Slc it is relevant to monitor habitat status (indeed the SI specifically refers to monitoring outcome indicator score). However, additional monitoring as suggested by the peer reviewer has been added.</p> <p>Druon 2014 reference has been added.</p>
2.5.1	Yes	No	NA	<p>The MSC require that the assessment should consider the impact of the fishery on the key elements of ecosystem structure and function (as distinct from impacts on other P2 components).</p> <p>There is no evidence that this has been considered. All that is presented here is a statement that there is information about the North Sea ecosystem on the ICES website, and that ICES consider ecosystem interactions.</p>	<p>The other harmonised fisheries score as follows: The most recent PFA &amp; SPSPG North Sea Herring Fishery scores this at 100. The FROM Nord North Sea and Eastern Channel pelagic trawl herring fishery scores this at 90. The DPPO and DFPO North Sea herring fishery scores this at 90 and Norway North Sea and Skagerrak herring scores this at 95. In this context the proposed score of 80 is well below average. Peer Reviewer A</p>

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				<p>It is not at all clear from the text presented here that the team has identified what the key ecosystem elements are, and hence it is not at all clear whether the fishery may be adversely affecting them.</p> <p>While a score of 80 is probably appropriate here, the information presented does not justify it at present.</p>	<p>agrees with the score given.</p> <p>Although we do not propose to change score, further text is added. Specifically referencing "Key Ecosystem Elements" and most significant potential impact.</p>
2.5.2	No	No	NA	<p>The justification presented is appropriate for EU waters; no information is presented to indicate that there is a partial strategy in place in Norwegian waters, where the UoA catches over 1,000t of herring per year.</p> <p>With the inclusion of text to describe Norwegian ecosystem management, a score of 80 would seem appropriate.</p>	<p>Given that the main ecosystem impact is the removal of the target species, which is covered by the EU-Norway agreement this is implicit. Furthermore the ICES ecosystem descriptions do not sub-divide the North Sea into EU and Norwegian sectors therefore the Ecosystem descriptions are pan-North Sea. The score has been reduced from 90 to 80.</p>
2.5.3	No	No	NA	<p>The justification at Sla does little more than present URLs. It does not, for instance, indicate what the key elements are, nor how</p>	<p>Sla: The links provided take the reader to the ICES Greater North Sea Ecosystem Overview. In addition these</p>

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				<p>well understood they may be; this is not adequate to meet the SG60 requirements let along SG80.</p> <p>Again, at SIb, what are the main impacts of the fishery on the key ecosystem elements? The quotation provided in the text states that:</p> <p>"However, many of the current ecosystem models are very sensitive to the assumptions about herring, or do not include herring as a predator and prey species, thus it is difficult to test the impact of increasing or reducing the herring biomass on the ecosystem functioning as a whole".</p> <p>This quotation does not seem to support an SG80 score – it points to considerable uncertainty in understanding the role of herring in the ecosystem and would speak against an SG80 score.</p> <p>For SId, a score of 100 would be warranted if sufficient information has been presented for PIs 2.1.1, 2.2.1, 2.3.1 &amp; 2.4.1 to indicate that the impacts of the fishery can be inferred. In the absence of any quantitative information</p>	<p>are provided as references in the reference list. This provides a clear audit trail to evidence which shows that the key elements of the ecosystem are understood, meeting SG80.</p> <p>SIb: The quotation was included to highlight the limitations in current ecosystem modelling and explain why SG100 is not met. However, the quotation has been removed and further references have been added.</p> <p>SId: Earlier comments in relation to PIs 2.1.1, 2.2.1, 2.3.1 &amp; 2.4.1 have been addressed therefore the score remains unchanged.</p> <p>Sle: Catch sampling data relates to the scientific sampling of catches to inform stock assessment work – it has no connection with observer programmes. A reference has now been added to the annual stock annex which describes this sampling in detail and a quote from the stock assessment advice is also added.</p>

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				<p>in the scoring rationales for this PIs, it is not possible to be sure that the SG80 requirements are met here.</p> <p>For Sle, again no data are presented in the report to substantiate the claims that there are "robust and reliable landings data" and "robust and reliable catch sampling data" (the latter being hard to understand given the lack of any observer coverage in this fishery for the past 10 years).</p> <p>Overall, it is not possible to justify a score of 80 for this PI on the basis of the information presented in the report.</p>	
3.1.1	No	No	NA	<p>As noted in the comments under P2 above, a substantial catch (over 1,000t) of herring per year is taken in Norwegian waters. There is no mention here of the Norwegian legal system, which is very relevant to this UoA, and which should be addressed in each SI.</p> <p>For SId, whilst it is clear that there is a mechanism in place that commits to the legal rights of people dependent on fishing, it is</p>	The fisheries are primarily governed by EU (and EU member state) legislative frameworks. The division of TAC and access to Norwegian waters result from the EU-Norway Agreement, which is described here. Nonetheless, further reference to Norwegian fisheries legislation is added. And reference to the binding legislation between EU and Norway. Reference

