

## **Marine Stewardship Council (MSC) Final Report**

**The SPSG, DPPO, PFA, KFO & Compagnie des Pêches St Malo Northeast Atlantic Blue Whiting pelagic trawl fishery**

**Prepared by ME Certification Ltd**

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**Authors: Sophie des Clers  
Mike Pawson  
Chrissie Sieben**



ME Certification Ltd  
56 High Street, Lymington  
Hampshire, SO41 9AH  
United Kingdom  
Tel: 01590 613007  
Fax: 01590 671573  
E-mail: [info@me-cert.com](mailto:info@me-cert.com)  
Website: [www.me-cert.com](http://www.me-cert.com)

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## Glossary

Term / acronym	Definition
ACOM	ICES Advisory Committee
BIM	Bord Iascaigh Mhara - Irish Sea Fisheries Board
BLE	German Fisheries National Authority
$B_{MSY}$	equilibrium total biomass at MSY
CAB	Conformity Assessment Body
CCTV	Closed Circuit Television
CDPSM	Compagnie des Pêches de Saint Malo
CFP	Common Fisheries Policy
CoC	Chain of Custody
CPUE	Catch per Unit Effort
CR	MSC Certification Requirements
DCF	Data Collection Framework
DPPO	Danish Pelagic Producers Organisation
EAPO	European Association of Fish Producers Organisations
EEZ	Exclusive Economic Zone
EFCA	European Fisheries Control Agency
EM	Electronic Monitoring
ETP	Endangered Threatened or Protected species
EU	European Union
ExCom	Executive Committee
F	Fishing mortality
$F_{MSY}$	Fishing mortality at age resulting in MSY
HCR	Harvest Control Rule
IBWSS	International Blue Whiting Spawning Stock Survey
ICES	International Council for the Exploration of the Sea
IESNS	International Ecosystem Survey in the Nordic Seas
ITQ	Individual Transferable Quota
IUU	Illegal, unreported and regulated fishing
JDP	Joint Deployment Plan (EFCA MCS)

KFO	Killybegs Fishermen's Organisation Ltd
MCS	Monitoring, Control and Surveillance
MEC	ME Certifications Ltd.
MMO	Marine Management Organisation (England)
MSC	Marine Stewardship Council
MSY	Maximum Sustainable Yield
MSFD	Marine Strategy Framework Directive
NEAFC	North East Atlantic Fisheries Commission
NVWA	Food and Consumer Products Safety Authority (Netherlands)
PELAC	Pelagic Advisory Council
PFA	Pelagic Freezer-Trawler Association
PO	Producer Organisation
RA	Regulatory Area (NEAFC)
RSW	Refrigerated Sea Water
SPFA	Scottish Pelagic Fishermen's Association
SPSG	Scottish Pelagic Sustainability Group
SSB	Spawning stock biomass
STECF	Scientific, Technical and Economic Committee For Fisheries
TAC	Total Allowable Catch
UoC	Unit of Certification
UNCLOS	United Nations Law of the Sea
VMS	Vessel Monitoring System
vTI	(Johann Heinrich) von Thünen-Institut
WG	Working Group
WGBYC	ICES WG on Bycatch of Protected Species
WGINOR	ICES WG on the Integrated Assessments of the Norwegian Sea
WGWIDE	ICES WG on Widely Distributed Stocks
WKPELA	ICES Workshop on Pelagic Stocks
WKREF	ICES Workshop on Limit and Target Reference Points
WGNPBW	ICES Northern Pelagic and Blue Whiting WG
WGIPS	ICES WG on International Pelagic Surveys
WW	Western Waters

## 1. Executive Summary

This is the Final Report (FR) for the SPSG, DPPO, PFA, KFO and Compagnie des St Malo Northeast Atlantic blue whiting fisheries using pelagic trawl. The assessment team consisted of Dr Sophie des Clers (Team Leader, Principle 3), Dr Mike Pawson (Principle 1) and Chrissie Sieben (Principle 2). Two site visits took place for the assessment; one in Copenhagen, Denmark on the 25<sup>th</sup> to 26<sup>th</sup> November 2014 and the other in St. Malo, France on the 13<sup>th</sup> February 2015. There are five Units of Certification (UoC) in this fishery and a list of vessels in the fishery has been provided in the report. Stakeholders were contacted at the following stages:

- i. Fishery announcement – 12 August 2014
- ii. Assessment team and timeline - 12 August 2014
- iii. Assessment team confirmation – 4 September 2014
- iv. Use of Default Assessment Tree – 2 October 2014
- v. Site visit notification – 21 October 2014 and 13 January 2015
- vi. Proposed peer reviewers – 7<sup>th</sup> July 2015

Blue whiting (*Micromesistius poutassou*) is a small pelagic gadoid species that is widely distributed in the North-eastern Atlantic. High concentrations are found at spawning time along the edge of the continental shelf to the west of the British Isles, Rockall Bank and Faroe Plateau at depths between 300 and 600 m. It is a shared and widely distributed stock straddling the EEZ of several countries and international waters beyond 200 nm. The fishery was developed by the Soviet Union in the 1960s and by Norway in the early 1970s followed by the Faroe Islands and countries from the EU, and eventually Iceland in the 1990s (Ekerhovd, 2008). Historically, the blue whiting fishery was an important source of fishmeal, but a larger part is now sold for human consumption.

For European vessels, the fishery mostly takes place early in the year in European waters to the west and northwest of the British Isles and Ireland and in international waters, and possibly later in the year through negotiated access to Faroes and Norwegian waters and on the High Seas in the North East Atlantic Fisheries Commission (NEAFC) Regulated Area (RA) outside national jurisdictions.

The results of the 2014 ICES stock assessment show that recruitment has decreased substantially from a high phase between 1997 and 2004 and historic low levels from 2006 to 2009, leading to a substantial decrease in SSB from 2010. However, subsequent higher recruitment (confirmed by recruitment indices from surveys not used in the assessment) has allowed SSB to recover from around 3 Mt in 2010 to 5.5 Mt in 2013, well above biomass reference points ( $B_{pa}$  and  $MSYB_{trigger} = 2.25$  Mt). Fishing mortality (F) has shown a decreasing trend since 2004, falling to a historical low in 2011 at 0.04 and increasing to 0.16 in 2013.

Since the site visit and a draft report was presented to the clients and peer reviewers, ICES has published the results of its 2015 stock assessment (Sept. 2015). Briefly, this indicates that SSB remains above  $B_{pa}$  and that F continues to increase and may now be above  $F_{MSY}$  (estimated to be 0.30). There is currently no management plan for the blue whiting stock.

Under Principle 2, no 'main' retained or discarded species, or significant interactions with ETP species, were identified. This is one of the fishery's strengths, in that it is very selective for the

target species it takes: blue whiting makes up at least 99% of the average total catch composition of the client fleets.

For Principle 3, under governance and policy, the team evaluated the coastal states agreement in detail, including the current issues around quota allocations. Under fishery-specific management, the team mainly considered the EU fisheries framework, which applies to all the vessels in the UoC, but particularly for monitoring, control and surveillance (MCS).

One weakness of the fishery is that landings data requested for the Dutch and Irish fisheries authorities (NVWA and SFPA) were not provided in time to be included in the report, though the catch patterns for the KFO RSW vessels and PFA freezer-trawlers could be inferred from the available data. Official landings data were obtained for the DPPO and SPSG fleets and CPDSM for the Joseph Roty II. The assessment team therefore recommends that annual catch data are made available in time for any subsequent MSC surveillance audits.

The overall outcome for each principle across each of the separate UoCs was as follows:

Final Principle Scores					
Principle	UoC 1	UoC 2	UoC 3	UoC 4	UoC 5
Principle 1 – Target Species	90.0	90.0	90.0	90.0	90.0
Principle 2 – Ecosystem	86.0	89.3	89.3	89.3	87.6
Principle 3 – Management System	88.3	88.3	88.3	88.3	88.3

The condition related to PI 3.1.1 – legal and customary framework - is specifically related to the effectiveness of the coastal states agreement and its dispute resolution system. This is a harmonised condition with the other similar fisheries subject to coastal states agreement. The condition has a maximum of five years for compliance. This may be achieved earlier depending on how rapidly the fishery can successfully engage with the EU, the Pelagic Advisory Council, NEAFC and/or other parties, such as other MSC fisheries, to support the resolution of the dispute between the coastal states and to re-establish an effective international cooperation mechanism.

Since each Principle scored an average above 80 and no single PIs scored below 60, the fishery is being provisionally recommended for certification.

## 2. Authorship and Peer Reviewers

The authors of this report (MEC assessment team) are:

**Dr Sophie des Clers:** Dr des Clers is an independent consultant, specialising in economic and social aspects of fisheries management. She has collaborated on several MSC assessments since 2008, including UK Fisheries Ltd cod, haddock and saithe, Euronor/Compagnie des Pêches cod and haddock, Brittany sardine seine fishing and Normandy-Jersey lobster. Sophie is an expert in fisheries public policy, management systems and legislation at international, regional and national levels, with particular focus on the EU. During this full assessment she was in charge of Principle 3 and acted as Team Leader.

**Dr Mike Pawson:** Mike Pawson retired as senior fisheries advisor at Cefas, Lowestoft, in 2007 after 38 years carrying out biological research and providing scientific advice to Defra, the EC and other national and international organisations on fish stock abundance (marine teleosts, elasmobranchs, salmonids and eels), technical conservation measures and fisheries management regulations, and on related monitoring, sampling, survey and research programmes. Between 1974 and 1980, he initiated and led acoustic surveys for Blue Whiting and mackerel, and trawl surveys in the North Sea (1975-1979), and then spent 1 year working as an UNESCO Expert in Ichthyology in Tripoli, Libya. From 1980 to 1990, Mike designed and managed MAFF's coastal fisheries programme, implementing biological sampling, trawl surveys, a fishermen's logbook scheme and socio-economic evaluation in relation to sea bass fisheries. Between 1990 and 2000 he led the Cefas Western demersal team, providing analytical assessments and management advice for 12 finfish stocks. During this time he was co-ordinator of the Anglo-French English Channel Fisheries Study Group (1989-1997) and chairman of the ICES Southern Shelf Demersal Stock Assessment Working Group (1996-98), and subsequently chaired the ICES Sea bass Study Group (2000-04) and Elasmobranch Study Group (2001-02). He has initiated and managed EU-funded multi-national projects on methods for egg-production stock biomass estimation, bio-geographical identity of English Channel fish stocks, bio-economic modelling of Channel fisheries, development of assessment methods for elasmobranchs, marine recreational fishing in Europe etc. Mike has provided scientific evaluation, quality assurance and advice to several national and EC-funded projects on fisheries biology, monitoring and assessment, and one of his major roles over the last 20 years has been peer-reviewing papers, reports and manuscripts in preparation. Mike has worked as an assessor on 12 MSC certifications, and was in charge of Principle 1 during this full assessment.

**Chrissie Sieben:** Chrissie Sieben has a Master's Degree in Marine Environmental Protection, which she obtained at the University of Wales, Bangor. She is MSC fisheries manager at MEC and specialises in marine and fisheries ecology, marine environmental impact assessment and sustainable fisheries. As a fully qualified MSC assessment team member and leader she is involved in MSC pre and full assessments and fishery surveillance audits and participates regularly in MSC CAB training sessions and workshops. During this full assessment she was in charge of Principle 2.

The peer reviewers for this report are:

**Dr Lisa Borges:** Lisa has been a fishery scientist for the last 18 years and now runs her own consultancy firm. Lisa has a BSc in Marine Biology & Fisheries from the University of the Algarve (Portugal), an MSc in Fisheries from the University of Porto (Portugal), and a PhD on discards from demersal fisheries from the National University of Ireland. She has worked for three national fisheries research institutes, which include IPIMAR (Portugal), the Marine Institute (Ireland), and IMARES (The Netherlands). Lisa has extensive knowledge and experience of assessing the environmental impact of fisheries, with a particular focus on discards and bycatch. She also has knowledge and experience of fisheries management policies, including harvest control rules, management plans and discard policy development. Lisa developed conservation policies for Atlantic fish stocks when she worked for the European Commission in Belgium. Lisa has experience in both pelagic and demersal stock assessments and is familiar with MSC assessment procedures, having participated as a principle 1 and 2 expert on four different assessments over the last year.

**Dr Jim Andrews:** Jim is a marine biologist with over 20 years' experience working in marine fisheries and environmental management. He currently works as an independent fisheries and marine environmental consultant. His previous experience includes running the North Western and North Wales Sea Fisheries Committee as its Chief Executive from 2001 to 2005, and previously working as the SFC's Marine Environment Liaison Officer. During this time he was responsible for the regulation, management and assessment of inshore finfish and shellfish stocks along a 1,500km coastline. He has an extensive practical knowledge of both fisheries and environmental management and enforcement under UK and EC legislation. Jim has formal legal training & qualifications, with a special interest in the policy, governance and management of fisheries impacts on marine ecosystems. He has worked as an assessor and lead assessor on more than 25 MSC assessments within the UK, in Europe and in India since 2007. Jim has carried out numerous MSC Chain of Custody assessments within the UK.

### 3. Description of the Fishery

#### 3.1. Unit(s) of Certification and scope of certification sought

The assessment team confirms that the fishery under assessment is within the scope of the MSC fisheries standard (as per Section 7.4 of the MSC Fisheries Certification Requirements v2.0):

- The target species is not an amphibian, reptile, bird or mammal;
- The fishery does not use poisons or explosives;
- The fishery is not conducted under a controversial unilateral exemption to an international agreement;
- The client or client group does not include an entity that has been successfully prosecuted for a forced labour violation in the last 2 years
- The fishery has in place a mechanism for resolving disputes, and disputes do not overwhelm the fishery

The ‘unit of certification’ (UoC) is the definition of the fishery under assessment, i.e. the target stock(s) combined with the fishing method/gear and practice (including vessels) exploiting that stock. The assessment has defined five UoCs in this fishery as follows:

#### UoC1 – PFA

Species	Blue Whiting ( <i>Micromesistius poutassou</i> )
Geographical range	Northeast Atlantic (ICES Subareas I–IX, XII, and XIV)
Method of capture	Pelagic trawl
Stock	ICES Subareas I–IX, XII, and XIV
Management System/s	North East Atlantic Fisheries Commission Joint agreement between EU, Norway, Iceland and the Faroes National management systems of EEZs fished and client vessel flag states.
Client group	Pelagic Freezer-Trawler Association (PFA) – The Netherlands
Other eligible fishers	None

### UoC2 – DPPO

Species	Blue Whiting ( <i>Micromesistius poutassou</i> )
Geographical range	Northeast Atlantic (ICES Subareas I–IX, XII, and XIV)
Method of capture	Pelagic trawl
Stock	ICES Subareas I–IX, XII, and XIV
Management System/s	North East Atlantic Fisheries Commission Joint agreement between EU, Norway, Iceland and the Faroes National management systems of EEZs fished and client vessel flag states.
Client group	Danish Pelagic Producers Organisation (DPPO)
Other eligible fishers	None

### UoC3 – KFO

Species	Blue Whiting ( <i>Micromesistius poutassou</i> )
Geographical range	Northeast Atlantic (ICES Subareas I–IX, XII, and XIV)
Method of capture	Pelagic trawl
Stock	ICES Subareas I–IX, XII, and XIV
Management System/s	North East Atlantic Fisheries Commission Joint agreement between EU, Norway, Iceland and the Faroes National management systems of EEZs fished and client vessel flag states.
Client group	Killybegs Fishermen’s Organisation Ltd (KFO) - Ireland
Other eligible fishers	None

#### UoC4 – SPSG

Species	Blue Whiting ( <i>Micromesistius poutassou</i> )
Geographical range	Northeast Atlantic (ICES Subareas I–IX, XII, and XIV)
Method of capture	Pelagic trawl
Stock	ICES Subareas I–IX, XII, and XIV
Management System/s	North East Atlantic Fisheries Commission Joint agreement between EU, Norway, Iceland and the Faroes National management systems of EEZs fished and client vessel flag states.
Client group	Scottish Pelagic Sustainability Group Ltd (SPSG) - UK
Other eligible fishers	None

#### UoC5 – CDPSM

Species	Blue Whiting ( <i>Micromesistius poutassou</i> )
Geographical range	Northeast Atlantic (ICES Subareas I–IX, XII, and XIV)
Method of capture	Pelagic trawl
Stock	ICES Subareas I–IX, XII, and XIV
Management System/s	North East Atlantic Fisheries Commission Joint agreement between EU, Norway, Iceland and the Faroes National management systems of EEZs fished and client vessel flag states.
Client group	Compagnie des Pêches de Saint Malo - France
Other eligible fishers	None

Note that these 5 UoCs pursue the same target stock with the same fishing gear (mid-water trawl) in the same broad fishing area, but there are some differences in fishing and management operations that justify 5 separate UoCs.

### 3.1.1. Scope of Assessment in Relation to Enhanced Fisheries

The MSC defines enhanced fisheries as: Any activity aimed at supplementing or sustaining the recruitment, or improving the survival and growth of one or more aquatic organisms, or at raising the total production or the production of selected elements of the fishery beyond a level that is sustainable by natural processes. It may involve stocking, habitat modification, elimination of unwanted species, fertilisation or combinations of any of these practices (MSC Certification Requirements v1.3).

The fishery under assessment is a wild capture fishery and does not meet the above definition. This fishery is therefore not considered enhanced.

### 3.1.2. Scope of Assessment in Relation to Introduced Species Based Fisheries (ISBF)

The MSC defines ISBF fisheries as: Any fishery which prosecutes a target fin or shellfish species that was intentionally or accidentally transported and released by human activity into an aquatic environment beyond its natural distribution range. This does not include species that are “introduced” into a location due to an expansion in their natural geographic range (MSC Certification Requirements v1.3).

The fishery under assessment does not meet the above definition. This fishery is therefore not considered ISBF.

## 3.2. Presentation of the client groups

### 3.2.1. PFA (UoC 1)

The Pelagic Freezer-Trawler Association (PFA) represents the interests of nine European pelagic freezer-trawler companies. It includes vessels registered in the Netherlands (NL), the UK, France (FR), Germany (DE) and Lithuania (LT). All of its members catch and process pelagic fish for human consumption. The PFA fleet currently comprises 19 freezer-trawler vessels, all of which are included in UoC 1 (see Table 1).

**Table 1. PFA member vessels as of January 2015 (UoC 1).**

Vessel Name	Vessel Registration (PLN)	Catch holding method	Flag
Afrika	SCH 24	Freezer	NL
Zeeland	SCH 123	Freezer	NL
Alida	SCH 6	Freezer	NL
Franziska	SCH 54	Freezer	NL
W. van der Zwan	SCH 302	Freezer	NL
Carolien	SCH 81	Freezer	NL

Frank Bonefaas	SCH 72	Freezer	NL
Jan Maria	BX791	Freezer	DE
Maartje Theadora	ROS171	Freezer	DE
Helen Mary	ROS785	Freezer	DE
Annie Hillina	KW170	Freezer	DE
Annelies Ilena	KW174	Freezer	DE
Cornelis Vrolijk Fzn	H 171	Freezer	UK
Wiron 5	PH 110	Freezer	UK
Wiron 6	PH 220	Freezer	UK
Atlantic Lady	H 180	Freezer	UK
Sandettie	FC 716999	Freezer	FR
Prins Bernhard	FC-716900	Freezer	FR
Margiris	KL749	Freezer	LT

Freezer vessels (UoC 1) use relatively small nets and do shorter hauls than vessels using Refrigerated Sea Water (RSW) (UoCs 2,3,&4) in order to match their daily processing and freezing capacity. The catch is graded, frozen whole, packed and labelled on board. Weight by species is entered into the e-logbooks submitted daily. The PFA fleet lands exclusively in the Netherlands, where cartons of frozen fish are subject to EU traceability requirements and sampled by the Dutch authorities, and crosschecked with e-logbook data and quota uptake.

### 3.2.2. DPPO (UoC 2)

The Danish Pelagic Producers Organisation (DPPO) was established in 1984 as an organisation for purse-seiners. In 2001 it was opened for membership to trawlers (Lockwood et al, 2009). At present, the organisation has 12 vessels, of which 4 are trawlers and 8 combined trawlers and purse-seiners, but only trawls are used for blue whiting. All vessels are use on-board holding RSW tanks to store the catch before onshore processing and fishing trips are kept short to maintain quality (1-3 days depending on distance between ports and fishing grounds as blue whiting is not caught in Danish waters). The 12 DPPO member vessels in UoC 2 are shown in Table 2.

**Table 2. DPPO member vessels in UoC 2 as of January 2015**

Vessel Name	Vessel Registration (PLN)	Home Port	Overall length (metre)	Catch holding method
Cattleya	E 349	Esbjerg	69.6m	RSW
Rockall	E 532	Esbjerg	75.4m	RSW
Beinur	HG 62	Hirtshals	57.6m	RSW
Ruth	HG 264	Hirtshals	60.8m	RSW
Asbjorn	HG 265	Hirtshals	75.4m	RSW
Isafold	HG 333	Hirtshals	76.3m	RSW
Themis	S 144	Skagen	42.6m	RSW
Gitte Henning	S 349	Skagen	86.0m	RSW
Ceton	S205	Skagen	55.9m	RSW
Astrid	S264	Skagen	63.6m	RSW
Lingbank	HM379	Hanstholm	37.7m	RSW
Ariadne	L303	Thyborøn	53.0m	RSW

### 3.2.3. KFO (UoC 3)

The Killybegs Fishermen's Organisation Ltd (KFO) is the largest fishermen's representative body in Ireland and is a recognised Fish Producer Organisation (PO). The vessels in the UoC are all trawlers using RSW, and some may fish in pairs. Seventeen of the 23 pelagic vessels in Ireland are members of KFO, all of which are in UoC 3 as shown in

Table 3. If the annual quota is too low to support all RSW vessels viably (800 to 1100 t for each vessel), a rotating system is used to ensure that some boats have adequate quota. Fifteen Irish vessels participated in the fishery in 2013 to the west and northwest of Ireland, mainly in the first quarter, and reported landings of 12,428 t. Killybegs has a processing capacity of 70-90 t per day with 10-15% as meal. Irish vessels may also land in Shetland, Esbjerg (DK), Peterhead (Scotland) or Norwegian ports.

**Table 3. KFO member vessels as of January 2015 (UoC 3).**

Vessel Name	Vessel Registration (PLN)	Home Port	Overall length (metre)	Catch holding method
Aine	SO734	Killybegs	48.6	RSW
Antarctic	D97	Killybegs	50.7	RSW
Atlantic Challenge	D642	Killybegs	59	RSW
Brendelen	SO709	Killybegs	64.6	RSW
Carmarose	SO555	Killybegs	27	RSW
Colmcille	G186	Killybegs	27.05	RSW
Father Mc Kee	SO708	Killybegs	64.6	RSW
Felucca	SO108	Killybegs	58	RSW
Girl Stephanie	G190	Killybegs	45	RSW
Neptune	SO715	Killybegs	48.6	RSW
Olgarry	SO591	Killybegs	40.4	RSW
Pacelli	D383	Killybegs	40.4	RSW
Paula	D165	Killybegs	62.6	RSW
Sheanne	SO716	Killybegs	61.6	RSW
Vigilant	SO109	Killybegs	53.06	RSW
Western Endeavour	D653	Killybegs	71	RSW
Westward Isle	G185	Killybegs	41.1	RSW

The Irish pelagic fleet has the same constraint of short trips as the other RSW vessels operating in the blue whiting fishery. Fish landing at Killybegs are pumped from the vessels into lorries and transported to the factory. When landing into other countries closer to some

fishing grounds, such as Scotland, the fish are pumped through certified scales directly into the processing plant.