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				not explained how this is consistent with MSC Principles 1 & 2.  To justify a score of 80 or more here, this missing information should be provided.	made to the objectives of the Norwegian legislation also in SId.
3.1.2	No	No	NA	<p>There is a good account of the role and responsibilities of Swedish institutions and ICES.</p> <p>At SIb there is reference to the "Pelagic RAC". There hasn't been an "RAC" since the revised CFP was introduced in 2013.</p> <p>To justify a score of 80 for SIb, it would be helpful to state how regularly the various institutions "<i>seek and accept relevant information</i>".</p> <p>At SIc there is reference to the consultation that was carried out by the EU during the review of the CFP nearly 10 years ago. No other mechanisms for interested parties to be involved in consultation processes are mentioned. This evidence does not seem adequate to meet the SG80 requirements, let alone SG100. If the justification made</p>	SIb: References to Regional Advisory Council updated to "Advisory Council". SIc: Reference to EC Better Regulation Guidelines added and further reference to the work and consultation opportunities of the Pelagic AC. Plus further consultation example added – for the annual EC Fishing Opportunities.



Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				<p>appropriate reference to the work of ACFA, STECF and the Pelagic AC, as well as consultations in Norway, then a score of 80 or even 100 would be justified.</p> <p>There is no mention of the organisations involved in the management of the fishery in Norwegian waters, where more than 1,000t of herring are taken by the UoA each year.</p> <p>To justify a score of 80 or more, some information on the Norwegian management system should be provided.</p>	
3.1.3	No	No	NA	<p>The scoring would be justified if the fishery was conducted only in EU waters; however it is not. There should be an account here of the long-term objectives that guide decision making in Norway as well as those for the EU.</p> <p>On a matter of details, the justification quotes (in part) several of the recitals in the preamble of CFP Regulation 1380/2013, and does not quote the actual objectives of this Regulation, which are set out in Article 2. The justification does not, therefore, provide</p>	Reference to the objective in the Marine Living Resources Act 2009 has been added. Also, the objectives under article 2 of the CFP are listed and earlier ones are referred to as pre-ambles.

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				evidence that explicit long term objectives that are consistent with MSC Principles and Criteria are in place.  The reference to the EU treaty to demonstrate that these objectives are "required by" management policy is excellent.	
3.1.4	No	No	NA	The scoring is justified for the EU sector of the UoA. No evidence is presented to demonstrate that the PI requirements are met for the Norwegian sector.  With appropriate justification for the Norwegian sector, the SG80 requirements are likely to be met.	Reference now added to Norwegian incentives. Although the equivalent Norwegian fishery scored this at 100, the limitation is explicit consideration of incentives in an EU context mean that those score remains at 80.
3.2.1	Yes	Yes	NA	The scoring seems a little harsh – it would seem that SG100 is perhaps partially met since there is clearly a management plan in place with measurable short and long term objectives for the fishery; hence SG100 is met for P1 at least. A score of 80 is fine, and 90 would be justified.	Score increased to 90 as suggested and justification tweaked accordingly.

<b>Performance Indicator</b>	<b>Has all available relevant information been used to score this Indicator? (Yes/No)</b>	<b>Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)</b>	<b>Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)</b>	<b>Justification</b> Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	<b>CAB Response</b>
3.2.2	No	No	NA	Whilst the key elements of the fishery-specific management system are the EU-Norway agreement and the CFP, there should also be some consideration of the Norwegian management system.	The EU-Norway forum is the primary decision-making forum for the fishery specific management therefore it is appropriate that it is described here. This is in-line with the description (and score) of the relevant harmonised fisheries.
3.2.3	No	No	NA	As previously, the scoring comments would be appropriate in an EU-only fishery; however it is not. There is insufficient reference to the monitoring, control and surveillance mechanisms in place in Norway to justify the score awarded.	More reference to Norway added. This does not describe the full Norwegian enforcement system, but rather the Norwegian enforcement that Swedish vessels would be subject to. However – the key issue here is the degree of coordination between the jurisdictions which is rightly highlighted in the justification.
3.2.4	Yes	Yes	NA	The scoring is appropriate.	
3.2.5	No	No	NA	The only evidence of review of the management system is for the EU sector. No information is presented for the Norwegian sector.  With the addition of appropriate information	

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary.  Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
				for the Norwegian sector, a score of 80 would seem appropriate.	

**Optional: General Comments on the Peer Review Draft Report (including comments on the adequacy of the background information if necessary) can be added below and on additional pages**

The use of the reduced re-assessment report template has resulted in a refreshingly brief report; however it is one that lacks key information and presents very little evidence to support its conclusions.

The MSC indicate in their "Reduced Re-Assessment Report Template" that for Outcome PIs, the report should include

2. For all outcome indicators (PIs 1.1.1, 2.1.1, 2.2.1, 2.3.1, 2.4.1 and 2.5.1) where quantitative information has been used in scoring, the report shall include:
  - a. A referenced URL where stakeholders can view this information, or
  - b. The quantitative information used.

For all of the Principle 2 PIs, the report does not meet this requirement. It is not possible for the casual or even the informed reader to determine whether the scores awarded are supported by adequate evidence.

**CAB response:** *these are addressed in turn at the relevant PI.*

A recurring comment on the scoring of the fishery is that the report gives little or no consideration to the management regime in Norwegian waters. This is particularly relevant in the case of this fishery, since over 1,000t of herring are caught by UoA vessels in Norwegian waters annually.

**CAB response:** *We have sought to address the Peer Reviewers concern about the need for greater Norwegian reference. That said, we are not convinced that this is a correct interpretation. The UoA is for Swedish (i.e. EU) vessels. Therefore, the management regime which applies is the Swedish and EU regime. The fact that some catch can be taken in Norwegian waters does not change this fundamental fact. The key criteria is how are other nations included within management and how is agreement reached to allow access – i.e. what are the detailed arrangements contained in the EU-Norway agreement. This is, correctly in our view, the primary focus of the assessment. Already science and scientific advice is coordinated at an international level which includes Norway. Likewise, things like ecosystem information and descriptions are for the whole of the North Sea, not just the EU part of it. For control and enforcement what is relevant is the degree of coordination and resulting effectiveness. Simply providing further description of the Norwegian management system does not add value to the report and likely makes it less readable. For context, the harmonised North Sea herring fisheries which are from EU nations generally do not refer Norwegian management, even though they may all take herring in Norwegian waters, and the Norwegian harmonised fishery does not refer to EU management even though they may catch herring in EU waters. In general, the Norwegian herring assessment scores higher (than the EU), so referring extensively to Norwegian elements would not lead to any reduction in scores.*

**Some elaboration is needed of the basis for assessing two UoAs simultaneously and without distinction against all of the Performance Indicators. The basis for this in Principle 1 is self-evident; but a clear rationale is required to justify the identical scoring of purse seines and pelagic trawls in both Principle 2 & Principle 3.**

A further concern is that there is no mention or consideration of harmonisation with other fisheries in the report. This may be a consequence of the MSC's "Reduced Re-Assessment" reporting template. Whilst appreciating that the team is bound by the instruction that the use of the template is mandatory and that only cosmetic alterations can be made to it, the omission of any mention of harmonisation seems to be an oversight. It would be very helpful and reassuring to the reader (as well as the peer reviewer) to know that the findings in this re-assessment are harmonised with those of overlapping fisheries.

**CAB Response:** *This was not in the Reduced Re-assessment Template. I hesitate to recommend adding sections to a report which is supposed to be short, but perhaps this is an omission. On this occasion we have added a Section 2.5 to address harmonisation. All scores and conditions (or lack of) are appropriately harmonised.*

*Elaboration of the rationale for scoring P2 together has been added to the introduction for P2 scoring and the scoring summary section (5.2). Principle 3 has not been parsed into separate UoA scoring as the management regime is identical for both UoAs.*

## Appendix 3. Stakeholder submissions

### Appendix 3.1 During site visit

Informal minutes are retained by the CAB of all meetings – primarily to enable an audit trail of discussions. These are available to meeting attendees on request. However, in the interests of brevity and clarity these are not included in full in the certification report. Instead a brief summary of the focus of discussion and where this has been addressed in the surveillance report is detailed below. No strong concerns were raised by any stakeholder and no stakeholder expressed any reservation or objection to the on-going certification of the SPFPO Swedish herring fishery:

Meeting	Topic Discussed / concerns raised	Where addressed
Mr Bengt Gunnarson	Fishery description in the last 12 months. Catch record. Vessel list. Summary of infringements and non-compliances. Progress against conditions and recommendations.	Appendix 1 – Scoring Justifications.
Michael Axelsson and Lars Axelsson – co-skipper of ‘Sunnanland’	Areas of operation and operational characteristics. Bycatch and ETP interactions. Monitoring, control and surveillance activities, Representation and Roles & Responsibilities. Traceability / mixing of certified and non-certified product.	Appendix 1 – Scoring Justifications.