### 3.2.4. SPSG (UoC 4)

The Scottish Pelagic Sustainability Group Ltd (SPSG) comprises Scottish pelagic fishing, processing and trading interests, established in 2007. Membership includes all Scottish pelagic vessels, the main pelagic POs, and all the main pelagic processors and traders. All 24 vessels in UoC 4 are large mid-water RSW trawlers (Table 4). Vessels are based in Peterhead, Fraserburgh, the Shetlands (where they usually land), and Kilkeel in Northern Ireland.

**Table 4. SPSG Ltd member vessels as of January 2015 (all in UoC 4).**

Vessel Name	Vessel Registration (PLN)	Home Port	Overall length (metre)	Catch method	holding
Adenia	LK193	Whalsay & Skerries	61.9	RSW	
Altaire	LK429	Northmavine	76.4	RSW	
Antares	LK419	Whalsay & Skerries	72.8	RSW	
Antartic II	LK145	Whalsay & Skerries	61.9	RSW	
Challenge	FR226	Fraserburgh	65	RSW	
Charisma	LK362	Whalsay & Skerries	70.7	RSW	
Chris Andra	FR228	Fraserburgh	71.2	RSW	
Christina S	FR224	Fraserburgh	72	RSW	
Forever Grateful	FR249	Fraserburgh	64	RSW	
Havillah	N200	Kilkeel	49	RSW	
Kings Cross	FR380	Fraserburgh	70	RSW	
Lunar Bow	PD265	Peterhead	69.3	RSW	
Ocean Quest	BF77	Fraserburgh	61.5	RSW	
Ocean Venture	FR77	Fraserburgh	61.5	RSW	
Pathway	PD165	Peterhead	66.6	RSW	
Quantus	PD379	Peterhead	65.5	RSW	

Research W	LK62	Whalsay & Skerries	70.7	RSW
Resolute	BF50	Fraserburgh	64	RSW
Serene	LK297	Whalsay & Skerries	71.7	RSW
Stefanie-M	N265	Kilkeel	49.2	RSW
Sunbeam	FR487	Fraserburgh	56.2	RSW
Taits	FR227	Fraserburgh	70.6	RSW
Unity	FR165	Fraserburgh	44.9	RSW
Zephyr	LK394	Whalsay & Skerries	72.8	RSW

### 3.2.5. CDPSM (UoC 5)

The French *Companie des Pêches de Saint Malo* (CDPSM) has the only European surimi paste factory freezer trawler in the blue whiting fishery. The *Joseph Roty II* is the only vessel in UoC 5 (Table 5) and fishes only for blue whiting from December to April to the west of England Ireland and Scotland, possibly in May in the Faroe EEZ, and in October in the Bay of Biscay.

**Table 5. CDPSM vessel as of January 2015 (UoC 5)**

Vessel Name	Vessel Registration (PLN)	Home Port	Overall length (metre)	Catch holding method
Joseph Roty II	SM 199 078	Saint Malo	90.55	Surimi paste pelagic freezer Trawler

## 3.3. Overview of the fishery

### 3.3.1. Target stock definition

Blue whiting (*Micromesistius poutassou*) is a small pelagic gadoid that is widely distributed in the North-eastern Atlantic. The highest concentrations are found at spawning time along the edge of the continental shelf to the west of the British Isles and on the Rockall Bank and Faroes Plateau, where it occurs at depths between 300 and 600 m between March and April. It is also present as juveniles or feeding adults in almost all areas between the Barents Sea and the Strait of Gibraltar, and the Norwegian Sea is believed to be an important nursery area in times of high abundance (Figure 1). Blue whiting mature at 2-7 years old and undertake long annual migrations between the feeding areas and the spawning grounds (Bailey, 1982).

Morphological, physiological and genetic research has suggested that there may be several components of the North-east Atlantic blue whiting stock, which mix in the spawning area west

of the British Isles. Prior to 1993, for the purposes of stock assessment, it was assumed that blue whiting had two components: a Northern stock that fed in the Norwegian Sea and spawned to the west of the British Isles; and a Southern stock that was found along the continental shelf off the coast of Spain and Portugal and spawned to the north around the Porcupine Bank (ICES, 1990). In 1993 it was argued that there was no strong evidence to maintain this division between the two stocks, and it was agreed by ICES that the two stocks should be combined for assessment purposes (ICES, 1995).

Subsequently, several approaches have been employed to investigate the stock structure of blue whiting. A genetic study by Mork and Giaever (1995) revealed significant geographic heterogeneity in reproductive units found at the fringes of the distribution range, and potentially genetically distinct populations were found in the Barents Sea and in the Mediterranean (Ryan *et al* 2005). However, samples taken from the area west of the British Isles and from the Norwegian Sea were genetically similar, suggesting a single blue whiting stock throughout this area (Giaever and Stein, 1998).



**Figure 1. North East Atlantic Fishing Area 27 (from Ekerhovd, 2008)**

A study by Was *et al.* (2008) combined spatial and genetic information and found that samples collected from along the south flowing current from the Porcupine Bank through the Celtic Sea and Bay of Biscay were genetically different from those in the northward flowing current, which tends to support the two stock hypothesis. Similarly, oceanographic modelling has been used to examine the likely movements of blue whiting eggs and larvae, and Skogen *et al.* (1999) found a possible separation between the southern stock (whose eggs and larvae are likely to

drift southwards) and the northern stock (eggs and larvae drifting northwards) at 54.5°N, though this was subject to significant inter-annual variability. Similar work by Bartsch and Coombs (1997) indicated that the separation zone could be around 53-54°N.

The ICES Stock Identification Methods Working Group (SIMWG, 2009) stated that assessing North-east Atlantic blue whiting as one stock unit is not consistent with recently observed differences in genetics and growth and supported an initial, precautionary delineation of two main blue whiting “stocks”. Subsequently, however, a full review of available studies on blue whiting stock structure in the NE Atlantic led WGPELA (ICES, 2012) to conclude that there is no scientific evidence in support of multiple stocks with distinct spawning locations or timings. Rather, there is a single stock whose large-scale spatial distribution varies as a function of hydrographic conditions and total abundance; and that there seems to be a number of core nursery and feeding areas with marginal areas being occupied at times of high stock abundance. As a result, WGPELA recommended that blue whiting in the North-east Atlantic should continue to be treated as a single stock for assessment purposes.

### 3.3.2. History of the fishery

Blue whiting is a shared and widely distributed stock straddling the EEZ of several countries and international waters beyond 200 nm. The modern blue whiting fishery developed during the second half of the 1970s when the landings increased rapidly to above 1 million tonnes (Mt), taken chiefly on the spawning grounds west of the British Isles and Ireland. Since 1988, 18 national fleets have been involved in the blue whiting fisheries, from which the highest landings have been reported by Norway, followed by Russia, Iceland and the Faroe Islands (Ekerhovd, 2008). Up to 14 national fleets have landed blue whiting over the last decade, taken mainly in the first quarter of the year in a directed pelagic trawl fishery in the spawning and post-spawning areas from the Faroes south along the edge of the continental shelf (>200m) in the EU region and international waters to the west of the British Isles, on the Rockall and Hatton Banks and around the Faroe Islands (ICES Divisions Vb, VIa, b, and VIIb, c). In the following quarters catches are generally taken further north in the Norwegian Sea and also in the North Sea with lesser quantities from southern area off Spain and Portugal.

Landings increased rapidly above 1 million tonnes in 1979, and again from 1998. Recruitment increased, but the fishery was unregulated and annual catches exceeded the ICES-advised TAC to more than 2 Mt between 2003 and 2006 (ICES, 2014a). An agreement was eventually reached in 2005, between the Coastal States (CS: EU, Faroe Islands, Iceland and Norway) that included a long term management plan to reduce fishing mortality and agree a % split between CS (Bjorndal and Ekerhovd, 2013).

Blue whiting are also taken in a directed and mixed-species trawl fishery in the North Sea and Skagerrak (Subarea IV and Division IIIa), and in a pelagic trawl fishery in Subareas I and II and in Divisions Va and XIVb. The fisheries in the northern areas have taken between 360,000–2,300,000 t per year in the last decade, while catches in the southern areas (Subarea VIII, IX, Divisions VII d, e and g–k) have been in the range of 20,000–85,000 t (Figure 2). The proportion of landings originating from the Norwegian Sea shows considerable fluctuations linked, apparently, to levels of recruitment of incoming year classes, and increased from 5% of the total in the mid-1990s to around 30% in 2003–2004, after which the proportion

decreased again to below 10%. Table 1 shows blue whiting landings from the main fisheries, 1988–2013 (from ICES, 2014a).

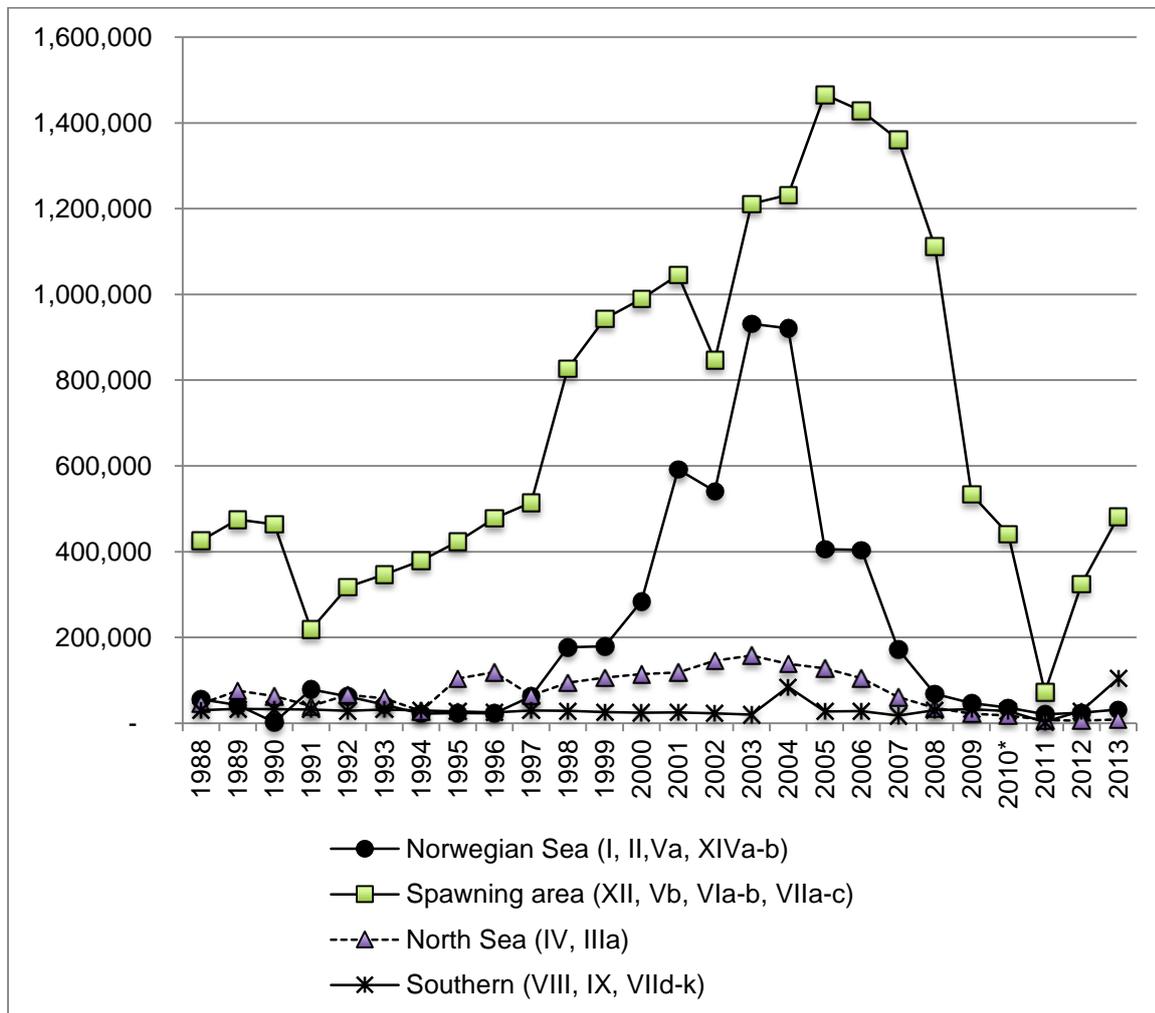
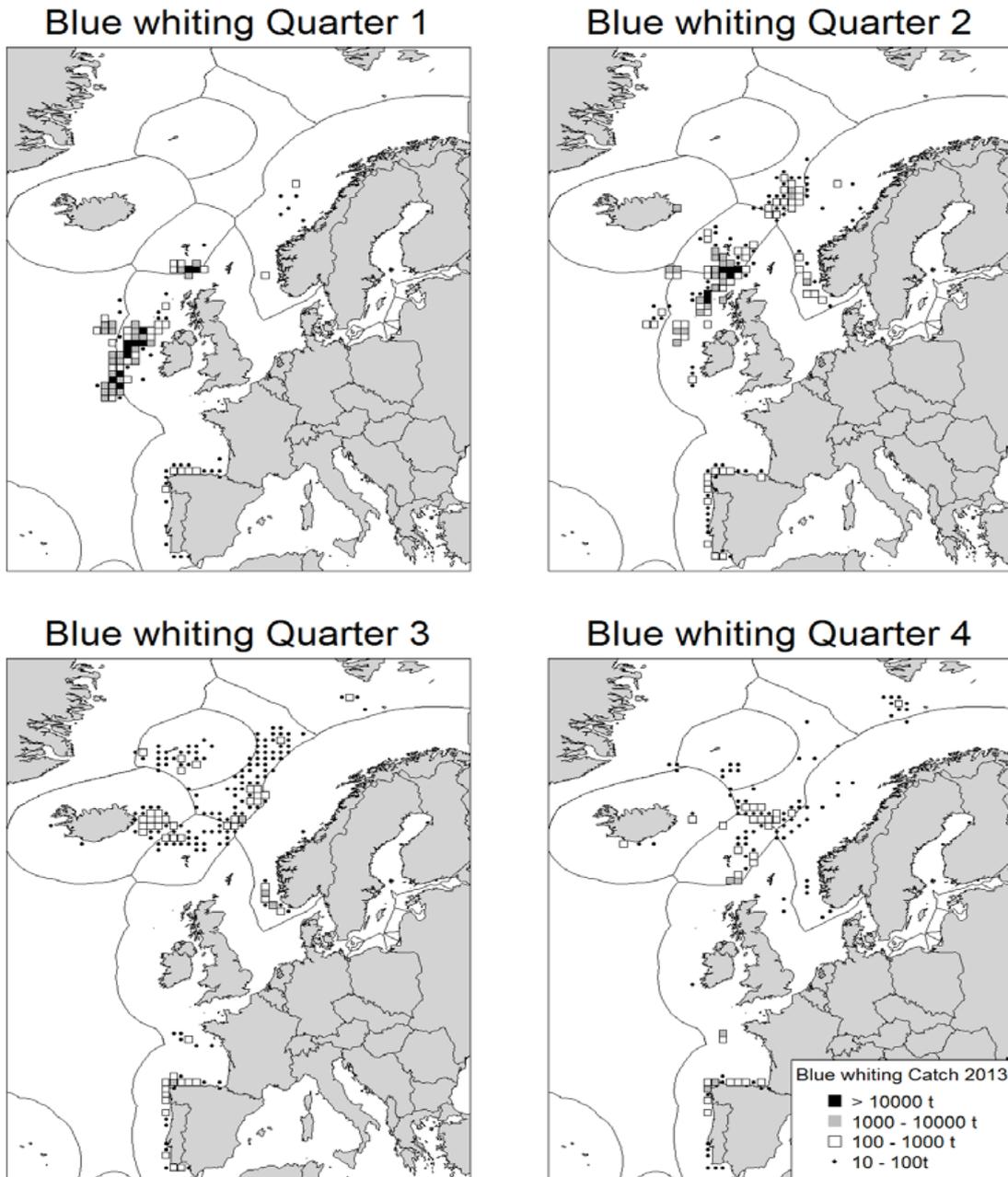


Figure 2. Historical Blue Whiting catches (tonnes, from ICES, 2014a)

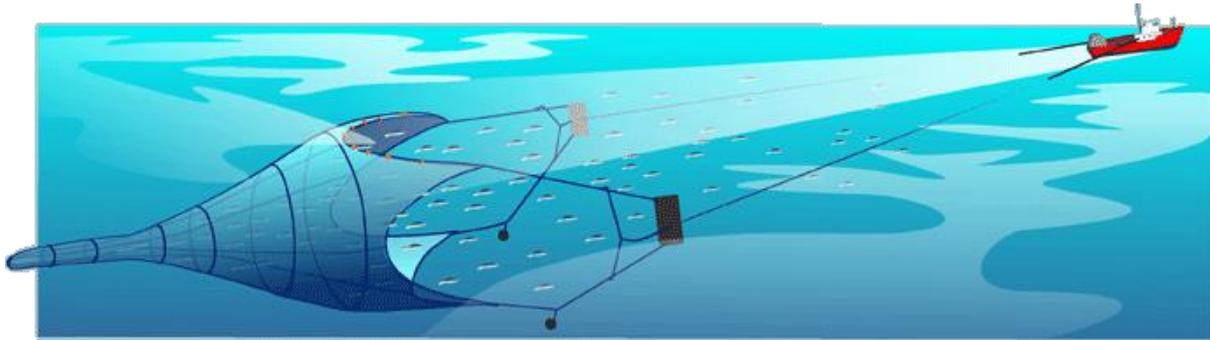
### 3.3.3. Fishing areas, fishing gear and operation of the fishery

For European vessels, the fishery mostly takes place on large pre-spawning and spawning aggregations of blue whiting when they occur in dense mono-specific shoals at depths of around 300-400 m over deep water off the continental shelf edge. These occur in the first part of the year in European waters to the West and NW of the British Isles and Ireland and in international waters. There may be some fishing later (Q3 and Q4) in the year through negotiated access to Faroes and Norwegian waters and on the High Seas in the North East Atlantic Fisheries Commission (NEAFC) Regulated Area (RA) outside national jurisdictions. Fishing areas are well known from fishermen's experience. The distributions of quarterly catches taken by the whole international fleet in 2013 are illustrated in Figure 3.



**Figure 3. Blue Whiting catches (t) in 2013 by quarter and ICES rectangle. Catches below 10 t are not shown. (Source ICES, 2014a)**

All vessels operating in the main blue whiting fishery use mid-water otter trawls that have been developed over many years and are designed to be selective for blue whiting. The cod end is made from 32-35 mm hexagonal mesh near its mouth that helps the net to spread when towing at 4 knots. Chains on the footrope and doors keep the net down in the water, and there are no floats or kites. The schematic at Figure 4 illustrates the gear design.



**Figure 4. Midwater trawl schematic (from <http://www.gma.org>)**

The fishery employs a number of measures that ensure that catches are composed almost entirely of blue whiting. It operates in a relatively short season (February to May) on spawning aggregations of blue whiting when they occur in dense mono-specific shoals or layers at depths of around 3-400 m over deep water off the continental shelf edge. The fishing grounds are well known from fishermen's experience and from scientific surveys going back to the 1970s (Bailey, 1982). There is good communication between the vessels and the location of fishing boats is known, so there is very little searching involved.

Echosounding equipment enables experienced skippers to identify blue whiting from its characteristic location, depth and signal type and, once identified, the net is deployed and fishing commences using sonar (range of 3-5 km) to show the shoal size and which way it is swimming. Due to the aggregating nature of blue whiting at spawning time, hauls are very short (typically 10-20 min) so the water is not being 'filtered' as in some other pelagic trawl fisheries and fuel consumption is minimised, a key incentive in this fishery. This also serves to minimise the incidence of non-target species in the catch. The amount of fish entering the net is monitored by tunnel sensors, and catch sensors along the bag (which may be 50 m in length) provide an indication of how much has entered the net, thus facilitating hauling at the right time for the amount of catch to suit processing capacity and to avoid net bursts due to overloading (a new trawl cost around Euro 150,000).

Apart from the very rare occasions when the catch is too big and the net breaks and the cod-end is lost, slipping (of the catch in the net before pumping on board) is highly unlikely in this fishery: there is no point in high-grading as the fishmeal market is not concerned about size and the main destiny for human consumption of blue whiting is the African market, which also has no concern over size (though most blue whiting caught in the spring fishery are within the 25 to 35 cm size range. In any case, tank slipping (discarding) is physically impossible for RSW vessels, and slipping and high-grading are illegal and the Landing Obligation (LO) (Regulation (EU No.1393/2014) will be in force from January 2015.

Blue whiting caught by KFO, PFA and SPSG is mainly destined for human consumption (frozen whole) while DPPO mainly sells it for fishmeal. Among the clients, there is an increasing drive to sell blue whiting for human consumption in African and Chinese markets.

There are three types of vessel operating in this fishery, though they all use the same type of mid-water trawl.

**Refrigerated Seawater (RSW)** vessels (UoCs 2,3&4) pump the catch directly from the net into tanks of chilled sea water from which, upon landing, the fish are pumped into the factory (or transported in refrigerated trucks to the processing facilities, which only happens at Killybegs). Here the fish are sampled by independent officials who verify the quality and composition of the catch (for the protection of buyers and sellers as well as control purposes). The catch is then sorted and graded in the factory. At this point, the weights of each species in the landings (=catch) are recorded and it is these data that contribute to the official landing statistics and quota uptake. The usual landing from one trip is 600 – 700 t.

**Freezer vessels** (UoC 1) use much smaller nets and do shorter hauls than RSW vessels in view of their limited daily freezing capacity. The catch is sorted and graded on board and the weights of each species in the catch are entered into the electronic logbooks which are in operation in the whole fishery and are submitted every 24hrs, providing updates on catch and (provisional) quota uptake to the POs and authorities. The fish are frozen whole into blocks that are put into cartons which indicate the date, species, batch date, area. This is export for human consumption and is subject to EU traceability requirements. The Netherlands-managed fleet lands cartons of frozen fish that are sampled by the Dutch authorities, the results being validated against the logbook data and counted towards official landing statistics and quota uptake. In this case, reported daily catch corresponds to freezing capacity in the factory. In view of their processing capabilities, freezer-trawlers can do longer trips than RSW vessels and can target species such as mackerel, horse mackerel and herring during the same trip, though this does not happen in the blue whiting fishery.

There is only one **surimi paste factory freezer** trawler in the blue whiting fishery, the French (CDPSM) Joseph Roty II (UoC 5). The catch of up to 12,000 t /year (wet fish) is converted into surimi (a pulp of fish protein for which blue whiting is ideal, being a low value white fish with little fat). Individual blue whiting are headed, gutted and filleted skin off using a VMK filleting machine, and the fillets are processed into surimi base that is frozen in board.

For the first 4 UoCs in the fishery under consideration (PFA, DPPO, KFO and SPSG), the blue whiting fishery is prosecuted part of the time in conjunction with the Atlanto-Scandian herring and the Western mackerel fisheries, which are in the process of being MSC-recertified for the PFA, DPPO, KFO and SPSG UoCs. Only the CDPSM French surimi paste vessel (UoC5) targets blue whiting exclusively and is entering the MSC certification process for the first time.

### 3.3.4. TAC, quotas and catches

The blue whiting TAC is determined on the basis of ICES advice and, as part of the management plan, has been agreed by the Coastal States, with 8% set aside for NEAFC contracting parties that are not coastal states (Russia and Greenland). The remainder is split between the EU, Faroe Islands, Norway and Iceland (Table 6) with 30.50% for the EU fleet.