## Appendix 3.2 MSC Technical Oversight

SubID	PageReference	Grade	RequirementVersion	OversightDescription	Pi	CABComment
28835	18	Guidance	FCR-7.12.1.4 v2.0	Table 4 identifies traceability risk factors. In this section, any other risks of substitution between fish from the UoC (certified catch) and fish from outside this unit (non-certified catch) before subsequent Chain of Custody is required. The CAB has recorded that “No further risks identified”. It would be useful to include assessment of any risk factors relating to the risk of substitution between first point of landing and CoC starting and how traceability information is passed on at this point.		Table 4 has been amended to include identification of any other risk factors.
28836	11	Guidance	FCR-7.12.1.5c v2.0	Section 2.2.5: The fishery client group is SPFPO, but it is not clear how the supply chain can verify if product comes from an other eligible fisher (not SPFPO).		There are no other non-SPFPO Swedish vessels who have rights to fish in the areas included in the UoC. Text in section 4.3.2 has been amended to provide clarification.



## Appendix 4. Surveillance Frequency

The MSC Certification Requirements specify that after each certification, surveillance and recertification the Certified Accreditation Body (CAB) shall determine the level at which subsequent surveillance of the fishery shall be undertaken. The assessment team considers that it would be appropriate to assign a “**Level 1**” surveillance score to this fishery under the CR v2.0 requirements. This is the minimum surveillance level. There are a number of reasons why the team have concluded that this minimum level of surveillance will be sufficient in this fishery:

- This is the 3<sup>rd</sup> successful full MSC assessment of this fishery and the fishery has been MSC certified (without interruption) since 2008.
- Conditions raised at the time of the 1<sup>st</sup> and 2<sup>nd</sup> assessment have been fully addressed and ‘closed’.
- This 3<sup>rd</sup> full assessment of the fishery has resulted in high scores (minimum Principle Level score of 88.9; average 90.4) with no conditions.
- This fishery is harmonised with many other North Sea pelagic fisheries for herring, all operating using similar gear types, under the same or similar management regime. None of these fisheries have conditions in place.
- The assessors for this fishery – and a wider pool of experienced MSC assessors who have worked across the harmonised North Sea herring fisheries) - have very good familiarity with the operations of the Swedish pelagic fleet and the institutions of governance within Sweden.
- The increasing audit-trail evidential requirements of a MSC assessment means that there is now greater reliance on published data and on-line information, all of which can be accessed remotely.
- Much of the vital data about the fishery comes from annually updated reports, which are available on-line.
- By contrast there is comparatively less new information about the fishery that would be expected to be obtained on repeated site visits.

The surveillance programme that complies with this surveillance score is set out below.

**Table 4.1: Surveillance level rationale**

Yr	Surveillance activity	Number of auditors	Rationale
1	Review of Information	1 auditor	The review of Information in Year 1 and Year 3 can be carried out by 1 assessor. This would be expected to review the latest HAWG stock annex, plus latest relevant ICES working Group Reports, plus review the status of the other North Sea herring fisheries. This can reliably be done by a single assessor.
2	Off-site Surveillance audit	1 auditor plus 1 available for expert input as required	
3	Review of Information	1 auditor	For the Off-site surveillance on Year 2 it would be beneficial to be able to draw on expertise across all 3 Principles, as required. This may necessitate having 2 assessors.
4	On-site surveillance audit & re-certification site visit	2 auditors	For the 4 <sup>th</sup> surveillance, which will coincide with the recertification, 2 assessors should attend the site visit.

It should be noted that this does not prevent an expedited on-site surveillance audit being called by CAB in event of unforeseen circumstances.

It is proposed that surveillance audit should be maintained on the usual annual timing synchronised with the anniversary of the certificate issue date. No clear reason to deviate from this is foreseen, other than potentially to harmonise with the timings of other North Sea Pelagic fisheries.

## Appendix 5. Objections Process

(REQUIRED FOR THE PCR IN ASSESSMENTS WHERE AN OBJECTION WAS RAISED  
AND ACCEPTED BY AN INDEPENDENT ADJUDICATOR)

The report shall include all written decisions arising from an objection.

*(Reference: FCR 7.19.1)*