**Table 6. NEAFC Coastal States % shares of the Blue Whiting TAC**

Coastal states	% TAC
European Union	30.50%
Faroe Islands	26.12%

Norway	25.75%
Iceland	17.63%
Total	100.00

The EU divides its allocation into Northern (90.70%) and Southern portions, and only Spain and Portugal have access to the latter TAC share (in ICES areas VIII+IX, and sub-divisions VIIId-k). Access to the Northern portion of the EU quota, including to international waters, is shared between 9 member states, according to historical track records. The EU quota share of 30% (0.5% given to Norway) corresponded in 2013 to 177,548 t, of which 9.3% or 16,516 t were set aside specifically for Spain and Portugal in southern waters and 45,000 t were reserved for Norway to catch in EU waters under a reciprocal access arrangement. There was no quota transfer from the EU to the Faroes (15,000t in 2014 and planned for 2015) who had stopped access to their waters between 2011 and 2013.

In 2013, the EU blue whiting quota, after some bilateral arrangements and swaps was 132,538t, with 116,032t for the Northern area in which the assessed fishery is taking place, shared between 9 member states (Table 7). For some member states, catches (estimated by ICES 2014a) differed substantially from the initial quota allocations as a result of swaps and an agreed flexibility of 10% from one year to the next.

**Table 7. Blue Whiting 2013 EU TAC (t), member states initial % shares, and estimated catches**

Fishing areas	UE	DK	DE	IE	ES	FR	NL	PT	SE	UK
Northern* TAC	<b>116,032</b>	15%	6%	12%	13%	11%	19%	1%	4%	20%
Southern** TAC	<b>16,516</b>				80%			20%		
Total quota	<b>132,538</b>	15,649	5,933	11,753	26,080	10,614	18,552	4,499	3,755	20,164
Northern area catches	<b>118,430</b>	2,167	11,418	13,205	15,274	8,978	51,635	2,056	199	13,498

\* ICES areas I to VII, VIIIabde, XII and XIV including international waters, from ICES (2014a)

\*\* ICES VIIIc, IX, X and CECAF 34.1.1

### 3.3.5. Other fisheries on the stock

In 2013, the agreed blue whiting TAC, including in the NEAFC Regulatory Area (RA), was 643,000 t or 591,825 t for coastal states and 51,175 t (8%) for non-coastal states (Russia 47,694t and Greenland 3,481t). NEAFC consolidates EU, non-EU and High Seas catches<sup>1</sup>. Table 8 shows coastal states in rows, and the EEZ or jurisdiction where the fish were caught in columns.

<sup>1</sup> From <http://neafc.org/catch>

**Table 8. NEAFC 2013 Catch statistics (t) by jurisdiction (from <http://neafo.org/catch>)**

Caught in > by v	Faroese	Green land	EU	Iceland	Norway	Jan Mayen	Svalbard	NEAFC	Total
Faroese	83,761							2,006	85,767
Greenland	2,001	135						370	2,506
Iceland	99,137			5,692				89	104,918
Norway			130,343	2	9,735			56,166	196,246
Russia	66,750				12	1,570	870	51,467	120,669
EU			113,196		244		52	1	113,493
Total	251,649	135	243,539	5,694	9,991	1,570	922	110,099	623,599

In 2013, the largest tonnage of blue whiting was caught in Faroese waters, by the Faroese Islands' own fleet of pelagic trawlers / purse seiners that also operate in the MSC certified Atlanto-Scandian herring fishery<sup>2</sup>, together with vessels from Iceland, Russia and Greenland. EU vessels did not have access to Faroese waters in 2013. The EU fishery took place in EU waters, with very little caught elsewhere. The third largest catch was in the NEAFC RA, mostly by Russian and Norwegian vessels. In 2013, less than 2% of the TAC was caught in the Norwegian EEZ. In 2013, the European fleet making up the UoCs caught blue whiting mostly in EU waters, with some in Norwegian and Norwegian protectorate (Svalbard) and NEAFC waters. Agreements to catch blue whiting in Faroese waters resumed from 2014.

### 3.3.6. Management, legal and administrative framework

There are four tiers of management for the blue whiting fishery:

- International arrangements between Coastal States (CS),
- North-East Atlantic Fisheries Commission (NEAFC) for international waters outside the CS's EEZs and between CS multilaterally;
- European institutions, and
- The vessels' national fisheries administrations.

The main institutions, their roles and responsibilities, are described in section 3.6 to substantiate the scoring rationales of Principle 3 PIs.

<sup>2</sup> see [https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-east-atlantic/fpo-as-herring/assessment-downloads-1/20150331\\_SR\\_HER45.pdf](https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-east-atlantic/fpo-as-herring/assessment-downloads-1/20150331_SR_HER45.pdf)

The ICES provides scientific advice to the European Commission (“the Commission”), and to NEAFC to determine the overall annual TAC using harvest control rules (HCRs) in the management plan, and which is agreed annually through political negotiations between CS and by NEAFC. For European vessels, the shared fishery is managed within the European Union Common Fisheries Policy (CFP) framework by production quota system.

The current allocation key for blue whiting between CS and non-CS (92%-8%) and between CS (Table 6) has been in place since at least 2007. NEAFC provides international cooperation for the management of the blue whiting fishery in international waters, which can be considered to have been effective since 2010 (NEAFC, 2014).

NEAFC also provides an international framework for cooperation between CS, although it is not entirely effective. For the agreed management plan to work, NEAFC is dependent on the CS agreeing shares in their waters annually, and the blue whiting negotiations of previously agreed swaps between Norway and the EU broke down in December 2014. As a result, Norway announced in January 2015 that it unilaterally increased its blue whiting quota for 2015. However, the Agreement still stands (in November 2015), and the Norwegian announcement of unilateral quota increase cannot be effected because the blue whiting is mostly to be found in EU waters. Negotiations have been on-going but the matter has not yet been resolved. This aspect is discussed in more detail below.

The problem for the blue whiting fishery is similar to the recent lack of CS agreements in previously the MSC certified North-east Atlantic mackerel and Atlanto-Scandian herring fisheries. Taking into consideration all small pelagic fisheries shared by NEAFC CS, and in addition to any issue arising under Principle 1, a harmonisation meeting was held to set a harmonised condition, which aims to ensure that the management system “is capable of delivering sustainable fisheries in accordance to Principle 1” (PI 3.1.1). Details are given in section 3.6 and Appendix 1.3.

At the European level, the member states’ national quotas are split between firms or groups of vessels that have been active in the fishery, based on historical involvement (the European principle of “relative stability”<sup>3</sup>).

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<sup>3</sup> see [http://ec.europa.eu/fisheries/cfp/fishing\\_rules/tacs/index\\_en.htm](http://ec.europa.eu/fisheries/cfp/fishing_rules/tacs/index_en.htm)

### 3.4. Principle One: Target Species Background

#### 3.4.1. Ecology of the target species

Given its wide distribution and abundance, blue whiting is considered to be a major predator (of fish eggs, larvae and pelagic invertebrates) and an important prey item (for hake, for example: ICES, 2009b), and the stock has seen considerable fluctuations in abundance since exploitation began in the 1970s. The eggs and larvae spawned on the Porcupine Bank area (west of Ireland) can drift both towards the south or the north, depending on the spawning location and oceanographic conditions, while eggs and larvae from the northern spawning area west of the Hebrides always drift northwards and support the major part of the juvenile blue whiting population in the Norwegian Sea and adjacent areas: Iceland, Faroe Islands, North Sea and Barents Sea. The larvae usually settle on the deeper areas of the shelf edges in the autumn where they stay for 2 or 3 years before gradually recruiting to the spawning stock. As a consequence, blue whiting has an important role in the pelagic ecosystem of the North-east Atlantic

Utne et al. (2012) suggest a limited vertical overlap and food competition between blue whiting and herring or mackerel in the Norwegian Sea during the summer feeding period. It is thought, however, that the presence of mackerel throughout the blue whiting spawning grounds might indicate a possible ecologic interaction between the two stocks, and that predation from the strong mackerel stock on blue whiting eggs and larvae could be a contributing factor to fluctuations in blue whiting recruitment.

Environmental conditions in the main spawning areas have undergone substantial changes during the last three decades (ICES, 2008a): an increase in sea surface temperature of 3°C in the North-east Atlantic since the early 1980s, whilst salinity in the Rockall trough reached a peak in 2003 and then declined slightly (ICES, 2008b). The same trend can be seen in the Faroes-Shetland Channel, and increases in both temperature and salinity have occurred in the Norwegian Sea since the mid-1990s.

The circulation of the North Atlantic is characterized by two large gyres: the subpolar and subtropical gyre (Rossby, 1999, cited in ICES, 2014a). The latter controls the flow trajectory of the North Atlantic Current, which extends eastwards, and carries cold, less saline, water to the Rockall Trough and over the Rockall plateau when the gyre is strong (Hatun et al., 2009). When the gyre is weak it moves west and allows subtropical water to spread north and west and this results in warmer, more saline conditions. Since blue whiting spawn in water masses with relatively narrow temperature (9°-10°C) and salinity (35.35 and 35.45 psu) ranges (Hatun et al., 2009), the variability in the strength of the gyre influences their spawning distribution. Cold and less saline conditions seem to coincide with spawning to the east, along the continental slope and the Porcupine Bank area (Hatun et al., 2007). When the gyre index is weak, spawning takes place on the western slope of the Faroe plateau and over the Rockall plateau. The estimated threefold increase in blue whiting biomass coincided with major changes in the marine climate and this shift between east and west during the mid-1990s indicates a possible connection.

### 3.4.2. Stock status

The results of the 2014 ICES stock assessment (section 3.4.6, Figure 7, ICES 2014b) show that recruitment has decreased substantially from a high phase between 1997 and 2004 and historic low levels from 2006 to 2009, leading to a substantial decrease in SSB from 2010. However, subsequent higher recruitment (confirmed by recruitment indices from surveys not used in the assessment) has allowed SSB to recover from around 3 Mt in 2010 to 5.5 Mt in 2013, well above the value identified for both  $B_{pa}$  and  $MSYB_{trigger}$  (2.25 Mt). Fishing mortality (F) has shown a decreasing trend since 2004, falling to a historical low in 2011 at 0.04 and increasing to 0.16 in 2013. Subsequent to the draft report presented to the clients, ICES has published the results of its 2015 stock assessment (Sept. 2015). This suggests that F in 2014 increased to above FMSY (estimated to be 0.30), though there are some concerns about the reliability of the assessment (ICES, 2015a). This is well above the existing management plan target F of 0.18 that applies once SSB is above  $B_{pa}$ .

### 3.4.3. Reference points

Biological reference points for blue whiting were set in 1998, before the change in productivity regime became apparent (low productivity during 1981–1994; high productivity during 1995–2005). They were re-examined at a Workshop on Limit and Target Reference Points in 2007 (ICES, 2007), and again in May 2013 (ICES, 2013a), when it was agreed that the  $B_{lim}$  and  $B_{pa}$  reference points that are currently in use (Table 9) are compatible in relation to the two productivity regimes, and that there was no basis for revising them.

A stochastic equilibrium analysis (ICES, 2008c) indicates a high risk of stock collapse with an F higher than approximately 0.3, given the “low recruitment” regime as observed in 1981–1996, and a very limited increase in yield is obtained for F in the range 0.18 ( $F_{0.1}$ ) to 0.30. In May 2013, equilibrium stochastic simulations were used to give a new value for  $F_{lim} = 0.48$ . On the basis of this and the uncertainty in the assessment, a corresponding value for  $F_{pa} = 0.32$  was derived.

Advice following ICES’ MSY approach is based on simulations that estimate  $F_{MSY} = 0.30$  (ICES, 2014b).

ICES considers that there are no scientific reasons to reduce MSY  $B_{trigger}$  below  $B_{pa}$  (2.25 Mt), which should be retained as MSY  $B_{trigger}$  for the MSY framework.

**Table 9. Reference points used for blue whiting (ICES, 2014a)**

Type		Value	Technical basis
Management mkPlan	SSB <sub>MP</sub>	2.25 Mt	$B_{pa}$
	$F_{MP}$	0.18	Management strategy evaluation conducted in 2008 (ICES, 2008c)
MSY Approach	MSY $B_{trigger}$	2.25 Mt	$B_{pa}$
	$F_{0.1}$	0.22	Yield per recruit (ICES, 2013a)

	F <sub>MSY</sub>	0.30	Equilibrium stochastic simulations, (ICES, 2013a)
	B <sub>lim</sub>	1.50 Mt	B <sub>loss</sub>
Precautionary Approach	B <sub>pa</sub>	2.25 Mt	B <sub>lim</sub> exp(1.645*σ), with σ = 0.25.
	F <sub>lim</sub>	0.48	Equilibrium stochastic simulations, (ICES, 2013a)
	F <sub>pa</sub>	0.32	Based on F <sub>lim</sub> and assessment uncertainties (ICES, 2013a)

### 3.4.4. Strategy and harvest control rules

#### 3.4.4.1. Fishery management plan

A management plan was agreed for this stock between the four CS (Norway, Faroe Islands, Iceland and EU) in December 2005, with the aim of maintaining SSB at levels above 1.5 Mt (B<sub>lim</sub>) and fishing mortality rates at levels of no more than 0.32 (F<sub>pa</sub>). To achieve this, the TAC was to be reduced by at least 100,000 t a year until F was reduced to 0.32. The plan states that, if SSB falls below 2.25 Mt, (unspecified) actions to obtain a safe and rapid recovery to this level should be taken. ICES evaluated this management plan in 2006 and found it not to be in accordance with the precautionary approach in a period of low recruitment (ICES, 2006).

In July 2008 a new draft management plan was proposed by the Coastal States, which ICES considers to be precautionary if F in the first year is immediately reduced to the F implied by the HCR. The main elements of this plan are presented below.

- 1) The Parties agree to implement a long-term management plan for the fisheries on blue whiting, which is consistent with the precautionary approach, aiming at ensuring harvest within safe biological limits and designed to provide for fisheries consistent with MSY, in accordance with advice from ICES.
- 2) For the purpose of this long-term management plan, in the following text, "TAC" means the sum of the coastal state TAC and the NEAFC allowable catches.
- 3) As a priority, the long-term plan shall ensure with high probability that the size of the stock is maintained above 1.5 Mt (B<sub>lim</sub>).
- 4) The Parties shall aim to exploit the stock with a F of 0.18 on relevant age groups as defined by ICES.
- 5) While F exceeds that specified in paragraph 4 and 6, the Parties agree to establish the TAC consistent with reductions in F of 35% each year until the F established in paragraph 4 and 6 has been reached (to apply only during 2009 and 2010).
- 6) For the purposes of this calculation, the percentage reduction of F should be calculated with respect to the year before the year in which the TAC is to be established. For this year, it shall be assumed that the relevant TAC constrains catches.

- 7) When the F in paragraph 4 has been reached, the Parties agree to establish the TAC in each year in accordance with the following rules:
- In the case that SSB is forecast to reach or exceed 2.25 Mt ( $MSYB_{trigger} = B_{pa} = SSB_{MP}$ ) on 1 January of the year for which the TAC is to be set, the TAC shall be fixed at the level consistent with the specified F.
  - In the case that SSB is forecast to be less than 2.25 Mt on 1 January of the year for which the TAC is to be set (B), the TAC shall be fixed that is consistent with a F given by:
    - $F = 0.05 + [(B - 1.5)(0.18 - 0.05) / (2.25 - 1.5)]$
    - In the case that SSB is forecast to be less than 1.5 Mt on 1 January of the year for which the TAC is to be set, the TAC will be fixed that is consistent with  $F = 0.05$ .
- 8) When F on the stock is consistent with that established in paragraph 4 and the spawning stock size on 1 January of the year for which the TAC is to be set is forecast to exceed 2.25 Mt, the Parties agree to discuss the appropriateness of adopting constraints on TAC changes within the plan.
- 9) The Parties, on the basis of ICES advice, shall review this long-term management plan at intervals not exceeding five years and when the condition specified in paragraph 4 is reached

In essence, the management plan incorporates a harvest control rule (HCR) that requires:

- i. a target fishing mortality ( $F = 0.18$ ) if SSB is above  $SSB_{MP}$  ( $= B_{pa} = 2.25$  Mt),
- ii. a linear reduction to  $F = 0.05$  if SSB is between  $B_{pa}$  and  $B_{lim}$ , and
- iii.  $F = 0.05$  if SSB is below  $B_{lim}$  (1.5 Mt).

Discussions with the client revealed that there were no objections to the 2008 management plan, which, though ostensibly obsolete, has been used for advice during this transition period. A new management plan was developed by EU and the industry via the Pelagic Advisory Council, which incorporates two trigger points at high and low recruitment phases with a motivation to stabilize production for the fishery as well as sustainability of the resource.

The EC is expected to provide text on a new management plan to be adopted late in 2015. Meanwhile, it is recognised that  $F = 0.18$  is no longer valid for MSY and that the EC is being precautionary and will not set the 2015 TAC above  $F_{MSY}$  (0.30). It has been noted that any reduction in F due to management leads to a large drop in the TAC and could be regarded as over-zealous given the good state of the blue whiting stock (2011 illustrates this).

In May 2013 ICES addressed a NEAFC request to review a potential new HCR function (ICES 2013b, 2013c). A number of alternative F targets in the range of 0.1—0.35 were evaluated for the current HCR and found to be precautionary up to an F target of 0.32 (corresponding to  $F_{pa}$ ), with only a minimal increase in mean TAC for F targets above 0.30. There are no significant differences in catch either with or without stabilization mechanisms in the current (2008) HCR over the entire time period examined, and the HCR is therefore based solely on F considerations in relation to levels of SSB.

No international agreement has been obtained with respect a specific HCR to be used for a new management plan for blue whiting. The TAC for 2014 was set to 1.2 Mt, equivalent to an F of around 0.23, and that for 2015 at 1.260 Mt, equivalent to an F of around 0.28 (2014 assessment).

#### 3.4.4.2. ICES advice for 2015

ICES (2014b) provides a range of predicted catch and SSB options. The existing management plan has a target F of 0.18 that applies once SSB is above  $B_{pa}$  (2.25 Mt), which will lead to a TAC in 2015 of 840,000 t (a decrease of 30% on 2014, when it was 1.2 Mt). This is expected to lead to an SSB of 5.9 Mt in 2015.

Following the ICES MSY framework implies fishing mortality to be at  $F_{MSY} = 0.30$  which will give a TAC in 2015 at 1.326 Mt (1.2 Mt in 2014) and SSB of 5.4 Mt in 2015. This was expected to lead to an SSB in 2016 of 5.45 Mt, which is above MSY  $B_{trigger}$  (2.25 Mt).

Following the ICES precautionary approach implies a TAC of 1.40 Mt in 2015 based on a fishing mortality at  $F_{pa} = 0.32$ . This is expected to lead to a SSB in 2015 of 5.38 Mt, which is above  $B_{pa}$  (2.25 Mt).

In the event, the TAC for 2015 was set at 1.260 Mt, equivalent to an F of around 0.28 (2014 assessment)

The history of management of the North-east Atlantic blue whiting fishery is summarised in Table 10. Note that TACs were set higher than the catch advised by ICES following the management plan in all years other than 2011, 2012 and 2013.

**Table 10. Blue Whiting in Subareas I–IX, XII, and XIV. ICES advice, management, and catches (ICES 2014b)**

Year	ICES advice	Predicted catch corresponding to advice (1000 t)	Agreed TAC (1000 t)	ICES catch (1000 t)
1987	TAC for northern areas only	950	-	665
1988	TAC for northern areas only	832	-	558
1989	TAC for northern areas only	630	-	627
1990	TAC for northern areas only	600	-	562
1991	TAC for northern areas only	670	-	370
1992	No advice	-	-	475
1993	Catch at <i>status quo</i> F (northern areas);	490	-	481
1994	Precautionary TAC (northern areas);	485	650a	459
1995	Precautionary TAC for combined stock	518	650a	579
1996	Precautionary TAC for combined stock	500	650a	646
1997	Precautionary TAC for combined stock	540		672

1998	Precautionary TAC for combined stock	650		1125
1999	Catches > 650 000 t may not be sust. in the long run	650		1256
2000	F should not exceed the proposed Fpa	800		1412
2001	F should not exceed the proposed Fpa	628		1780
2002	Rebuilding plan	0		1556
2003	F should be less than the proposed Fpa	600		2321
2004	Achieve 50% probability that F will be less than Fpa	925		2378
2005	Achieve 50% probability that F will be less than Fpa	1075		2027
2006	F old management plan	1500	2100b	1966
2007	F should be less than the proposed Fpa	980	1847c	1612
2008	F should be less than Fpa	835	1250d	1246
2009	Maintain stock above Bpa	384	606e	636
2010	Follow the agreed management plan	540	548	540
2011	See scenarios	40–223	40	105
2012	Follow the agreed management plan	391	391	384
2013	Follow the agreed management plan	643	643	626
2014	Follow the agreed management plan	949	1200	1155
2015	Follow the agreed management plan	840	1260	1300*

\*estimated by ICES based on declared quotas and expected uptake (ICES 2015a).

#### 3.4.4.3 ICES advice for 2016

On the basis of its 2015 assessment (ICES 2015b), and following the MSY approach, ICES advises that catches in 2016 should be no more than 776 k t, leaving an SSB of 3.8 Mt in 2017 (note that the latest assessment model reduces the estimates of SSB in 2013 and 2014 to 3.9 Mt, and in 2016 as 3.6 Mt). The stock has full reproductive capacity and is well above any biomass reference point.

#### 3.4.5. Information and stock assessment

##### 3.4.5.1. Data used in the assessment

###### *Catch-at-age*

Commercial catch numbers-at-age data are obtained from national laboratories of countries that exploit blue whiting, submitted through the InterCatch web programme. In recent years, all the main countries participating in this fishery have provided sampling data to WGWISE, according to the European Commission Data Collection Regulation 1639/2001 (DCR). This includes the French surimi vessel, for which Ifremer devised an on-board self-sampling programme that contributes regular information to WGWISE. However, the DCR applies only to EU member states and there are currently no guidelines in place for other countries. The

allocations for those countries reporting catches without biological samples are generally made using all available data for the same ICES division and the same quarter. Detailed information on the number of samples collected, numbers of fish aged and measured by year and by country are presented in the WGWIDE report (ICES, 2014a).

Several blue whiting age-reading workshops have taken place since the mid-1970s. A workshop in 2005 provided guidelines and found that overall there was a high level of agreement between age readers. In 2011, however, the results of an otolith exchange revealed some difficulties in allocating ages to 1 and 2 group blue whiting caught in surveys, depending on which country read the otoliths. Nevertheless, strong year classes have been confirmed in the past as they moved through the fishery.

Mean weight-at-age in the catch data are calculated on an annual basis from data supplied by ten countries.

### *Maturity*

Maturity at age used in the assessment was obtained by combining maturity ogives from the southern and northern areas, weighted by catch in numbers at age (ICES, 1995).

### *Natural Mortality (M)*

The current M value of 0.2 was derived from investigations undertaken in the 1980s that examined the age distribution of the blue whiting stock before the industrial fishery started. At the WKPELA pelagic benchmark meeting in 2012 (ICES, 2012), the relationship between M and body weight was investigated to determine M by age. The values ranged from around 1.1 at age 0 to 0.7 at age 10; considerably higher than the value being used in the assessment. However, natural mortality rates cannot be estimated reliably with information normally available for stock assessment models, and further examination is required of the effects of a change in the value assumed for M (ICES, 2003a). At present, ICES considers that there is no new information to support a revision of the current estimate of M (0.2).

### *Discards*

Most of the blue whiting caught in directed fisheries are sold as frozen blocks of whole fish, surimi paste or for reduction to fishmeal and discards are thought to be small. Though discarding at rates of up to 40% occurs in the fisheries for human consumption and as bycatch in fisheries directed towards other species, WGWIDE (ICES, 2015) reports that discards are assumed to be minor in the blue whiting-directed fishery. Discard data provided for the Denmark, Netherlands, UK (England and Wales) fisheries are low (“and insignificant”) and were not used in the assessment. The discards of Portugal and Spain constituted respectively 39% (of 2kt) and 20% (of 32kt) of the total national catches and were considered in the 2015 assessment (for 2014, the basis for advice for 2016). A study carried out to examine discarding in the Dutch fleet in 2002–2007 found that blue whiting are not selected and discarded for length reasons (Borges et al., 2008).

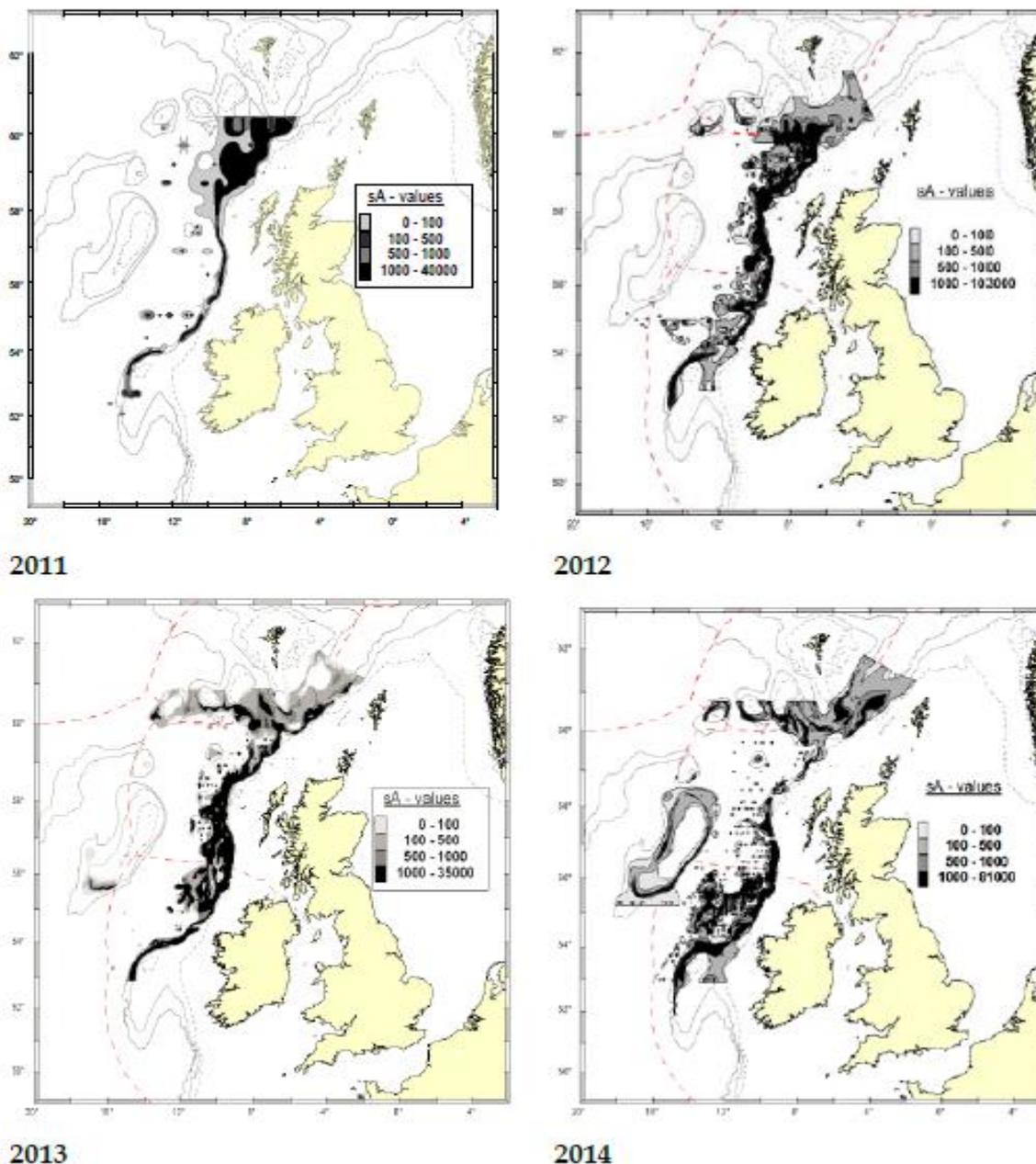
### 3.4.5.2. Fishery-independent indices of abundance

#### *The International Blue Whiting Spawning Stock Survey (IBWSS)*

Although a number of surveys provide data on blue whiting abundance, only one (acoustic) survey is used to tune the assessment. The IBWSS is carried out each year in March-April on the spawning grounds to the west of the British Isles and was established in its current form in 2004. Details are provided ICES (2008c). The Russian Federation, Norway, Faroe Islands, the Netherlands and Ireland participate in the survey, which is coordinated through the Working Group of International Pelagic Surveys (WGIPS) and allows broad spatial coverage of the stock as well as a relatively dense array of trawl and hydrographical stations (ICES, 2014c). The Norwegian element of this survey has been carried out since 1991 and is an important time series for tuning the assessment.

The IBWSS is designed to take account of the northward migrating of blue whiting during spawning, and to ensure a synoptic coverage in relation to the temporal occurrence of spawning aggregations. The survey design is based on variable transect spacing, allocated systematically with a random start location and has followed the same principles in 2012, 2013 and 2014, focusing on a good coverage of the shelf slope. This survey, incidentally, has provided good information on the incidence of non-target species in the blue whiting fishery.

The surveys have revealed annual shifts in the centres of aggregation of blue whiting, which are apparent in the distribution of acoustic backscattering densities for the last 4 years shown in Figure 5. There was a perceived later northward migration of the stock in 2014 compared to 2013, and the centre of density was located further south within the northern Porcupine Bank area, with more high density aggregations being found on the Rockall Bank.



**Figure 5. Schematic of blue whiting acoustic densities during the spawning surveys in spring 2011-2014 (ICES, 2014c).**

The original acoustic target strength (TS) relationship applied for blue whiting (based on measurements taken in the 1970s, and used to convert returning echo strength into fish biomass or numbers) is now considered to be too low, resulting in acoustic abundance estimates of blue whiting that have been considerably higher than those based on the analytical assessment. A workshop on implementing a new TS relationship for blue whiting abundance examined *in-situ* acoustic measurements taken over several years (Pedersen et al., 2011). Recalculating the survey index using the updated TS relationship resulted in a downward shift to around 32% of the original biomass estimates.

Abundance indices of ages 3–8 from this survey have been used as a tuning series in the assessment since 2007, though a gap in coverage of the core spawning area due to adverse

weather conditions (often encountered in the North-east Atlantic at that time of the year) and survey vessel availability led the 2011 WGWISE to exclude the 2010 values from the IBWSSS time series (ICES, 2014c).

The blue whiting SSB estimates based on the IBWSS show a continued decrease in biomass from 2007—2011, which is regarded as statistically significant. The estimated total abundance of blue whiting from the 2014 survey on the spawning grounds was 3.25 Mt, and the SSB was estimated at 3 Mt. This represents a 3% decrease in the observed stock biomass in comparison to the 2013 results. The main contribution (76%) to the SSB was the age groups 3-6, with strong 2010 and 2011-year classes (3 and 4-year old fish) and signs of a potentially strong 2013-year class.

#### *Other surveys that provide data on Blue Whiting*

An international survey coordinated by WGIPS is carried out annually in the Nordic Seas from late April to early June, aimed at observing the pelagic ecosystem in this area and focusing on Norwegian spring-spawning herring, blue whiting, zooplankton and hydrographic measurements. This survey provides a coherent time-series with adequate spatial coverage in the Norwegian Sea, and the data are used as abundance indices for blue whiting aged 1 and 2 by WGWISE (but are not used directly in the assessment: ICES, 2012).

A number of other bottom-trawl surveys provide data on blue whiting abundance, but the results are not used in the assessments since they represent only a small part of the stock area. Norway has conducted bottom trawl surveys since 1981, targeting cod and other demersal fish in the Barents Sea during the winter months (usually late January - early March), in which blue whiting is regularly caught. The survey gives the first reliable indication of year-class strength (Heino et al., 2003).

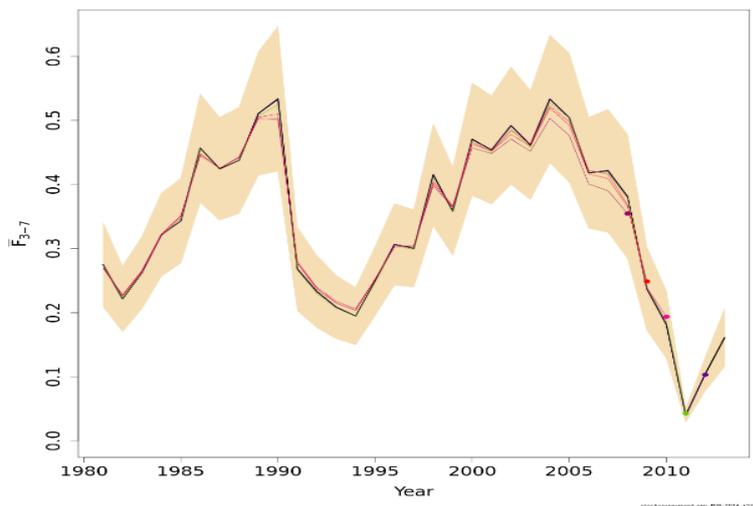
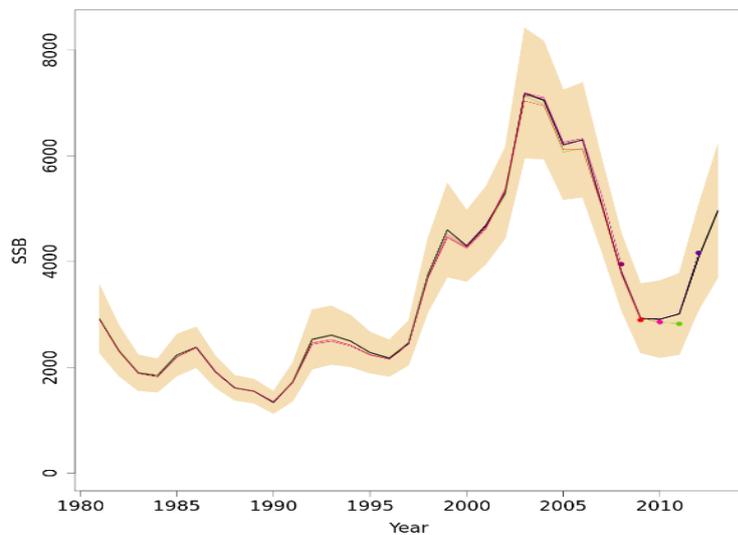
Other surveys include a Spanish survey since 1983 off the Galician coast (Spanish waters in Division VIIIc), a survey off the Portuguese coast since 1979, a French survey carried out since 1987 in the Bay of Biscay and since 1997 in the Celtic Sea, and an Irish bottom trawl survey that has been carried out since 2003 in October-November around Ireland. Other surveys that have provided data on blue whiting in the past, but have not been updated in recent years, include the Norwegian Sea summer survey (1981 – 2001, 2005 – 2007), Faroese Plateau spring bottom trawl survey (March 1996–2008), and Faroese Plateau autumn bottom trawl survey (August - September 1994–2008).

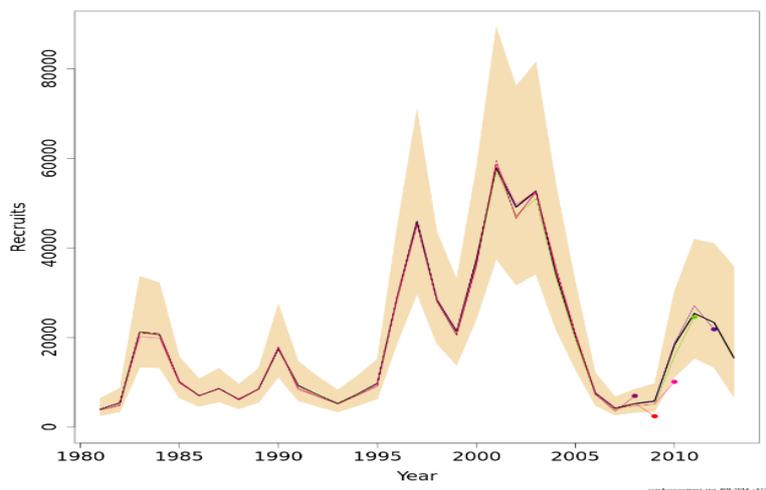
#### *Fishery-dependent abundance indices*

Although a Spanish pair trawl catch-per-unit-of-fishing effort (CPUE) series (1983-2003) was used for several years as a tuning fleet in the blue whiting assessment, the ICES methods working group (ICES, 2003b) recommended that its use be discontinued as this fleet represents only a small part of the landings caught in a small part of the distribution area. A similar reasoning applies to CPUE data collected from the Norwegian commercial fleet fishing in the spawning area (1982–2003). Neither time series has been updated in recent years.

### 3.4.6. Stock assessment method and data

At the WKPELA benchmark meeting (ICES, 2012), the state-space model (SAM, see Nielsen and Berg, 2014) was chosen as the assessment model for blue whiting, and has been used for the last three years. SAM offers a flexible way of describing the entire system, with relative few model parameters, and provides similar model diagnostics and almost identical assessment output compared to the previously used SMS model. Consequently, the perception of the stock remains unchanged. However, SMS assumes a separable model for F and thereby a rather stable exploitation pattern, whereas SAM gives a slightly better fit to catch data as it allows a gradual change in exploitation pattern as each new year's data are added to the time series, which probably stabilizes the estimates of F and SSB from year to year (as indicated by retrospective analyses, Figure 6).





**Figure 6. Retrospective analysis of Blue Whiting SSB, F and recruitment (age 1) using the SAM model. The 95% confidence interval is shown for the 2014 assessment. Source ICES 2014a.**

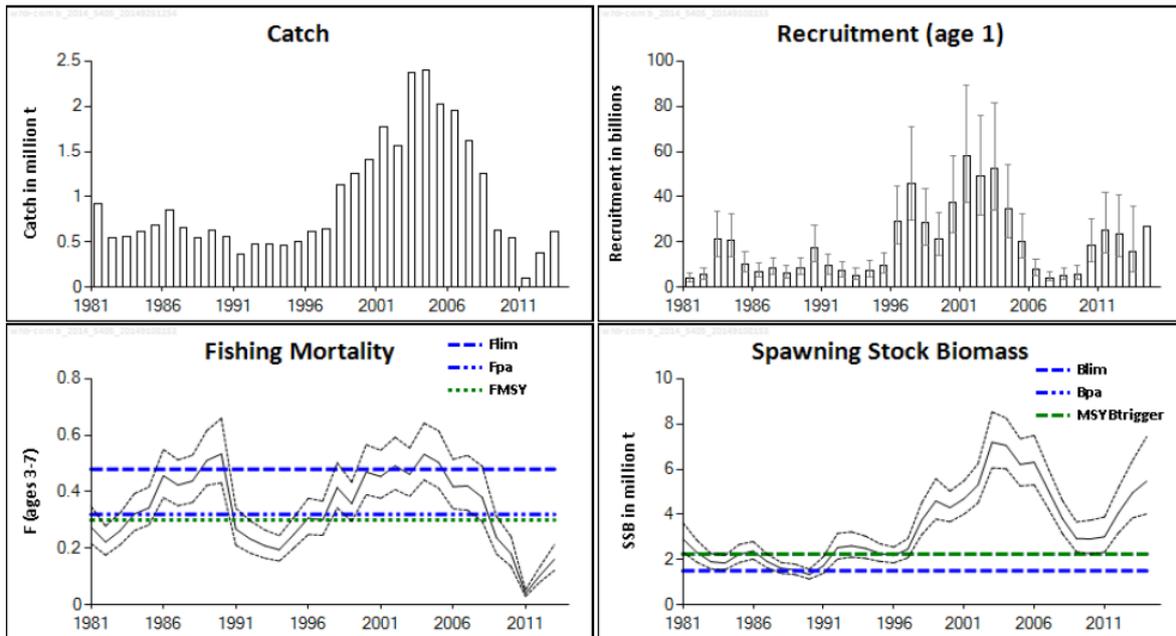
The blue whiting assessment uses total catch-at-age data and biological parameters from 1981 onwards and one survey index (IBWSS, from 2004 onwards), for which a linear relation between CPUE and stock size is assumed with an age-dependent catchability for age 3 and 4 and a combined (the same) catchability for ages 5-8 (ICES, 2014a).

The diagnostic output from the SAM model shows low CVs for the main age groups in the fishery for both commercial catch and survey indices, and the fit for other age groups is also quite good. The catch residuals for 2012 and 2013 show a tendency for a higher observed catch of older fish than estimated by the model. Residuals from the IBWSS survey showed a “year effect”, with higher indices for ages 3-7 than estimated by the model using all data sources. This is often seen in time series from acoustic surveys. The IBWSS residuals for 2014 show a tendency to overestimate ages 3 and 4 and underestimate ages 5-8.

Recruitment in the terminal year is determined from catch data (there are no reliable survey indices for age 1 and 2 blue whiting), though the short time series available indicates that recruitment estimates have been in the range of the final model estimates. There is no obvious relationship between estimates of SSB and recruitment, which has experienced high and low phases since the 1990s.

The results of the stock assessment (Figure 7) show a decreasing trend in F since 2004, falling below  $F_{MSY}$  in 2009 to an historical low in 2011 at 0.04 and an increase in F to 0.16 in 2013. Recruitment decreased substantially from a high phase in the period 1997 - 2004 and was at historic low levels in 2006 - 2009 (at age 1), leading to a substantial decrease in SSB to 2010. However, subsequent higher recruitment (confirmed by recruitment indices from surveys not used in the SAM assessment) has allowed SSB to recover from around 3 Mt in 2010 to 5.5 Mt in 2013, well above  $B_{pa}$  and  $MSYB_{trigger}$  (2.25 Mt).

ICES WGWIDE (ICES 2014a) considers that the assessment has a low to moderate uncertainty of the absolute estimate of F and SSB, more certainty about the recent step decline in F and increase in SSB, but less certainty on the strength of recruiting year-classes. There is some concern about the quality and consistency of age readings of blue whiting, and an age-reading workshop proposed for 2017 will look particularly into discrepancies for ages 1 - 3 in survey data.



**Figure 7. Summary of stock assessment for Blue Whiting in Subareas I-IX, XII, and XIV, with added 95% confidence limits and reference points. Source ICES 2014b.**

2015 assessment.

Since the draft assessment report was presented to the client, and subsequently to peer reviewers, the ICES WGWIDE has published the results of its 2015 stock assessment, for which we provide a brief summary of the outcome (though this is not strictly necessary for MSC purposes).

The stock assessment for blue whiting in Subareas I-IX, XII, and XIV is based on the same SAM model used previously and the results are summarised in Figure Figure 8 (ICES 2015b). This year's assessment has led to a substantial downward revision of the historical SSB and a small upward revision of F, though ICES considers that the assessment (and forecasts) is more uncertain than in previous years. Nevertheless, F appears to have continued its upward trajectory, and it is now estimated to be above  $F_{MSY}$ , whilst SSB remains well above MSYBtrigger. Reference points have remained as in 2014.

On this basis, ICES advises that catches in 2016 should be no more than 776 k t (MSY approach). (The advice for 2015 was 840 kt, and the TAC set at 1.26 Mt).

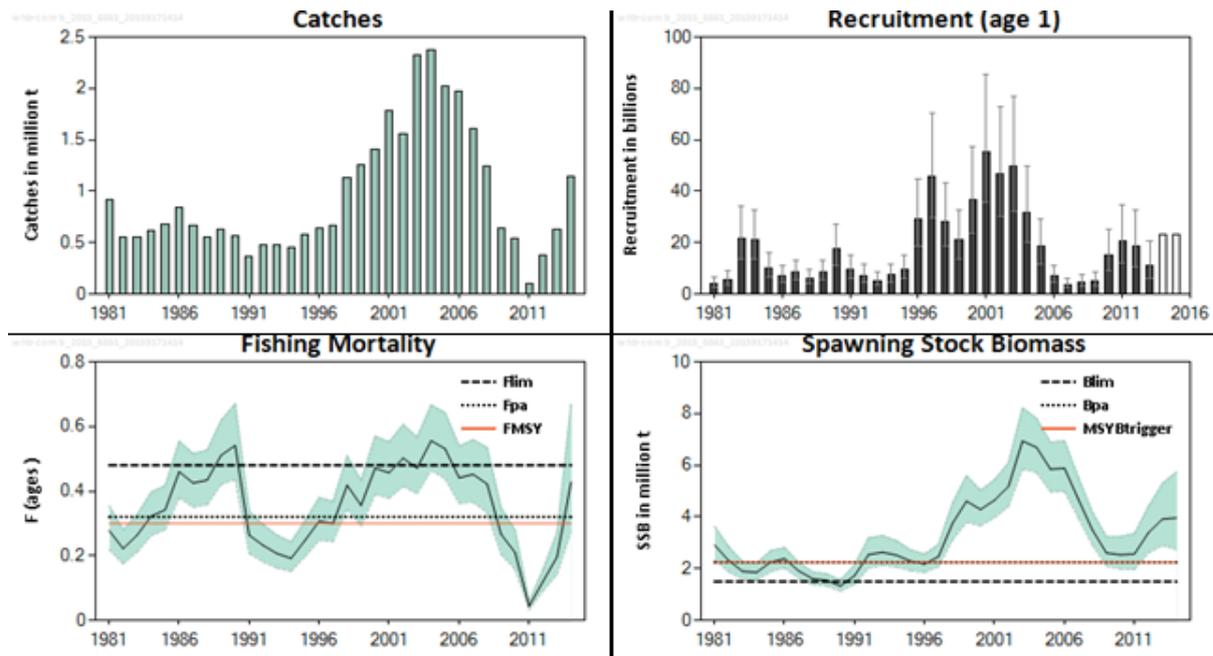


Figure 8 Summary of stock assessment for blue whiting in Subareas I–IX, XII, and XIV.. Recruitment for 2014 and 2015 is the 75th percentile of mean recruitment 1981–2012. (Source ICES 2015b).

### 3.4.7. Short-term forecasts

ICES uses (some of) the available survey indices in a qualitative way to estimate recruitment, rather than using them in a strictly quantitative model framework. The International Ecosystem Survey in the Nordic Seas (IESNS), which partially covers the known distribution of blue whiting juveniles, indicated that both the 1-group (2013 year class) and 2-group (2012 year class) were near the historic median level in 2013. The 1-group (2013 year class) index from the IBWSS survey in 2014 was the highest in the time series, though this survey is not designed to give a representative estimate of juvenile blue whiting abundance.

One-group blue whiting were present in the Norwegian bottom trawl survey in the Barents Sea in February-March 2014, which is usually a sign of a strong year-class (Heino et al., 2008), whilst the 1-group estimate in 2014 (2013 year class) from the Icelandic bottom trawl survey (March) was the highest observed in the time series from 1996 to the present. Similarly, the 1-group estimate in 2014 (2013 year class) was the highest observed in the time series of the Faroese Plateau spring (March) bottom trawl survey 1994 to the present.

In the forecasts, the WG decided to use the estimate from the SAM assessment for the 2011 year class (approximately at the 70th percentile), the geometric mean of the whole period (1981–2011) for the 2012 year-class, and the 75th percentile for the apparently strong 2013 year classes as input. The geometric mean of the whole period (1981–2011) was used for the 2014 and 2015 year classes in 2015 and 2016. As all signs are that incoming recruitment is likely to be high, this seems to be a conservative (precautionary) approach. No stock-recruitment model is used.

The SAM model provides uncertainty of fishing mortality and stock numbers in the final year estimates, which can only be fully applied in a stochastic short-term forecast (see ICES (2014a) for details). Compared to a deterministic forecast, the stochastic forecast gives slightly higher estimates of TAC and SSB (the TAC for 2015 is estimated 4-5% higher and SSB in 2016 8-9% higher) due to the assumed log-normal distribution of stock numbers. Though a stochastic forecast has been applied for the last two years, a deterministic version was applied for advice in 2014. Again, this is a conservative approach.

The input parameters for the catch forecasts include:

- Mean weight at age in the stock and in the catch are the same; calculated as three year averages (2011-2013).
- Selection (exploitation pattern: F-at-age); based on average F in the most recent three years in the assessment.
- The maturity ogive used in the assessment; the proportion mature is assumed constant over the years.
- Spawning is assumed to take place the 1st January. Natural mortality is assumed to be 0.2 across all ages.

Information from the WG members indicated an uptake of the TAC of 1,200,000 t of blue whiting in 2014 (set in accordance with the management plan), and F in 2014 was calculated on the basis of this TAC. The latest estimate of the 2014 catch was 1.155 Mt (see Table 10).

#### **3.4.8. Possible consequences of lack of Coastal States Agreement in 2015**

The Blue Whiting TAC for 2014 was 1,200,000 t, agreed between NEAFC coastal states according to the management plan. Leaving aside an 8% provision for non-coastal states (in this case 95,506 t for Russia), the remaining 1,104,494 t was shared as follows:

- EU: 336,871 t (30.50%)
- Faroe Islands: 288,549 t (26.12%)
- Norway: 258,352 t (25.75%)
- Iceland: 194,722 t (17.63%)

In 2014 Norway's 25.75% share augmented by 0.5% from the EU quota (giving 26.25%) was 289,886 t, with a specific arrangement to catch up to 61% (176,719 t) of the Norwegian quota in EU waters. The bilateral transfer of blue whiting from EU to Norway (100,000t in 2014) was deducted from EU's quota.

The TAC for 2015 was 1,260,000 t, of which Norway's share was 25.75% augmented by 0.5% from the EU quota, with no arrangement for access to EU waters. However, Norway has since increased its quota share unilaterally to 35% of the recommended TAC<sup>4</sup>. If Norway were to catch all its declared increased share in its own waters, this would amount to a TAC overshoot.

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<sup>4</sup> <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+WQ+E-2015-004180+0+DOC+XML+V0//EN&language=lt>

However, it is very unlikely that Norway could substantially increase its catches in Norwegian waters, which were only 9,735 t in 2013 (Table 9).

The management response to ICES advice for 2016 (ICES 2015b), in which an increase in fishing mortality to above the target was flagged, in addition to the lack of an active management plan, will not be known until the relevant meeting is held in the New Year (possibly March 2016), and an update on this will be provided at the year 1 surveillance (in 2017).

### 3.5. Principle Two: Ecosystem Background

This section of the report outlines the fishery's potential impacts on the wider ecosystem and considers five key components. These are:

- (i) Retained, non-target species: species that are retained by the fishery (usually because they are commercially valuable or because they are required to be retained by management rules).
- (ii) Bycatch (discarded) species: organisms that have been taken incidentally and are not retained (usually because they have no commercial value).
- (iii) ETP species: Endangered Threatened or Protected species
- (iv) Habitats: the habitats within which the fishery operates
- (v) Ecosystem: broader ecosystem elements such as trophic structure and function, community composition, and biodiversity.

#### 3.5.1. Retained species

Declared landings data were used as the principal data source to determine retained species in this fishery. The catch of RSW vessels is only sorted and graded once it arrives in the factory, at which stage the official weights per species are recorded. For PFA freezer-trawler vessels, as well as for the Joseph Roty II, the catch is sorted and graded on board and the official weights by species are recorded at landing by the national authorities. For this assessment official landings data were obtained for the DPPO and SPSG fleets and for the Joseph Roty II. Data were also requested from the Dutch and Irish fisheries authorities (NVWA and SFPA), but these were not provided in time to be included in the report. The catch patterns for the KFO RSW vessels and PFA freezer-trawlers can be inferred from the data presented below, but the team recommends that annual catch data are made available in time for any subsequent MSC surveillance audits (a specific recommendation has been made in Section 6.3.2).

The blue whiting fishery can generally be described as a clean, single-species fishery, though small quantities of other species such as mackerel can occur. Landings data for the DPPO, SPSG and Joseph Roty II landings are summarised in Table 11 tot Table 13 . At the time of the site visit, daily catches or catches per haul for all vessels under assessment were not available. This is because freezer trawlers in the fleet process, freeze and store catches at sea, and normally only return to port once fully loaded. As part of a research effort into measuring selectivity of a number of escape grids, three PFA vessels monitored catch composition per haul between January and April 2015. This equated to nine trips, with a total of 339 hauls (from PFA fisheries targeting blue whiting, horse mackerel and silver smelt). Initial conclusions from this on-going project are that bycatches of mackerel and horse mackerel in the directed blue whiting fishery are in the order of 1% of total catches. This will be reviewed at the fishery's first surveillance audit next year (pending successful certification).

**Table 11. 2014 landings data for the DPPO Blue Whiting fishery**

Species	Total landings (tonnes)	% Composition
Blue Whiting	29,592.3	100.00
Total	29,592.3	100.00

**Table 12. 2011 - 2014 landings data for the SPSG Blue Whiting fishery**

Species	Total landings (tonnes)				Average composition (% total)
	2011	2012	2013	2014	
Blue Whiting	1,323.91	6,296.02	8,165.19	25,560.94	99.96
Mackerel	16.24		0.70		0.04
Total	1,340.15	6,296.02	8,165.89	25,560.94	100.00

**Table 13. 2012 - 2014 landings data for the Joseph Roty II (Compagnie des Pêches St Malo)**

	Total landings (tonnes live weight)			% composition
	2012	2013	2014	
Blue Whiting	9,803.38	8,776.68	10,424.28	100.00
Total	9,803.38	8,776.68	10,424.28	100.00

The research institutes IMARES and Johann Heinrich von Thünen-Institut (vTI) carried out a discard sampling programme for the Dutch and German PFA fleets in 2011/2012 (van Overzee et al., 2013). For the blue whiting fishery, UoC 1, only one trip was sampled, trip P100 in ICES Divisions VIa, VIIb and VIIc, the results of which are presented in Table 14. Blue whiting makes up the bulk of the catches, with horse mackerel contributing less than 2%.

**Table 14. Total catch, landings, discards (t), discard percentage and unsampled discards for the PFA sampled pelagic discard trip (P100) in ICES Divisions VIa, VIIb and VIIc in 2012. Adapted from van Overzee et al. (2013).**

Trip	P100			
Species	Catch	Discarded	% discards out of total catch	
Blue Whiting	2050.9	0.9	0.04	
Horse mackerel	29.1	0.0	0.00	
Total	2080.0	0.9	0.04	

In the MSC context, “main” retained species are typically identified as those species that constitute over 5% of the total catch weight, or that can be considered as vulnerable, or of particularly high value to the fisher. In this assessment, vulnerable or valuable species were designated as ‘main’ if they made up more than 2% of the total catch.

On the basis of the data presented, the team considered that it is highly likely that there were no ‘main’ retained species in any blue whiting UoC, though this should be verified by future sampling of the KFO and PFA fleets. Minor retained species are mackerel and horse mackerel.

#### Stock status of retained species

**Mackerel.** A benchmark evaluation was carried out for the North-east Atlantic mackerel stock in 2014, indicating that  $F$  has been decreasing in recent years and was estimated to be 0.19 in 2012, below  $F_{MSY}$  and  $F_{pa}$  (ICES, 2014e and 2014f). SSB has also increased considerably since 2002 and remains high, above  $B_{pa}$  and  $MSY B_{trigger}$ . The SSB for 2013 is estimated with a precision of  $\pm 25\%$ , with the lower estimate is well above  $B_{lim}$  (ICES, 2014a). Based on these findings, there is a high degree of certainty that this stock is within biologically based limits.

**Horse mackerel.** ICES assessment for the western stock has shown a steady decline in SSB since 1988, which is expected by ICES to decline below  $MSY B_{trigger}$  in 2014 (ICES, 2014g). Fishing mortality has been increasing since 2007 and has been above  $F_{MSY}$  since 2012.

#### **3.5.2. Discarded species**

In general, fish are discarded mainly when they are: i) of no commercial interest, ii) below the minimum landings size, iii) of low quality or damaged, or iv) exceed quota limitations. As discussed under section 3.3.3 on gear and operation of the fishery, all vessels involved in the blue whiting fishery make use of state-of-the-art hydro-acoustic equipment to identify the target species and catch sensors to allow the net to be hauled at the right time. This approach has been designed and adapted over time to keep catches clean and therefore make the fishery as efficient as possible (in terms of sorting and processing). In this fishery, discarding can take place either by slippage (i.e. opening the net and releasing the fish before they are brought on-board) or after sorting. Note however that for the RSW (refrigerated seawater) vessels (SPSG, DPPO and KFO: UoCs 2, 3 & 4), the fish are pumped directly from the net into holding tanks and sorting takes place upon landing (most often when the fish are pumped or transported into the factory). For these fleets the only source of discarding would be slippage, which is further discussed below. For the freezer trawler vessels (PFA only: UoC1) and the Joseph Roty II surimi vessel (UoC 5), sorting can take place aboard the vessels before the catch is processed.

The clients have commented that, very rarely, nets may burst if there is a rapid increase in the density of the catch due to the swim bladders of blue whiting rupturing as the pressure drops when the net is hauled up to the surface.

Slipping (of the catch from the net before pumping on board) for the purpose of high grading is highly unlikely in this fishery, which supplies markets (human consumption in Africa, surimi paste and fishmeal) that are not concerned about fish size. Other reasons for slipping the catch could be an undesirable mix of species in the catch or lack of storage capacity at the end of a trip. Note that “tank slippage” is physically impossible for RSW vessels.

The practice of slipping is avoided in all five UoCs due to the cost in fuel, gear wear and time. Additionally, overcapacity of the hold can be largely avoided by the skipper’s skill in estimating fish species and school size prior to fishing and using net sensors to monitor the amount of fish entering the net. Nonetheless, excessive catch can occur and in this case the fish are usually not loaded on board but released from the net at the end of the haul (Morizur et al., 1996) with some partial but non-quantified mortality. Although some skippers suggest that there may be some survival of slipped catches, research evidence suggests that actual mortality for slipped fish from pelagic trawls is likely to be substantial (Southall et al., 2010). In this context, scientists assume 100% mortality level when factoring a slippage estimate into assessment models. As the discards are never brought on board, species composition and length frequency of “slipped” catch is unknown and accurate numbers of discards per species can therefore not be calculated. None of the fleets involved reported other than negligible occurrences of slipping in this fishery.

Finally, discarding is prohibited in the NEAFC Convention Area under Regulation (EU) No 227/2013, in Faroese waters under the Commercial Fisheries Act 1994 and in Norwegian waters under the Norwegian Marine Resources Act, 2009. The EC Landing Obligation in force from January 2015 will prohibit discarding of any species under quota from European-registered vessels in this fishery, for all vessels in UoCs 1 to 4. The French surimi paste vessel (Joseph Roty II, UoC 5) has a *de minimis* exemption (EC, 2014) (see Section 3.5.2 for further details).

All client fleets have some form of sustainability policy; the key points of which in relation to discarding are summarised in the table below.

**Table 15. Key Sustainability policy points in relation to discarding policies**

PFA	<p>PFA policy states that:</p> <ul style="list-style-type: none"> <li>- Where possible, the PFA takes initiatives (or supports initiatives) for activities that lead to adequate measures to counter by-catches and discards.</li> <li>- The member vessels of the PFA are not permitted to deliberately discard marketable fish to make room for fish of a higher commercial value that are caught later ('high-grading'). This is subject to strict monitoring.</li> <li>- The members of the PFA do all possible, through the application of modern technology, to further reduce the occurrence of by-catches and discards to less than 3%.</li> <li>- Fishing grounds where undersized fish occur are avoided</li> </ul> <p>Several research activities are being carried out by PFA and these include electronic monitoring aboard vessels, gear selectivity, the use of state of the latest broadband echo-sounding equipment – these projects are discussed further on in this section.</p>
DPPO	<p>DPPO vessels complete a special logsheet on which discards and interactions with ETP species must be recorded.</p> <p>The DPPO Code of Conduct further specifies that DPPO members are engaged in avoiding unwanted catches (undersized fish or unwanted species) and reducing discards by:</p>

	<ul style="list-style-type: none"> <li>- Helping to develop search tools that increase the possibility for identifying fish species and size, before commencing fishing</li> <li>- Immediately leaving areas with small fish or other unwanted catch</li> <li>- Exchanging experience with colleagues - both Danish and foreign fishermen - on positions, size and quality of individual fishing grounds</li> <li>- Using the best electronic search tools</li> <li>- Giving fish on to colleagues if the vessel's capacity or quota is exhausted</li> </ul> <p>Compliance with the Code of Conduct is verified by each member vessel during an internal audit procedure.</p>
KFO	<p>Although KFO do not operate under a sustainability policy (which goes above and beyond what is required under government regulations), the PO's member vessels do complete an environmental management form as part of having signed up to the BIM Seafood Stewardship Programme, which includes recording of slipping, gear loss and seabed interaction, and interactions with ETP species.</p>
SPSG	<p>SPSG vessels complete a special logsheet: "Occurrence of Exceptional / Unusual Events During Fishing Activity". Events to be reported include slippage events, interactions with endangered, threatened or protected species and gear contact with seabed or gear loss.</p> <p>SPSG policy further includes (<i>inter alia</i>):</p> <ul style="list-style-type: none"> <li>- Following the occurrence of a poor quality or unsuitable catch, the skipper/master shall be responsible for communicating information and relevant circumstances of the event to all other pelagic vessels in the vicinity as soon as is practicable to prevent other vessels in the vicinity from experiencing similar adverse catches</li> <li>- The fleet participates in the Seafish Responsible Fishing Scheme and as such is committed to make every effort to minimise unselective fishing practice and minimise interactions resulting with incidental by-catch.</li> <li>- Pelagic fishing vessels should take all reasonable precautions to ensure that their fishing activity is only directed towards stocks of the species for which they intend to catch and for which they have the necessary licenses and entitlements.</li> </ul>
CDPSM	<p>The Joseph Roty II has no specific policy document, but it has initiated a systematic self-sampling programme with Ifremer since 2007, to record the sizes of blue whiting in the catch (transmitted to WGWIDE) and, with Ifremer and the FROM NORD PO, to report interactions with ETP species (specifically elasmobranchs and marine mammals) using a specific set of forms since 2012. A species identification guide is kept on board.</p>

The discard sampling programme for the Dutch and German PFA fleets in 2011/2012 (van Overzee et al., 2013; ICES, 2014a) sampled one trip for the blue whiting fishery, UoC 1, and observed that only blue whiting were discarded (Table 16).

No observer data exist for the DPPO blue whiting fishery (UoC 2). The Danish Institute of Aquatic Resources (DTU Aqua) completed an overview study of Danish commercial fisheries (Storr-Paulsen et al., 2012), with special attention to discards, but no on-board sampling of discards was undertaken in the pelagic trawl sector as the fishery is considered a ‘closed’ system, i.e. the catch is pumped directly from the net into the hold and only leaves the vessel upon landing (when it is pumped straight into the factory) (J.Dalskov, DTU Aqua, Pers. Comm., 23<sup>rd</sup> March 2015). This ‘closed’ system exists for all RSW vessels in the UoCs (2, 3 & 4) under assessment.

Very limited data exist for the KFO fleet. The Irish Marine Institute explained that although one or two observer trips take place annually, discards have not been observed. Nevertheless, the blue whiting fishery (UoC 3) is considered to be clean (Maurice Clarke, Marine Institute, Pers. Comm., 21 April 2015).

For the SPSG fleet, Marine Scotland Science ran a pelagic sampling programme until 2012 during which commercial catch data were collected from various pelagic trawl fisheries, including the blue whiting fishery (UoC 4). The Sea Mammal Research Unit (SMRU) at the University of St Andrews, in collaboration with the Centre for Environment, Fisheries and Aquaculture Science at Lowestoft (CEFAS) and the Agri-Food and Biosciences Institute of Northern Ireland (AFBINI) also carry out an observer scheme. Although the main focus is on quantifying protected species bycatch, the observers also record information about other aspects of the fishing operations such as estimating the catch composition. Since 2000, about 20 trips on-board 7 different UK vessels in the blue whiting fishery have been observed, corresponding to 100 days at sea. The overall perception is that this is a very clean fishery, with the catch overwhelmingly consisting of the target species with very low catches of non-target fish species (Allen Kingston, SMRU, Pers. Comm. 16 April 2015).

For the Joseph Roty II (UoC 5), discards have been recorded in the vessel’s electronic logbooks from the end of 2013 onwards (Table 16). Other than blue whiting, none of the species listed made up more than 0.2% of the total catch and total discards averaged 2.8% of the total catch. Note that the porbeagle (*Lamna nasus*) is an ETP species and is further discussed in Section 3.5.

**Table 16. Discards by species for 2013 (last trip only) and 2014 (all trips) and corresponding % composition out of total catch for the Joseph Roty II (based on electronic logbook data).**

Species	2013*		2014	
	Volume (kg)	% catch comp.	Volume (kg)	% catch comp.
Blue Whiting ( <i>Micromesistius poutassou</i> )	19,890	1.09	455,500	4.19
Swordfish ( <i>Xiphias gladius</i> )	4,810	0.26	1,610	0.01
Shortfin squids ( <i>Illex</i> spp.)	260	0.01	760	0.01
King of herrings ( <i>Regalecus glesne</i> )		0.00	1,370	0.01
Alfonsinos nei ( <i>Beryx</i> spp.)	155	0.01		0.00
Hake ( <i>Merluccius merluccius</i> )	85	0.00		0.00

Saithe ( <i>Pollachius virens</i> )		0.00	100	0.00
Porbeagle ( <i>Lamna nasus</i> )		0.00	50	0.00
Total discards	25,200	1.38	459,390	4.22
Total landings	1,804,411		10,424,280	
Total catch	1,829,611		10,883,670	

\* last trip only

Based on the data presented, no main discarded species were identified in this fishery although a number of minor species were taken into account in the scoring of this component (see Appendix 1).

In addition to the fleet-specific discard policies outlined previously, the following management regulations apply to the fisheries under assessment:

- Minimum mesh size range of 16 - 31mm, with the retained catch consisting of at least 90% of any mixture of two or more target species, or at least 60 % of any one of the target species (Council Regulation (EC) No 850/98)
- Prohibition on discarding (including slipping) in Norwegian waters (see Norwegian Marine Resources Act, 2009).

Summary of relevant measures to reduce discarding under Regulation (EC) No 227/2013 of 13 March 2013 amending Council Regulation (EC) No 850/98:

- Prohibition of high-grading: the discarding, during fishing operations, of species subject to quota which can be legally landed shall be prohibited;
- Moving-on provisions and prohibition on slipping: where the quantity of undersized mackerel, herring or horse mackerel exceeds 10 % of the total quantity of the catches in any one haul, the vessel shall move fishing grounds; and it is prohibited to release mackerel, herring or horse mackerel before the net is fully taken on board a fishing vessel resulting in the loss of dead or dying fish;
- Catch handling and discharge restrictions on pelagic vessels: the maximum space between bars in the water separator onboard pelagic fishing vessels targeting mackerel, herring and horse mackerel operating in the NEAFC Convention Area as defined in Article 3(2) of Regulation (EU) No 1236/2010 shall be 10 mm; pelagic vessels operating in the NEAFC Convention Area shall be prohibited from discharging fish under their water line from buffer tanks or RSW tanks

Following the CFP reform a so-called discard ban (or landing obligation) was introduced for pelagic fisheries in January 2015. This means that all catches of fish subject to catch limits in EU waters will need to be recorded, landed and counted against quota, and also requires techniques for at-sea monitoring to document compliance with the new regulation. In preparation for its implementation, five discard plans were adopted in October 2014, setting out the specific conditions by which fisheries or species covered by the landing obligation may be exempt from the discard ban. The plan relevant to the blue whiting fishery is the *discard plan for certain pelagic fisheries in north-western waters (EU No.1393/2014)*, though a *de minimis* exemption is in place permitting discarding to take place of the following quantities:

Up to a maximum of 7 % in 2015 and 2016, and 6 % in 2017, of the total annual catches in the industrial pelagic trawler fishery targeting that species in zones Vb, VI and VII and processing that species on board to obtain surimi base. For the fisheries under assessment, the *de minimis* exemption only applies to the Joseph Roty II (CDPSM, UoC 5).

In 2013, the PFA started several pilot projects, in cooperation with IMARES, the NVWA (Dutch) and BLE (German) Control Agencies and funded by the European Fisheries Fund (EFF), to investigate the implications of the discard ban on the fishery. The following projects are being carried out:

- Pilot project on electronic monitoring (EM) on pelagic freezer-trawlers: the EM system records sensor and image data from fishing operations, and thus can be used to provide 100% monitoring of fishing activity. Following a pilot project completed in 2014, a second pilot project is focussed on engaging the inspection agencies. CCTV trials are currently being carried out aboard the German vessel Jan Maria (in cooperation with BLE) and aboard the Dutch vessel SCH 81 – Carolien (in cooperation with NVWA). A trial is also taking place aboard the UK vessel H171 - Cornelis Vrolijk (in cooperation with the UK MMO).
- Pilot project on net-innovation: development and testing of specific grids that will allow the escape of unwanted fish (small size, species). The grids were tested on four PFA vessels (Dutch, German) during their fisheries for mackerel, horse mackerel and blue whiting in the autumn and winter of 2014-2015
- Pilot project on broadband echo sounders: this project will test the potential applicability of the new generation of broadband echo sounders to provide a much higher resolution for better species recognition in commercial fisheries.
- Pilot project on making best use of unwanted bycatch.

The results of these projects were not available at the time of the site visit.

In the context of the EU discard ban, one vessel (Pathway PD 165) has been fitted with CCTV cameras since August 2013 as part of the Marine Scotland discard trial project.

Following implementation of the landing obligation, the 2015 data will be analysed at national and regional levels so that changes to fleet operations with respect to the discard plan can be investigated at surveillance audits, pending the successful outcome of this MSC assessment.

### 3.5.3. Endangered, Threatened and Protected (ETP) species

The MSC define Endangered Threatened & Protected (ETP) species as those that are recognised by national ETP legislation and those species that are listed in Appendix 1 of the Convention on International Trade in Endangered Species (CITES)<sup>5</sup>.

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<sup>5</sup> Note that this list is from MSC Certification Requirements v1.3 at §CB3.11.1. The revised and more extensive list set out in Annex SA of CRv2.0 does not apply to this assessment, by virtue of the implementation timeframes set out in the MSC Fisheries Certification Requirements (at page 6).

The species that fall within the scope of this definition include those listed in Annex II of the EC Habitats Directive (92/43/EC) and the Wild Birds Directive (2009/147/EC). The species listed in this legislation that could be vulnerable to capture in North-east Atlantic offshore pelagic trawl fisheries are:-

- Bottlenose dolphins (*Tursiops truncatus*)
- Harbour porpoise (*Phocoena phocoena*)
- Basking shark (*Cetorhinus maximus*)
- Marine turtles (several species)

All European countries have legislation protecting such species (and habitats) through, among others, enactment of the Bern Convention (Convention on the conservation of European wildlife and natural habitats), the Bonn Convention (Convention on the conservation of migratory species of wild animals), CITES and domestically through the implementation of EU Habitat Directive and Bird Directives.

Observer data are usually the best source of information to determine the extent of interaction between a fishery and ETP species, particularly cetaceans. The main legislation for cetaceans is the Council Regulation (EC) No 812/2004 which sets out requirements for observers monitoring cetacean bycatch onboard pelagic fishing vessels > 15m length (see for full details <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32004R0812>). For most of this fleet, however, limited observer data exist in view of the cost and logistics involved in running these observer programmes and because this fishery is generally perceived as low-risk to ETP species. This is consistent with MSC assessments of other trawl fisheries for small pelagic species in the area (see Southall et al., 2010; Andrews et al., 2010; Lockwood et al., 2009).

On the basis of annual EU Member State reports submitted to ICES under regulation 812, ICES (2015) state that - with the exception of pelagic pair trawls for sea bass (*Dicentrarchus labrax*) and tuna (*Thunnus* spp.) in the Atlantic – towed gears do not appear to represent a high risk of bycatch for cetaceans compared with fixed net gears. This is supported by the submitted member state data shown in Tables 4 and 6 (Annex 4) of the ICES 2015 WGBYC report (ICES, 2015c), which shows that interactions were only reported in ICES Sub-Area VIIe, where the blue whiting fishery does not take place (see Section 3.3.3).

For each of the client fleets under assessment, the following data were taken into consideration by the assessment team:

PFA (UoC 1): In addition to the self-reporting scheme, an observer programme is being run by IMARES (for Dutch vessels) and the Johann Heinrich von Thünen Institut (JHvTI) (for German vessels) in accordance with EC regulation 812/2004 and data are submitted annually to the ICES WGBYC. ICES (2014d) states the following: '*Only one cetacean bycatch event of a long-finned pilot whale (Globicephala melas) in a midwater otter trawl was observed. The observed bycatch rate of 0.01 cetaceans per day in the pelagic trawl fishery is in line with the findings in 2006–2011 when the bycatch rate was 0.00–0.01 cetacean per day*'. Similarly, no bycatch of cetaceans were recorded for the German PFA fleet in recent years: '*The bycatch of five long-finned pilot whales was observed in the midwater otter trawl fishery targeting*

mackerel in ICES Area VIIghj. During all other observed trawl fisheries in the North Atlantic, North Sea and in the Baltic, no bycatch of cetaceans was observed' (ICES, 2013d).

DPPO (UoC 2): as part of the DPPO Code of Conduct, vessels have to report any interactions with ETP species. In 2013, one porbeagle (*Lamna nasus*) was caught and subsequently released by the vessel Rockall. No further interactions with ETP species were reported in 2014/2015 (E.Sverdrup-Jenson, pers. comm., 27<sup>th</sup> May 2015).

KFO (UoC 3): The Marine Institute operates an observer programme for the pelagic trawl fishery (in accordance with EC regulation 812/2004) with one or two observer trips taking place in the blue whiting fishery each year. No interactions with marine mammals have been recorded in this fishery (Maurice Clarke, Marine Institute, Pers. Comm., 21 April 2015). As explained in Section 3.5.2, having signed up to the BIM Seafood Stewardship Programme, KFO member vessels complete an environmental management form that requires all interactions with ETP species to be recorded. No interactions were reported for this fishery during the site visit.

SPSG (UoC 4): Marine Scotland Science ran a pelagic sampling programme until 2012 conducted by SMRU in association with CEFAS and AFBINI, during which data were collected from various pelagic trawl UK fisheries. Since 2000, no marine mammal bycatch has been recorded on some 20 trips on-board 7 different UK vessels in the blue whiting fishery, corresponding to 100 observed days at sea. However, the fishery does occur in an area of relatively high cetacean abundance, so the potential for bycatch does exist. Although there is little concern about the potential for marine mammal or seabird bycatch in the blue whiting fishery, SMRU plan to carry out further observer trips in the fishery (Allen Kingston, University of St Andrews, Pers. Comm. 16 April 2015).

CDPSM (UoC 5): Although the Joseph Roty II currently does not have observer data, all discards are recorded in the vessel's electronic logbook (as of end 2013). Prior to this, the vessel had a system in place to report any ray, shark and marine mammal bycatch to IFREMER from 2012. From 2012 until the end of 2013, the following elasmobranch species were caught: *Centrophorus granulosus* (1 ind. >10kg), *Daenia calcea* (1 ind.: 3kg), *Isurus oxyrinchus* (1 ind.: 15kg). In 2014, 50kg of porbeagle (probably one fish) was caught. No other interactions with ETP species were recorded.

#### 3.5.4. Habitats

Mid-water pelagic trawls are not configured to interact with the seabed and damage to the gear is likely to occur before substantial damage to seafloor structures occurs (Donaldson et al., 2010). Pelagic trawls are, therefore, considered very low-impact gears with respect to benthic habitats (Chuengpagee et al., 2003; Morgan and Chuengpagee, 2003). The vessels in the UoC operate in deep waters and are equipped with hydro-acoustic equipment including depth sounders, sonars and trawl sensors, which enables the skippers to maintain control over the position of the net in the water column, thus further reducing the likelihood of interaction. Vessels are also continually aware of the location of protected deep-sea habitats (as per regulation (EU) No 227/2013), which are plotted into their on-board navigation systems. Note that none of the access restrictions for vulnerable deep-sea habitats prohibit pelagic fisheries from operating in these areas on the basis of low impact (regulation (EU) No 227/2013). Within the Norwegian EEZ habitat regulations apply to bottom gear fisheries only.

Although ghost fishing can be caused by nets and cod ends discarded at sea (noting that this would be against regulations and unlikely considering the cost of the gear), lost trawl gear is generally perceived to have a low potential for ghost fishing (Morgan and Chuenpagdee, 2003). Occurrences of gear loss are recorded by PFA, SPSG, KFO and DPPO member vessels and are reported to be very rare. Gear damage or loss would also be recorded in the vessel logbook by the Joseph Roty II, although it has never happened so far.

### 3.5.5. Ecosystem

This fishery takes place in the North-east Atlantic, where the blue whiting has a wide distribution and high abundance (in relation to many other fish species). Blue whiting is considered to be a major predator (of fish eggs, larvae and pelagic invertebrates) and an important prey item (for hake, for example: ICES, 2009b), and it is likely to have an important role in the North-east Atlantic ecosystem.

A combination of oceanic and atmospheric forces leads to large oceanographic anomalies in the Northeast Atlantic. These are likely to have an impact on the spatial distribution of spawning and feeding grounds and on migration patterns of pelagic species such as blue whiting, which are sensitive to temperature and salinity and will only spawn in waters with suitable ranges (ICES, 2014a).

Blue whiting recruitment is further influenced by a complex interplay of factors with changes in oceanographic conditions affecting the food availability to larvae and juveniles (the 'food hypothesis') and predation on eggs and larvae by other pelagic species (the 'predation hypothesis') also play an important role. With regards to the latter, it is thought that the overlapping distribution of feeding mackerel within the blue whiting spawning grounds suggests possible predation from mackerel on blue whiting eggs and larvae, which might have contributed to the collapse in recruitment observed in the past (see section 3.4.1). This interaction may have increased significantly both with the growth in the mackerel stock and with the changes observed in its distribution in recent years (ICES, 2014a).

It is clear that ecosystem factors may have a determinant effect on the productivity of North-east Atlantic pelagic fish stocks (including recruitment, growth or natural mortality), and may therefore be a source of variation as important as exploitation by fisheries (ICES, 2014a). It is extremely difficult to single out the likely effects of fisheries exploitation on such a complex ecosystem. Historically, most stocks in the North-east Atlantic have been managed with a single species approach, focused on keeping stocks above a precautionary biomass level to avoid stock collapse though, from 2012, ICES transitioned its fisheries advice to be based on maximum sustainable yield (MSY) and future stock status (ICES, 2014e). While this approach ignores to a large extent those environmental factors affecting stock development and which can bias estimates of future stock status (ICES, 2014e), maintaining SSB at sustainable levels remains a key tool in maintaining stock status and ecosystem health. In the absence of a full ecosystem-based approach to fisheries management, monitoring SSB, compliance with the harvest control rule (such as TACs), and an enforced quota regime should deliver most of the management requirements for preventing stock collapse, thereby preventing any effects the fishery may have on the wider ecosystem. As already explained in Section 3.4.2, the blue whiting SSB has recovered since 2010 to well above the reference points defined by ICES. On this basis, the vessels in the UoCs are highly unlikely to disrupt the key elements

underlying ecosystem structure and function to a point where there would be serious or irreversible harm.

The key elements contributing to the management of the North-east Atlantic ecosystem in the context of this fishery are as follows:

- Regulation (EU) No 1380/2013 of the CFP outlining a set of rules for managing European fishing fleets and for conserving fish stocks. Under the CFP fishing levels should be set at MSY levels by 2015 where possible, and at the latest by 2020 for all fish stocks;
- The blue whiting fishery is managed through a joint management plan between the EU, Norway, Iceland and Faroe Islands, which provides a framework for setting an annual TAC and is based on current scientific advice provided by ICES;
- In the Norwegian EEZ: Norwegian regulations contain provisions to limit ecosystem impacts from fisheries. These include the prohibition of discarding fish and processing to fish meal (see Norwegian Marine Resources Act, 2009 and Gullestad et al, 2012);
- In the Faroese EEZ: National regulations aim to limit ecosystem impacts of fisheries, including through permanent and seasonal closed areas, zoning of allowed fishing methods and technical measures to reduce bycatch (Faroese, 2015);
- EC Council Regulations setting out provisions to limit ecosystem impacts from fisheries. These include but are not limited to:
  - Council Regulation (EC) No 812/2004 of 26 April 2004 laying down measures concerning incidental catches of cetaceans in fisheries,
  - Council Regulation (EC) No 850/98 of 30 March 1998 for the conservation of fisheries resources through technical measures for the protection of juveniles of marine organisms
  - Council Regulation (EC) No 1185/2003 of 26 June 2003 on the removal of fins of sharks on board vessels
- The landing obligation (so-called discard ban) that came into effect from January 2015, requires that all pelagic species subject to quota regulations be kept on board, landed and counted against their quotas.
- Directive 2008/56/EC on establishing a framework for community action in the field of marine environmental policy. This Marine Strategy Framework Directive (MSFD) outlines the legislation for an ecosystem-based approach to the management of human activities which supports the sustainable use of marine goods and services. The overarching goal of the Directive is to achieve 'Good Environmental Status' by 2020 across Europe's marine environment. The MSFD in the context of the Northeast Atlantic is discussed further on.
- The OSPAR Convention is the current legal instrument guiding international cooperation on the protection of the marine environment of the North-East Atlantic. Its role is further discussed below.

## OSPAR and the MSFD

The role of the OSPAR Commission is to harmonise policies and strategies, including the drawing up of programmes and measures, for the protection of the marine environment. The OSPAR Commission also undertakes and publishes at regular intervals joint assessments of the quality status of the marine environment and of the effectiveness of the measures taken and planned. On the basis of these Quality Status Reports, the OSPAR Commission identifies priorities for action for the protection of the marine environment.

The work of the OSPAR Commission is directed by the “Strategy of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic 2010–2020 (the North-East Atlantic Environment Strategy or NAE Strategy), adopted by contracting parties in 2010. The strategy focuses on the Ecosystem Approach to conserve marine ecosystems and safeguard human health and, when practicable, restore marine areas which have been adversely affected in the North-East Atlantic by preventing and eliminating pollution and by protecting the maritime area against the adverse effects of human activities. The Strategy is guided by the following principles:

- The precautionary principle;
- The polluter pays principle;
- The application of best available techniques and best environmental practice, including, where appropriate, clean technology;
- The principle of sustainable development through the application of the Ecosystem Approach;
- The principle that preventive action should be taken;
- The principle that environmental damage should as a priority be rectified at source.

Some of the key strategic objectives of the OSPAR Commission in the context of this fishery are listed below. Each of these has specific operational objectives and measurable indicators and targets are due to be developed and implemented, either by Contracting Parties or, where appropriate, within the OSPAR Commission:

- To halt and prevent by 2020 further loss of biodiversity in the OSPAR maritime area, to protect and conserve ecosystems, and to restore, where practicable, marine areas which have been adversely affected through monitoring and assessment, targeted actions for the protection and conservation of species, habitats and ecosystem processes, and developing an ecologically coherent OSPAR network of well-managed marine protected areas (“the OSPAR Network”);
- To ensure integrated management of human activities in order to reduce impacts on the marine environment, taking into account the impacts of, and responses to, climate change and ocean acidification;
- To facilitate and coordinate the work of relevant Contracting Parties in achieving good environmental status under the EU Marine Strategy Framework Directive (MSFD) by 2020.

The OSPAR Commission is the main platform through which EU member states and NEAFC Contracting Parties (including Norway and the Faroe Islands) coordinate their work to implement the MSFD in the North-East Atlantic. In the context of the MSFD, the NAE Strategy and the Joint Assessment and Monitoring Programme (JAMP, OSPAR Agreement 2010-4), include the following milestones for contracting parties:

- By 2012: determination of a set of characteristics for good environmental status for the marine waters and their environmental targets and associated indicators, using Ecological Quality Objectives, where applicable, and other existing tools as appropriate
- By 2014: monitoring programmes for the on-going assessment of the environmental status of their marine waters feeding into the review by the OSPAR Commission of the Joint Assessment and Monitoring Programme by 2014
- By 2015: identification of their programmes of measures in order to maintain or achieve good environmental status in their marine waters throughout the OSPAR maritime area
- By 2018: first review by the relevant Contracting Parties of the initial assessment of their marine waters, their descriptions of good environmental status, and their environmental targets and associated indicators

### 3.6. Principle Three: Management System Background

This section of the report gives a summary of the main features of the blue whiting fishery's management system, in terms of:

- (i) The governance and policy framework provided by international and national laws and standards;
- (ii) the institutions and processes and general fisheries management objectives and incentives; and
- (iii) The fishery-specific objectives, decision making processes and management system characteristics (compliance and enforcement, and research plan).

#### 3.6.1. Governance and policy framework

The four policy levels for the blue whiting fishery are:

- Annual Coastal States (CS) Agreement regarding i) the blue whiting TAC on the basis of ICES scientific advice, and ii) to confirm the % allocation key between CSs (Table 6) and various bilateral swap arrangements (section 3.3.4);
- The (revised) Convention of NEAFC, the Regional Fisheries Management Organisation (RFMO) that manages regulatory areas (RAs) beyond national EEZs, and that recommends measures to maintain the rational exploitation of fish stocks in the Convention Area on the basis of scientific advice from ICES and the CS Agreement;
- The Common Fisheries Policy (CFP, 2013) implemented by European institutions who manage the shared blue whiting fishery on behalf of the 9 member states holding historical entitlements (Table 7);
- Policies of national and devolved institutions that manage fisheries in each of the EU member states involved in the fishery, including vessel registration, data collection, research activities, fisheries inspections and prosecutions; and
- The national policies of the Faroe Islands (2015) and Norway (2008 and Gullestad et al, 2012).

#### Coastal States (CS) Agreement

Historically, access to countries' EEZ was arranged through bilateral agreements. There was no overall international agreement to regulate the fishery's exploitation until 16 December 2005 when some of the CS (EU, the Faroe Islands, Iceland and Norway) reached an agreement on the management and allocation of the blue whiting stock, after six years of negotiations.

The Blue Whiting CS agreement, starting in 2006, included a long-term management strategy that implied annual reductions in landings until the management goals were reached. This arrangement limited catches in 2006 to 2 Mt, allocated as follows: the EU 30.5%, the Faroe Islands 26.125%, Norway 25.745% and Iceland 17.63%. Russia's share of the blue whiting TAC is accommodated by transfers from some of the CS and by a proportion (8% of the TAC) set aside by NEAFC.

Over time, the negotiations considered three main grounds (and their combinations) as a basis to allocate shares of the TAC between the countries (Ekerhovd, 2010):

- Estimated biomass by time within their EEZ (stock size within a zone multiplied by the duration of the stay;
- Historical catch statistics from the zone; and
- Economic dependence.

The first criteria, of zonal attachment, is greatly complicated by migratory patterns of small pelagic species stocks, which make it more difficult to establish and uphold international agreements on catch quotas (Bjørndal and Ekerhovd 2014), particularly in times of variable and rapid climate change.

Ekerhovd (2008) summarises the seasonality of recent blue whiting stock distribution as follows (Table 18):

- 1<sup>st</sup> quarter (Q1): Migration to waters west of Ireland and Scotland, 50% of the stock is harvested by EU member countries and 50% is in international waters, harvested by non-EU member countries;
- 2<sup>nd</sup> quarter (Q2): Stock migrated to spawning grounds located within the EEZs of the EU (50%) and the Faroe Islands (50%);
- 3<sup>rd</sup> quarter: stock spreads out into the feeding areas in the Norwegian Sea, 10% remain in the Faroe Islands EEZ, 40% in Norwegian waters (that include 200 nm around Jan Mayen and Svalbard fishery protection zones), 25% in the Icelandic EEZ, and 25% in the high seas areas harvested by the EU and Russia;
- 4<sup>th</sup> quarter: 20% in the EEZ of Iceland, 25% around the Faroe Islands, 35% in Norwegian waters and 20% in the Norwegian Sea high seas areas harvested by the EU and Russia.

**Table 17. Blue Whiting zonal attachment in % per quarter (from Ekerhovd 2008)**

	Q1 JAN-MAR	Q2 APR-JUN	Q3 JUL-SEP	Q4 OCT-DEC
NEAFC RA	50		25	20
EU waters	50	50		
Faroe Islands		50	10	25
Iceland			25	20
Norway			40	35

Zonal attachment is increasingly invoked as a valid ground to revise historical access arrangements, in particular for small economies that are highly dependent on fishing, such as the Faroe Islands and Iceland.

North East Atlantic Fisheries Commission (NEAFC)

NEAFC is the RFMO for the North-east Atlantic. It is made up of delegations from Contracting Parties who have agreed to abide by the rules of the Convention on Future Multilateral Cooperation in North East Atlantic Fisheries, which entered into force in its current form in November 1982. It is now amended as the “New” Convention (NEAFC, 2007) that came into force adopted by the Commission in 2006 and which entered into force for all Contracting Parties on 29 October 2013. NEAFC’s contracting parties are Denmark (in respect of the Faroe Islands and Greenland), the European Union, Iceland, Norway and the Russian Federation.

The NEAFC Convention Area covers the FAO Major Fishing Area 27 apart from the east of the Barents Sea, stretching from the southern tip of Greenland to the south to Portugal (NEAFC, 2007). NEAFC is in charge of fisheries management in its RA, outside the CS’ 200 nautical miles EEZs. For the blue whiting fishery, the international or high seas waters of importance are:

- RA1 or XRR Reykjanes Ridge to the west of EU waters out to the south of Greenland (the ICES area to the midline with Canadian/ US waters to the east and Iceland waters to the north, and
- RA2 or XNS, in the Norwegian Sea also known as the “Banana Hole” (Figure 9).

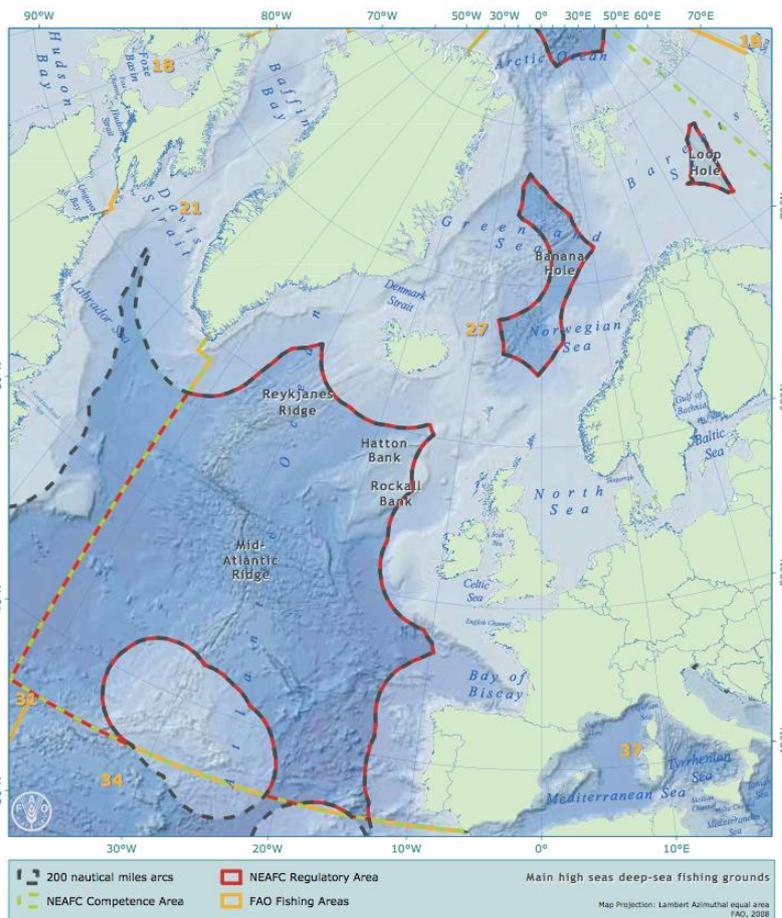


Figure 9. NEAFC Regulatory Areas in FAO Fishing Area 27 (from Bensch et al 2009)

NEAFC is the competent organisation for recommending measures to Contracting Parties to promote the rational exploitation of fisheries in the NEAFC area, but beyond areas under national fisheries jurisdiction of Contracting Parties. NEAFC's objective is to ensure the long-term conservation and optimum utilisation of the fishery resources in the Convention Area, providing sustainable economic, environmental and social benefits. To this end, NEAFC adopts management measures for various fish stocks and control measures to ensure that they are properly implemented when the stock are momentarily in its management area (Bjørndal, 2008). NEAFC also adopts measures to protect other parts of the marine ecosystem from potential negative impacts of fisheries. If Contracting Parties so request, NEAFC will also recommend measures for areas under their own fisheries jurisdiction.

NEAFC recently commissioned an analysis of the spatial distribution of blue whiting, from fisheries catches and research survey information (NEAFC, 2013). The study concluded that catches were too fisheries-dependent, and notably depended on access arrangements (such as to Faroese waters) being granted, to provide reliable indicators of changing zonal attachment. However, the report also concluded, on the basis of research surveys on the spawning grounds in March-April (IBWSS) that around 80% of the blue whiting spawning stock is within EU waters and 12% within Faroes' EEZ at that time. Allegedly (the details of negotiations are not public), these preliminary findings gave grounds for the EU during negotiations in January 2015 to cease swap arrangements with Norway. Norway had previously been allowed to catch a large part (61% in 2014) of its national quota in European waters.

Currently there is no forum, within NEAFC or otherwise, that offers a transparent mechanism for the resolution of legal disputes between CS that could be considered to be effective in dealing with most issues or to be appropriate to the context of the fishery. Although NEAFC CS parties have improved TAC setting according to scientific advice for its shared stocks, and for blue whiting in particular, failure to reach agreement on TAC and TAC shares have affected all small pelagic stocks (mackerel, Atlanto-Scandian herring, and blue whiting) at some stage in the past (NEAFC, 2014a: 47 and 100). This and other issues identified by the 2014 NEAFC Performance Review panel (NEAFC, 2014a) were discussed by NEAFC Contracting Parties during an Extraordinary Meeting in 2015. The aim is to ensure that the Contracting Parties have had extensive discussions on the report and on possible ways forward before the Annual Meeting of NEAFC in November 2015.

The newly reformed CFP (CFP, 2013), which is binding for all EU member states, defines the long-term policy objective to “ensure that fishing and aquaculture activities contribute to long-term environmental, economic, and social sustainability”. Specifically,

- The CFP aims to contribute implementing the Union's international obligations including “to take conservation and management measures designed to maintain or restore marine resources at levels which can produce the MSY both within sea areas under national jurisdiction and on the high seas, and to cooperate with other states to that end, obligations to apply the precautionary approach widely to conservation, management and exploitation of fish stocks, obligations to ensure compatibility of conservation and management measures where marine resources occur in sea areas of different jurisdictional status and obligations to have due regard to other legitimate uses of the seas.” The EU is a contracting party to UNCLOS, and the CFP provides for the implementation of the UN Fish Stocks Agreement (UNFSA) relating to the

conservation and management of straddling (and highly migratory) fish stocks, and promotes compliance with international conservation and management measures by fishing vessels on the high seas.

- Ensure coherence with the fisheries targets laid down in the Decision by the Conference of the Parties to the Convention on Biological Diversity on the Strategic Plan for Biodiversity 2011 – 2020, and with the biodiversity targets adopted by the European Council of 25 and 26 March 2010; to
- base sustainable exploitation of marine biological resources on the precautionary approach, which derives from the precautionary principle referred to in the first subparagraph of Article 191(2) of the Treaty, taking into account available scientific data; and to
- contribute to the protection of the marine environment, to the sustainable management of all commercially exploited species, and in particular to the achievement of good environmental status by 2020, as set out in Article 1(1) of the Marine Strategy Framework (MSFD) Directive (2008/56/EC of the European Parliament and of the Council and Commission Decision of 1 September 2010 2010/477/EU on criteria and methodological standards on good environmental status of marine waters).

National Fisheries and Environmental Policies are also relevant. For EU member states, the policies defer to the CFP for conservation objectives and the negotiation of international agreements and all EU-registered vessels are bound to abide by the CFP provisions and the agreements signed by the EU Delegation (NEAFC and the Coastal Agreement). All Coastal States have fisheries legislation that defines clear long-term objectives that are consistent with the common objectives set by NEAFC and the MSC Principles and Criteria and the precautionary approach. The national policies of the Faroe Islands (2015), Iceland and Norway (see Gullestad et al, 2012) apply to their registered vessels and to EU-registered vessels fishing in their EEZ that are compatible with CFP measures. It is important to note that fisheries policies of the Faroe Islands and Norway (and Iceland and Russia) have several key features in common, such as a discard ban, specific trawl escapement grids and move-on rules and real-time closures to protect juvenile fish, many of which are also in force in NEAFC waters.

There are currently no agreed provisions of blue whiting quota for EU vessels in Icelandic or Norwegian waters. However, Norwegian vessels were catching most of their blue whiting quota in EU waters until 2014. Conversely, the resumption of consultations between the EU and the Faroe Islands (EU-Faroe Islands, 2014) has led to reciprocal access to take up to 35 000 t of their catch limits in each other's waters (Faroese-EU, 2105).

Norway: The Ministry of Fisheries and Coastal Affairs, Directorate of Fisheries and the Norwegian Coast Guard work are together in fisheries management. Stakeholders play an important role (e.g. Norges Sildesalgslag, sales organisation for pelagic fish), Norges Fiskarlag (fishermen's association) and environmental NGOs. Roles, functions and responsibilities are set in the Marine Resources Act (2008). The Ministry of Fisheries and Coastal Affairs is responsible for policy and regulation, while the Directorate of Fisheries acts as a technical body with responsibility for secondary legislation, as well as monitoring and compliance, supported by the Coast Guard for surveillance at sea. Quotas are allocated to fleet groups according to a scheme based on vessel groups by gear and length of the vessels.

Stakeholders can participate in twice-yearly Regulatory Meetings, open to all. The national Institute of Marine Research operates an advisory programme for each regional ecosystem (North Sea, Norwegian Sea, Barents Sea), in addition to its MAREANO programme, which aims to map the distribution of natural resources, biodiversity, the physical environment supporting bottom communities, vulnerable habitats, impacts from fishing; sediment types, and chemical contaminants. Norway contributes actively to NEAFC and ICES research programmes and working groups, and to OSPAR reports.

Faro Islands: Institutional arrangements are similar to those of Norway, although with much smaller teams. The Ministry of Fisheries and Maritime Affairs (Fiskimálaráðnum) is responsible for the management of all fisheries in Faroese waters and for Faroese vessels in EU and waters. The framework for the regulation of commercial fisheries, both in home, foreign and international waters, is the Commercial Fisheries Act (1994) amended in 1996 and subsequently. Detailed regulations govern vessel and fishing licences, area closures, gear and data requirements and other technical regulations for commercial fisheries, after review and advice from the Fisheries Advisory Committee and Committee on Fishing Days where the industry is represented. The Fisheries Laboratory provides scientific advice on effort control (days at sea) for the Faroese fleet, on the basis of cooperative ICES stock assessment. The total quota available for the Faroese fishery is agreed through either a) bi-lateral agreements including annual agreements with Iceland, Norway and EU, or b) through international fisheries commissions, especially the North East Atlantic Fisheries Commission (NEAFC) for this fishery. The Faroese Fisheries Inspectorate controls the VMS, e-logbook, days at sea uptake and all fishing vessel activities generally (Løkkegaard et al, 2007).

### **3.6.2. Institutions, processes and general fisheries management**

International, European and national institutions of the CS Agreement on blue whiting are each involved in the management of their shared fisheries to some extent, through coordination mechanisms that are especially strong for research and the provision of scientific advice to management through ICES, and for monitoring, control and surveillance activities (MCS) through Joint Deployment Plans (JDP) that cover all shared small pelagic fisheries.

The key institutions are listed in Table 18.

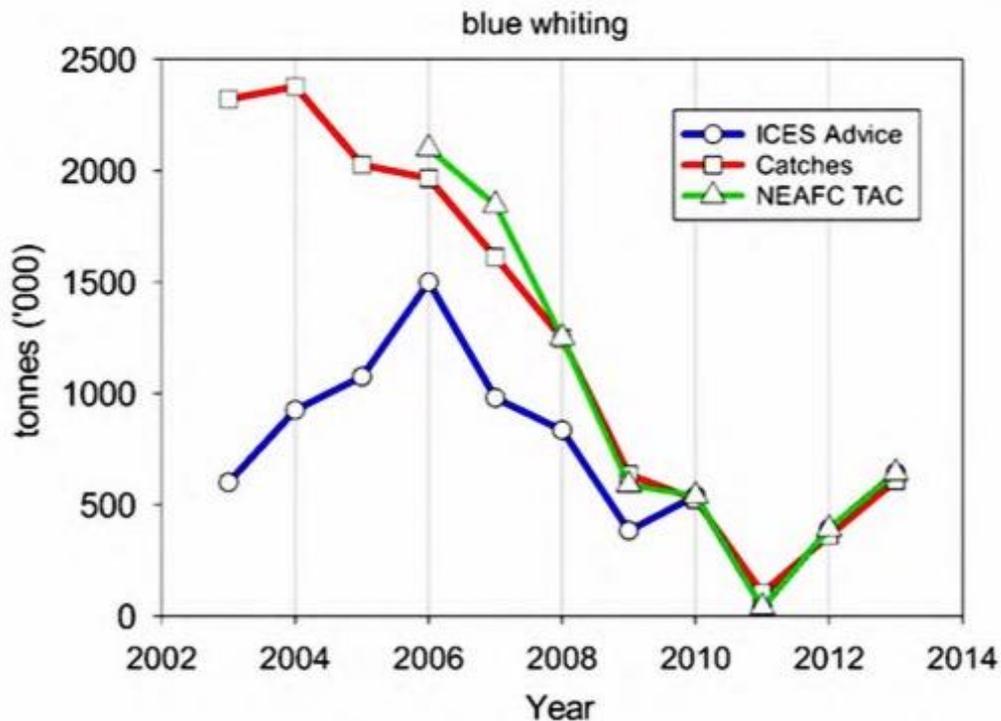
The management plan agreed by the CS (Norway, Faroe Islands, Iceland, and EU) in December 2005 was evaluated by ICES in 2006 and was revised in 2008. Depending on the fishery, management plans are usually revised every 5 or 10 years.

In 2013, NEAFC requested ICES to evaluate the HCR element (ICES, 2013b) and options (ICES, 2013c) of the long-term management plan. In its latest WG report however, ICES (2015a) notes that international agreement has still not been reached with respect to new HCRs and, therefore, the plan revised in 2008 is not yet implemented.

**Table 18. Institutions involved in the management blue whiting fishery**

Organisation	Role / responsibility
NEAFC	RFMO with responsibility for management of fishery outside national waters (including data collection, licensing, management measures based on ICES advice and MCS)
European Commission	Makes recommendations to the Fisheries Council on TACs based on scientific advice from ICES, represents EU at NEAFC Coastal States meetings, negotiates multilateral and bilateral arrangements (including with the Faroe Islands and with Norway)
European Council of (Fisheries) Ministers	Regulates on the basis of proposals from the Commission for all non-legislative matters such as annual TACs, control and inspection programme etc.
ICES	Coordinates research activities, including research surveys in North-east Atlantic, provides stock assessments and scientific advice to the EC (WG WIDE) and on demand to NEAFC
STECF	Scientific, economic and technical advisory committee to the EC; reviews management plans and ICES advice periodically
EFCA	European Fisheries Control Agency, coordinates the Joint Deployment Plan in support of control and monitoring pelagic fisheries in Western Waters of Northeast Atlantic
PELAC	Pelagic Advisory Council, EU stakeholder advisory council (to the Commission) for pelagic fisheries, cover all small pelagic fisheries in the Western Atlantic including the blue whiting fishery (Working Group 1)

The institutions managing the blue whiting stock have been increasingly effective at following the scientific advice up to 2013. The overall TAC and catches coincided with ICES advice between 2010 and 2013 (), but in 2014 the agreed TAC (1,200, kt) exceeded ICES scientific advice (949 kt, ICES 2014b) as it did in 2015, when the lack of agreement led to a TAC of 1,260 kt when ICES advice (ICES 2015b) was to reduce catches to 840 kt. In the event, the 2014 catch was 1.155 kt, and ICES estimate a catch of 1,300 kt in 2015.



**Figure 10. TAC and ICES advice for Blue Whiting 2003 - 2013 (from NEAFC, 2014)**

In addition to the regional institutions described above, the following EU member states have fishing interests in the blue whiting fishery:

The Netherlands, Germany, UK (England), France, Lithuania: Pelagic Freezer-Trawler Association (PFA): UoC1

Denmark: Danish Pelagic Producers Organisation (DPPO): UoC2

Republic of Ireland: Killybegs Fishermen's Organisation Ltd (KPO): UoC3

UK (Scotland): Scottish Pelagic Sustainability Group Ltd (SPSG): UoC4

France: Compagnie des Pêches de Saint Malo (CDPSM): UoC5

In each member state the ministerial team in charge of fisheries is involved in the EU-level negotiations at the annual Council of Fisheries Ministers meeting, regarding national proportions of TAC and preparations of the CS Agreement negotiations. The Technical Agencies (research institutions, data collection and MCS agencies) coordinate their activities and resources through the EU institutions and mechanisms given above according to their vessels' activities in the fishery.

Policies, objectives and management mechanisms are fully framed by the CFP. Some national provisions differ, such as for the nature of fishing rights in the form of fishing licences delivered by government and species quota (privately owned, individual transferrable, swappable, leasable or government owned) and for the management of vessel quota. POs may manage vessel quota on behalf of government or of their members, or they may be managed directly by government agency. In all cases, the national systems concerned provide a clear and historical recognition of fishing rights within a system that includes reliable statistical data

collection, mechanisms to ensure quota uptake within agreed rules and penalties for overshoot.

### 3.6.3. Groups with interest in the fishery and consultations

The Pelagic Advisory Council (PELAC) brings together all interest groups in this fishery. Its General Assembly (GA) has currently 40 members from the catching sub-sector (vessel owners, small-scale fishermen, employed fishermen and POs), processors and traders; and stakeholders from environmental NGOs, aquaculture producers and recreational fishermen. Members of the Executive Committee (ExCom, currently 17), which adopts recommendations put forward by the GA and Working Groups, are from the fisheries sector (60% of the seats) and other interest groups (40%). Non-fishery users on the working group dealing with blue whiting fishery (WG1) are environmental NGOs (Dutch Elasmobranch Society, Pew Charitable Trusts, Seas at Risk, WWF European Policy Office) and social NGOs (European Transport Workers Federation, North Sea Women's Network).

All members of the client group and various interest groups are represented on ExCom and on WG1. The PELAC ExCom meets three times per year; WGs and other focus groups meet at least 4 times per year. The PELAC has been closely involved in the reform of the CFP and implementation of its new provisions. For example, the PELAC WG1 has provided a forum to discuss and propose the European pelagic discard plan, including a 10% inter-annual quota flexibility for blue whiting originally suggested by NEAFC (see PELAC 2014) in north-western waters (ICES zones Vb, VI and VII,), which was then established through EC delegated regulation No 1393/2014 (see section 3.5.2).

All PELAC documents, participants and minutes of working groups and plenary meetings can be found on its website (<http://www.pelagic-ac.org>).

The European Association of Fish Producers Organisations (EAPO) represents some of the largest POs in Europe including those of the client group. POs in Europe are tasked to advise their members on production quotas and marketing plans. The EAPO Northern Pelagic Working Group (NPWG) represents the specific commitments and interests of pelagic fisheries producers to European institutions. It has been lobbying the European Commission (EC) for a swift resolution to the coastal states agreement for blue whiting<sup>6</sup> since January 2015.

There is a long-standing record of cooperation between industry and national government agencies according to each UoC professional grouping (PFA, DPPO, KFO, SPSG and CDPSM), based on continuous and open consultations with national management authorities and other relevant stakeholders. At international level, Bjorndal and Ekerhovd (2014) suggest that fishing industry representatives were instrumental in devising the CS Agreement in the blue whiting fishery that was agreed annually between 2007 and 2014, through the European and national processes described above, and through the national management committees in Norway and the Faroe Islands in particular.

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<sup>6</sup> <http://eapo.com/UserFiles/20150116%20-%20NPWG%20press%20release%20re%20blue%20Whiting.pdf>

### 3.6.4. Monitoring, control and surveillance (MCS) arrangements

There is a comprehensive MCS plan for the fishery, which involves all European member states and operative from the coastal states parties to the CS Agreement. All vessels in the UoCs have a vessel monitoring system (VMS), monitored by their national administrations, and fill in electronic logbooks transmitted daily and systematically cross-checked for actual quantities upon landing. Prior to landing at designated ports, and as they enter or leave the EU, NEAFC, Norwegian or Faroese fishing zones, the vessels have to notify authorities with quantities on board by species and product type. Upon landing, MCS-competent authorities sample the catch to verify total volume, species and fish size and validate electronic logbook data (see section 5 on Traceability for detail). Validated landings data are counted towards the official landing statistics and vessel and national quota uptakes. These provisions also apply to Norwegian and Faroese or other CS vessels landing blue whiting in their homeports. Finally, together the parties to the CS Agreement (the EU, Norway, Faroe Islands, Iceland and the Russian Federation) set up a MCS Working Group in 2013, to ensure a level playing field between fleets and to improve the risk-based MCS of pelagic fisheries (EU-Faroes, 2014).

All vessels in the 5 UoCs are EU-registered fishing vessels (see section 3.3.3) and their activities are monitored by national fisheries agencies and coordinated at the European level. The legal framework for EU-registered vessels is the 'Control regulation' (Council Regulation (EC) No 1224/2009) that establishes "a Community control system for ensuring compliance with the rules of the common fisheries policy". The regulation, with direct effect in all member states, introduced from 1<sup>st</sup> January 2012 a point system for fishing licences to deter serious infringements, national registers of fishing offences against the CFP and the possibility for the Commission to close fisheries when the TAC is reached. It also compelled European member states to include effective, proportionate and dissuasive sanctions in their legislation, and ensure that the rules be respected. These provisions strengthened those of the 'IUU Regulation'<sup>7</sup>, which strengthens collaborations with RFMOs, and improved the integration of Port State Measures control systems and catch certification between member states (MRAG et al, 2014).

The Commission has its own inspectors, who can visit national authorities at any time to check that EU rules are implemented correctly. When the Commission finds that national authorities are not enforcing CFP rules properly, it may close the fishery down, and deduct any quota overshoots from the future national share of the TAC. It may also withhold fisheries-specific funds and take the member state concerned to the EU Court of Justice.

Following some serious infringements in the herring and mackerel fisheries, the Commission put specific MCS arrangements in place in 2012 to control the pelagic fisheries (mackerel, herring, horse-mackerel, anchovy and blue whiting) in Western Waters (WW)<sup>8</sup> (Commission Decision 2012/807/EU). On the basis of a long-term risk analysis undertaken by all member states agencies concerned, and for each fishery including blue whiting, the European

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<sup>7</sup> Council Regulation (EC) No 1005/2008 of 29 September 2008, and Commission Regulation (EC) No 1010/2009 of 22 October 2009 laying down detailed rules for the implementation of Council Regulation (EC) No 1005/2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing

<sup>8</sup> Western waters are EU waters of ICES sub-areas V, VI, VII, VIII and IX and in EU waters of CECAF 34.1.11

Fisheries Control Agency (EFCA) coordinates a regional WW JDP, the objectives of which are:

- a) to inspect fishing activities at sea and primarily landings of vessels likely to catch herring, mackerel, horse mackerel, anchovy or blue whiting which have been identified by risk analysis as liable to be in contravention of fishery conservation measures, particularly: mis-recording of catches (at sea and ashore), high-grading or discarding (at sea and ashore), misreporting area of capture (at sea and ashore), Incorrect catch composition (at sea and ashore), illegal transshipments (at sea), slipping (at sea), failure to report landings and transshipments; and
- b) to carry out inspections of weighing, marketing, freezing, processing, storage, takeover, transport, import and export of these pelagic species (ashore).

Since 2012, the EFCA WW JDP has coordinated between 3 and 6 campaigns each year using combined Fishing Patrol Vessels surveillance and inspections, aircraft surveillance flights, routine and targeted inspections of landing activities and transport, with the participation of national Fisheries control agencies from Germany, Denmark, Estonia, France, United Kingdom, Ireland, Lithuania, Latvia, the Netherlands and Poland. JDP campaign reports are published on the EFCA website<sup>9</sup>. National competent authorities for the EU IUU Regulation<sup>10</sup> were contacted by email for information regarding any enforcement concern with the vessels operating in the blue whiting fishery. No concern was reported.

The EFCA also coordinates the EU's role in support of NEAFC's Scheme of Control and Enforcement<sup>11</sup>. NEAFC has a Permanent Committee on Control and Enforcement that meets several times each year<sup>12</sup>, to discuss matters of concern and improvement to the regional MCS system, such as vessel IUU lists, Port-State-Measures and data reporting. NEAFC (2014b) has specific provisions regarding catch reporting, on board storage and inspection of pelagic catches (mackerel, herring, blue whiting and horse mackerel) from its Regulatory Area, from contracting and non-contracting parties. According to a recent independent Performance Review, the NEAFC has been very successful at controlling IUU activities from non-authorized vessels, and is developing close collaboration with national and European fisheries inspectorates to ensure non-compliance from contracting parties are minimal.

Research activities conducted to underpin management with respect to P1 and P2 are described in the corresponding sections above. There have also been a number of studies regarding key aspects of P3 described above, including on changes in the large scale distribution of blue whiting, which appears to be related to total stock size, with a contraction at lower abundance, and to water temperature (Ekerhovd and Kvamsdal, 2014). Research is coordinated as part of the CS Agreement process, and also through NEAFC, which passes some requests for scientific advice to ICES.

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<sup>9</sup> see [http://efca.europa.eu/pages/home/jdp\\_north\\_2012.htm#PELAGIC](http://efca.europa.eu/pages/home/jdp_north_2012.htm#PELAGIC)

<sup>10</sup> Council Regulation (EC) No 1005/2008 establishing a Community system to prevent, deter, and eliminate IUU fishing

<sup>11</sup> <http://www.neafc.org/mcs/scheme>

<sup>12</sup>

## 4. Evaluation Procedure

### 4.1. Harmonised Fishery Assessment

For this assessment, harmonisation was required for Principle 1 (target species stock status) with the ongoing MSC assessment of the Faroese Pelagic Organisation blue whiting fishery (CAB: DNV) and parts of Principle 3 (PI 3.1.1 – Governance and Policy Legal and Customary framework) with the fisheries.

For **Principle 1**, the DNV scores (obtained in September 2015) and those for the current assessment are shown in the following table. Scoring comments and justifications have been compared between these two assessments, and they are not dissimilar, with the main differences due to this assessment now having taken the most recent (Oct. 2015) ICES advice into consideration.

**Table 19. Principle 1 comparison against Faroese assessments**

PI	This fishery	Faroese blue whiting DNV on going
1.1.1	90	100
1.1.2	90	80
1.1.3	NA	n/a
1.2.1	85	100
1.2.2	90	80
1.2.3	90	90
1.2.4	95	100

With respect to **Principle 3**, the fisheries listed in Table 18 have in common a policy framework that relies on ad-hoc stock-specific CS Agreements negotiated annually to fix shares of the TAC between NEAFC contracting parties (EU, Iceland, Norway, Russia and Denmark on behalf of Faroe Islands and Greenland). The CS Agreements for all fisheries listed in Table 18 have not been honoured in recent years.

**Table 18. Fisheries in the MSC programme with which harmonisation was required**

Fishery name	Status	PCR reference
Faroese Pelagic Organization (FPO) Atlanto-Scandian (AS) herring fishery	Certified February 2010, suspended until 1 <sup>st</sup> April 2015	DNV (2010)
SPSG, DPPO, PFA, SPFPO & KFO AS herring purse seine and pelagic trawl fishery	In (part re-) assessment by MEC	N/A
Norway spring spawning herring (SSH)	Re-certified with a condition for 3.1.1 in July 2014	DNV (2014)

MINSAs North East Atlantic mackerel (several previously independently certified fisheries)	Re-assessment suspended until 30 <sup>th</sup> April 2015	N/A
Faroese Pelagic Organization (FPO) Blue Whiting fishery	In assessment by DNV	N/A

The Faroese fishery was suspended, because the Faroes' rejection of the CS Agreement for AS herring was considered to constitute a 'controversial unilateral exemption to an international agreement', and hence it put the fishery out of scope (Principle 3, Criterion A1). This did not apply in the case of the EU fishery.

Harmonisation was also required with the North East Atlantic mackerel fisheries because a similar situation arose in 2013 as a consequence of the Faroese decision and a CS agreement hasn't yet been reached. The fisheries that were previously certified are currently seeking re-certification under the common umbrella of the Mackerel Industry Northern Sustainability Alliance (MINSAs: Scottish SPSPG, Danish DPPO, Irish IPSA and IPSPG, Norwegian NFA, PFA countries and Swedish SPFPO).

Negotiations of the Blue Whiting CS Agreement for 2015 broke down in December 2014. Although meetings have been taking place since, Norway increased its %shares of the TAC unilaterally and no compromise was yet agreed in May 2015. Given the recent (1998-2012) zonal attachment of blue whiting, which is predominantly in EU (80%) and Faroese (12%) waters at the peak of the fishing season (NEAFC 2013b), Norway will be unlikely to catch the additional tonnage and affect the stock. Therefore, the situation is similar to the Norway's Atlanto-Scandian herring and a condition on P 3.1.1 will be required.

On the 16th March 2015, a harmonisation meeting took place between MSC, DNV GL, Intertek, FCI and MEC discussing the issue of CS disputes in Northeast Atlantic pelagic fisheries and how CABs could address this in their assessments in a harmonised manner. The meeting took place between Sophie des Clers, the MSC and the respective experts for the fisheries listed in Table 18. The key agreed outcomes from the meeting are copied in Appendix 6.

The main substantive points regarded how CS needed to recognize zonal attachment as well as historical access arrangements, and in particular:

- Scientifically there is some evidence that the Faroese fishery has a case for a re-alignment of the historical *ad hoc* arrangements for quota sharing of its small pelagic species fisheries. The case is based on evidence of recent changes in distribution ranges due to climate and ecosystem changes (see section 3.6.1 and Dankel et al, 2015).
- A similar case now exists for the blue whiting fishery in European waters (NEAFC, 2013).
- Small pelagic fisheries in the North-east Atlantic should be harmonized with AS herring fisheries in the MSC programme and join in "the Norwegian condition" at their recertification.

- The condition wording was agreed between CABs during the teleconference harmonisation meeting, for all small pelagic (Atlanto-Scandian herring and North East Atlantic mackerel (see 4.1) fisheries shared between NEAFC CS.

The agreed way forward resulted in the Faroese AS herring fishery MSC certificate being reinstated from 1<sup>st</sup> April 2015 (EU-Faroes, 2015).

A separate harmonisation exercise took place in preparation of the blue whiting site visit, which followed on from the site visit for the assessment of the SPSG, DPPO, PFA, SPFPO & KFO AS herring purse seine and pelagic trawl fishery. The Team Leader and P3 expert for this fishery (Sophie des Clers) was able to discuss information, rationales, and the needs and grounds for harmonisation by email and face to face with the AS Herring fishery MEC Team Leader Jo Gascoigne and P3 expert Geir Honneland.

**Table 19. P3 scores in assessments of other Western Waters small pelagic fisheries**

PI	This fishery	AS Herring MEC on going	DNV (2014)	DNV (2010)
3.1.1	65	65	65	85
3.1.2	90	100	100	100
3.1.3	100	100	100	100
3.1.4	100	90	100	100
3.2.1	90	90	90	90
3.2.2	80	85	90	100
3.2.3	100	100	100	95
3.2.4	90	90	100	100
3.2.5	80	80	100	90

#### 4.2. Previous assessments

No previous assessments have been conducted for this fishery.

#### 4.3. Assessment Methodologies

The assessment methodology is given in Table 20.

**Table 20. Assessment methodology used.**

Version of Certification Requirements used	1.3
Version of Full Assessment Reporting Template used	1.3
Default assessment tree used with adjustments?	No
Details of adjustments made	N/A

## 4.4. Evaluation Processes and Techniques

### 4.4.1. Site Visits and consultations

Two site visits were held during the assessment process: one in Copenhagen, Denmark on the 25<sup>th</sup> to 26<sup>th</sup> November 2014 and another in St. Malo, France on the 13<sup>th</sup> February 2015. The stakeholders consulted during and after the site visits are listed in Table 21.

**Table 21. Stakeholders consulted**

Name	Role / organisation	Type of consultation
Sophie des Clers	MEC	Assessor
Mike Pawson	MEC	Assessor
Chrissie Sieben	MEC	Assessor
Jo Gascoigne	MEP	Copenhagen site visit
Geir Honneland	MEP	Copenhagen site visit
Sean O'Donoghue	KFO - CEO	Copenhagen site visit
Gerard van Balsfoort	PFA – President	Copenhagen site visit
Esben Sverdrup-Jensen	DPPO - President	Copenhagen site visit
Ian Gatt	SPSG – Secretary	Copenhagen site visit
Jérôme Nous	CDPSM	Saint Malo site visit
Martine Edouard-Leborgne	CDPSM	Saint Malo site visit
Frédéric Quiniou	CDPMEM	Saint Malo site visit
Yves Duteil	CDPMEM	Saint Malo site visit
Yannick Le Peillet	CDPMEM	Saint Malo site visit
Lucille Aumont	CDPMEM	Saint Malo site visit
Sascha Fassler	IMARES	Remotely Copenhagen site visit
David Miller	IMARES	Remotely Copenhagen site visit
Martin Pastoors	PFA – Scientific advisor	Contacted remotely
Leon Bouts	Nederlandse Voedsel en Waren Autoriteit	Contacted remotely
Nicolas Goascoz	Ifremer	Contacted remotely
Sabine Manthey-Ehrich	German Federal Office for Agriculture and Food	Contacted remotely
MMO	England and NI vessels	Contacted remotely
Ulla Wiborg	Danish Ministry of Food, Agriculture and Fisheries	Contacted remotely
Seamus Gallagher	Irish Sea-Fisheries Protection Authority	Contacted remotely
Simon Dryden	Marine Scotland Compliance	Contacted remotely
Matthieu Reunavot	French Maritime administration DDTM-DML35	Contacted remotely

At key stages of the assessment process, stakeholders were contacted and provided with an opportunity to comment (for a full list of stakeholders, please see Appendix 7). Stakeholders were contacted at the following stages:

- i. Fishery announcement – 12 August 2014
- ii. Assessment team and timeline - 12 August 2014
- iii. Assessment team confirmation – 4 September 2014
- iv. Use of Default Assessment Tree – 2 October 2014
- v. Site visit notification – 21 October 2014 and 13 January 2015
- vi. Proposed peer reviewers – 7<sup>th</sup> July 2015

#### 4.4.2. Stakeholder comments during evaluation

The consultations with stakeholders focused on the provision of information for the assessment and no concerns were raised about the fishery by any of the stakeholders.

#### 4.4.3. Evaluation Techniques

##### a) Media announcements

MEC selected two media outlets: Fishing News EU and the MSC website. Fishing News EU was selected because it reaches a wide range of seafood professionals in the EU, while the MSC press release targeted a wide range of stakeholders within the sustainable seafood industry. The combination of both ensured that key stakeholders were notified of this fishery's announcement.

##### b) Methodology for information gathering

Information for the assessment was gathered during the site visit and through separate consultation and correspondence with individual stakeholders. The PO representatives listed in Table 21 provided most of the information regarding the operation and management of the fishery. Catch data for the fleets under assessment were obtained from the respective sea fisheries authorities. Scientific information was mostly available on the ICES website.

##### c) Scoring process

Scoring was partly completed during the initial Copenhagen site visit and partly in May, after the St. Malo site visit, by remote discussion. The scores were decided using the following scoring logic:

**Table 22. Scoring Issue Summary**

How many scoring issues met?	SG60	SG80	SG100
All	60	80	100
Half	FAIL	70	90
Less than half	FAIL	65	85
More than half	FAIL	75	95

Note that where there is only one scoring issue in the SG, the issue can be partially scored – in this case the team used their judgement to determine what proportion of it was met, e.g. at the 100 level, a small part met = 85, about half met = 90, nearly all met = 95.

#### d) Decision rules for final outcome

The decision rule for MSC certification is as follows:

- No PIs scores below 60;
- The aggregate score for each Principle, rounded to the nearest whole number, is 80 or above.

The aggregate score for each Principle is calculated by taking the average score for each section followed by the average of all the section scores.

#### e) Scoring elements

For Principle 1, only one scoring element was considered, i.e. the North-east Atlantic blue whiting stock. The set of scoring elements that were considered in the outcome PIs under retained, discarded and ETP species in Principle 2 is listed in Table 23.

**Table 23. Scoring elements**

Component	Scoring elements	Main/not main	Data-deficient or not
1.1 – Target species	Blue Whiting	N/a	No
2.1 – Retained species	Mackerel	Not main	No
	Horse mackerel	Not main	No
2.2 – Discards	None	N/a	N/a
2.3 – ETP species	Marine mammals	N/a	No

## 5. Traceability

### 5.1. Eligibility Date

The target eligibility date for this fishery has been set as the date of certification.

### 5.2. Traceability within the Fishery

For RSW vessels (UOCs 2, 3 & 4), no processing takes place on board and the catch is landed as fresh.

For PFA freezer-trawler vessels (UoC 1) the catch is graded and the fish frozen whole as blocks on board. The frozen blocks are boxed up in cartons, which indicate the date of catch, species, batch date and fishing area. Fish from separate production batches are kept on separate pallets and are never mixed. All PFA catch is destined for human consumption and is therefore subject to EU traceability requirements.

For the Joseph Roty II (UoC 5), blue whiting fillets are processed into surimi paste, which is then frozen into blocks. The frozen blocks are boxed up in cardboard cartons secured with plastic straps and labelled (including net weight, catch area and production date). Upon unloading, product is sold to the CDPSP group marketing subsidiary company, CDPSP-Commercialisation, which has a separate CoC Certificate (number MSC-C-54514). The warehouse will, therefore, not be considered as part of the fishery certificate.

All vessels in the UoCs are registered in the EU and equipped with an operational vessel VMS unit. Through the VMS, flag states can monitor the location of each of their vessels at any time. At-sea inspections are routinely carried out by EU member states coordinated by the EFCA risk-based JDP specific to the pelagic fisheries (see section 3.6.4). Participating member states may access VMS data and board fishing vessels to control the catch (e.g. catch composition and fish size) and fishing gear (e.g. mesh size) on deck and volumes of fish in the holds. In accordance with EU regulations, retained and discarded volumes by species are recorded into electronic logbooks, which are submitted to the authorities every 24 hours. Authorities must be notified at least 4 hours before a vessel reaches a designated port. Upon landing, MCS competent authorities sample the catch to verify total volume, species and fish size and validate electronic logbook data (a 10% discrepancy is permitted).

For PFA vessels (UoC 1), a fishery inspector checks each pallet against log-sheet records for total weight and a statutory subsample of pallets is set aside, allowed to thaw, and the actual carton contents weighed to verify the accuracy of the log-sheet and labelling records.

For RSW vessels (UOCs 2, 3 & 4), for which the landed catch is only sorted and weighed after pumping/transporting into the factory, the inspection occurs in the processing factories. Validated landings data are then counted towards the official landing statistics and quota uptake.

The combination of electronic logbooks, at-sea inspections, port controls and VMS data makes that this fishery is subject to a robust traceability system. For PFA vessels (UoC 1), further traceability is provided by the client's own internal systems that record the date and time of fishing activities, and the date and time of packaging on board vessels. All of the frozen fish landed from this fishery can be traced back to the date and location of the trawl haul in which

the fish were caught (Andrews et al., 2010). Upon landing, the production of the Joseph Roty II (UoC 5) is checked by competent MCS authorities against e-logbook records, and against the CDPSM's own traceability system.

### **b) Possibility of vessels fishing outside the Units of Certification and risk of substitution of certified products with non-certified products**

The UoCs are defined by the vessels listed in Section 3.2, the area fished (Northeast Atlantic - ICES Subareas I–IX, XII, and XIV), the gear used (pelagic trawl) and the targeted stock (North-east Atlantic blue whiting). The possibility of vessels fishing outside the UoCs and the risk of substitution of certified with non-certified products was considered minimal on the basis that:

- The blue whiting stock under assessment is assumed to cover the entire North-east Atlantic, there is therefore no risk of mixing with other stocks (**i.e. No vessel from any UoC will be fishing in non-certified and certified waters on the same trip**);
- All the UoCs cover the entire area of distribution of the blue whiting stock;
- All member vessels of DPPO, SPSG, KFO and PFA are included in the UoCs;
- The CDPSM Joseph Roty II (UoC 5) is the only factory trawler vessel that produces frozen surimi paste in Europe, when it only operates in the blue whiting fishery;
- Some of the vessels in the UoCs also operate purse seine nets in addition to pelagic trawls, however purse seines are not used to target blue whiting – they are instead used in the Atlanto-Scandian herring, North Sea herring and mackerel fisheries that take place in different seasons and at different depths. The two gear types are not used during the same trip, and gear type must be entered in the logbook for every catch;
- Herring purse seine fisheries may catch very small quantities of blue whiting, but they would not be in marketable condition after catch, transport and grading/sorting in factories and would instead be destined for fishmeal/fish oil. Blue whiting is a very soft and delicate fish, and cannot be kept together with large quantities of other species. There is thus minimal risk of any purse seine-caught blue whiting being marketed as MSC product;
- For RSW vessels, all catch is pumped directly into the hold after which it is pumped/transported directly to the processing factory. On PFA vessels, fish from separate production batches are kept on separate pallets and are never mixed.
- The JR II only produces surimi paste from the blue whiting its catches in the North Atlantic within the UoC; finally,
- On landing, all catches are subject to thorough inspection regimes at designated landing sites (see Table 26 and Table 27). The traceability systems from vessels to factories ensure that no non-UoC vessels can enter the MSC supply chain and that the risk of substitution of certified fish with non-certified fish is minimal.

### **c) Transhipping**

All transshipment operations at sea are prohibited in EC waters and may only take place in designated ports in EU Member States subject to authorisation from the competent authorities.

Transshipment at sea is not banned by Norwegian Law, but strictly controlled. The Norwegian Fisheries Ministry reserves the right to prohibit transshipment at sea or port under Regulations

amending the regulations of 6 August 1993 no. 802 relating to prohibitions against landings of fish.

For this fishery, all landings or transshipments in ports of Contracting Parties by foreign fishing vessels are subject to control by the Port State Control Measures of the NEAFC. This is strictly regulated and all landings must be reported to Port State Control in only designated ports at least 24 hours before estimated arrival. Transshipments in the NEAFC Area can only be undertaken by vessels authorised by NEAFC Contracting Parties or cooperating non-Contracting Parties. These vessels have strict reporting obligations and have to send VMS position data to the NEAFC database.

None of the vessels in the UoC have asked to (or intend to) carry out transshipment activities in EC or Norwegian waters.

#### **d) Points of landing**

The choice of landing point is made on the basis of market proximity to the fishing grounds and price. For some vessels in the UoCs, it is often the case that buyers have already been identified prior to the fishing trip taking place or are identified via electronic auction prior to landing. The catch is thus often not stored but changes ownership immediately after landing. For a number of the larger vessels including the Joseph Roty II (UoC 5), the catch is first sold within a group of integrated companies.

In accordance with Commission Regulation (EC) No 1542/2007 of 20 December 2007 on landing and weighing procedures, Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy and with the Commission Implementing Decision of 19 December 2012 establishing a specific control and inspection programme for pelagic fisheries in Western Waters of the North East Atlantic (2012/807/EU), vessels with more than a combined volume exceeding 10 t of small pelagic species<sup>13</sup> must land or tranship only at designated ports, and individual countries must each establish a list of designated EU and non-EU landing sites with capacity to control landings of industrial quantities (see section 3.6.4). Furthermore, NEAFC has a list of 99 (EU and non-EU) designated ports across its contracting parties that are allowed to land fish caught in its regulatory areas. The lists are regularly updated by CS, and the main possible ports are given in Table 24 and Table 25.

This commission Regulation applies to herring, mackerel and horse mackerel and not specifically to blue whiting. The NEAFC lists provided in Table 26 and Table 27 though are in relation to the implementation of Port State Measures and therefore include the landing of Blue Whiting. As a result, the vessels in the UoCs land only in the largest ports of the lists provided below and will not land outside the designated ports specified in Table 26 and 27. This is important as only the designated ports have the controls and facilities in place to ensure the Port State Measures are being met and maintained.

This will be confirmed during on-going surveillance audits.

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<sup>13</sup> taken in ICES zones I, II, IIIa, IV, Vb, VI, and VII

**Table 24. Designated EU landing ports for small pelagic species**

Member state	Ports
Denmark	Esbjerg, Thyborøn, Hanstholm, Hirtshals, Skagen, Grenå, Gilleleje
France	Boulogne-sur-Mer, Fécamp, Cherbourg, Saint-Malo, Douarnenez
Germany	Cuxhaven, Bremerhaven, Rostock, Sassnitz
Ireland	Killybegs, Rós a Mhíl (Rossaveal), Castletownbere, An Daingean (Dingle), Rathmullan
The Netherlands	Ijmuiden, Scheveningen, Vlissingen, Velsen-Noord, Harlingen
Sweden	Träslövsläge, Rönning, Mollösund, Ellös, Lysekil, Kungshamn
UK – England, Isle of Man, Wales	North Shields, Whitby, Scarborough, Humberside (Hull and Grimsby), Lowestoft, Shoreham, Brixham, Plymouth, Newlyn, Padstow, Milford Haven, Holyhead, Fleetwood, Whitehaven, Douglas, Peel, Port St Mary, Ramsey
UK - Scotland	Eyemouth, Aberdeen, Peterhead, Fraserburgh, Lerwick, Ullapool, Oban, Mallaig
UK - Northern Ireland	Ardglass, Kilkeel, Portavogie

**Table 25. Designated non-EU landing ports for small pelagic species**

Country	Ports
Faroe Islands	Fuglafjørð, Kollafjørð
Norway	Engelsviken, Lyngdal, Egersund, Sirevåg, Skudeneshavn, Avaldsnes, Haugesund, Brandasund, Storebø, Bergen, Florø, Kalvåg, Iglandsvik, Måløy, Deknepollen, Selje, Fosnavåg, Leinøy, Moltustranda, Liavågen, Fiskarstrand, Ålesund, Ellingsøy, Longva, Misund, Dyrnes, Vikan, Uthaug, Rørvik, Lovund, Træna, Bodø, Værøy, Leknes, Gimsøysand, Kabelvåg, Svolvær, Skrova, Lødingen, Sortland, Sigerfjorden, Bø, Eidet, Myre, Torsken, Husøy, Senjahopen, Sommarøy, Tromsø, Vannøy, Båtsfjord

The framework for the regulation of commercial fisheries in the Faroese, both in home, foreign and international waters, is the Commercial Fisheries Act of 1994 and its subsequent amendments. Based on this legislation, detailed regulations are implemented governing vessel and fishing licences, area closures, gear and data requirements including in port landings. This regulation provides requirements for the provision of logbook data, notification

of landings and the provision for port and sea based inspections for all vessels in Faroese waters.

In Norway, legislation is managed and implemented the Fishery Directorate department of the government and includes regulations on the provision of logbook data, notification of landings and the provision for port and sea based inspections for all vessels in Norwegian waters.

The assessment team did not see a risk to traceability regarding the regulatory aspects of the Faroes Islands and Norway (indeed in many cases they were seen as providing stronger regulation than that applied directly by the EU countries).

### **5.3. Eligibility to Enter Further Chains of Custody**

The following has been deemed through this assessment to be eligible to enter into further chains of custody;

#### **UoC1 – Pelagic Freezer-Trawler Association (PFA) – The Netherlands**

North-east Atlantic blue whiting caught by pelagic mid-water trawl in the North-east Atlantic (ICES Subareas I–IX, XII, and XIV) and by the vessels listed in Table 1 after the date of certification will be eligible to enter further chains of custody, pending the outcome of this evaluation.

#### **UoC2 – Danish Pelagic Producers Organisation (DPPO)**

North-east Atlantic blue whiting caught by pelagic mid-water trawl in the North-east Atlantic (ICES Subareas I–IX, XII, and XIV) and by the vessels listed in Table 5 after the date of certification will be eligible to enter further chains of custody, pending the outcome of this evaluation.

#### **UoC3 – Killybegs Fishermen’s Organisation Ltd (KFO) - Ireland**

North-east Atlantic blue whiting caught by pelagic mid-water trawl in the North-east Atlantic (ICES Subareas I–IX, XII, and XIV) and by the vessels listed in Table 4 after the date of certification will be eligible to enter further chains of custody, pending the outcome of this evaluation.

#### **UoC4 – Scottish Pelagic Sustainability Group Ltd (SPSG) - UK**

North-east Atlantic blue whiting caught by pelagic mid-water trawl in the North-east Atlantic (ICES Subareas I–IX, XII, and XIV) and by the vessels listed in Table 4 after the date of certification will be eligible to enter further chains of custody, pending the outcome of this evaluation.

#### **UoC5 – Compagnie des Pêches de Saint Malo - France**

North-east Atlantic blue whiting caught by pelagic mid-water trawl in the North-east Atlantic (ICES Subareas I–IX, XII, and XIV) and by the vessels listed in Table 5 after the date of certification will be eligible to enter further chains of custody, pending the outcome of this evaluation.

**Any changes to the membership of these UoCs (as shown in the relevant tables) should be communicated and approved by MEC prior to any claim being eligible on any additions to the UoC.**

**Separate chain of custody certification will be necessary from the point of landing onwards for all product landed from the UoCs as described above, regardless whether change of ownership occurs after landing and within the scope of the MSC Chain of Custody requirements.**

The eligible points of landing are as shown in Table 24 and Table 25.

#### **5.4. Eligibility of Inseparable or Practically Inseparable (IPI) stock(s) to Enter Further Chains of Custody**

There are no IPI stocks involved in this fishery.

## 6. Evaluation Results

### 6.1. Principle Level Scores

Table 26. Final Principle Scores

Final Principle Scores					
Principle	UoC 1	UoC 2	UoC 3	UoC 4	UoC 5
Principle 1 – Target Species	90.0	90.0	90.0	90.0	90.0
Principle 2 – Ecosystem	86.0	89.3	89.3	89.3	87.7
Principle 3 – Management System	88.4	88.4	88.4	88.4	88.4

### 6.2. Summary of Scores

Table 27. Summary of Scores

Principle	Component	Weighting	PI number	Performance Indicator	UoC1	UoC2	UoC3	UoC4	UoC5
1	Outcome	0.5	1.1.1	Stock status	90	90	90	90	90
			1.1.2	Reference points	90	90	90	90	90
			1.1.3	Stock rebuilding	N/A	N/A	N/A	N/A	N/A
	Management	0.5	1.2.1	Harvest Strategy	85	85	85	85	85
			1.2.2	Harvest control rules and tools	90	90	90	90	90
			1.2.3	Information and monitoring	90	90	90	90	90
			1.2.4	Assessment of stock status	95	95	95	95	95
2	Retained species	0.2	2.1.1	Outcome	95	95	95	95	100
			2.1.2	Management	85	85	85	85	100
			2.1.3	Information	95	95	95	95	100
	Bycatch species	0.2	2.2.1	Outcome	80	100	100	100	80
			2.2.2	Management	90	100	100	100	90
			2.2.3	Information	80	100	100	100	80
	ETP species	0.2	2.3.1	Outcome	80	80	80	80	80
			2.3.2	Management	80	80	80	80	80
			2.3.3	Information	80	80	80	80	80
	Habitats	0.2	2.4.1	Outcome	90	90	90	90	90
			2.4.2	Management	90	90	90	90	90
			2.4.3	Information	95	95	95	95	95

	Ecosystem	0.2	2.5.1	Outcome	80	80	80	80	80
			2.5.2	Management	80	80	80	80	80
			2.5.3	Information	90	90	90	90	90
3	Governance and Policy	0.5	3.1.1	Legal and customary framework	65	65	65	65	65
			3.1.2	Consultation, roles and responsibilities	90	90	90	90	90
			3.1.3	Long term objectives	100	100	100	100	100
			3.1.4	Incentives for sustainability	100	100	100	100	100
	Fishery-specific management system	0.5	3.2.1	Fishery specific objectives	90	90	90	90	90
			3.2.2	Decision making processes	80	80	80	80	80
			3.2.3	Compliance and enforcement	100	100	100	100	100
			3.2.4	Research plan	90	90	90	90	90
			3.2.5	Management performance evaluation	80	80	80	80	80

### 6.3. Summary of Conditions

#### 6.3.1. Conditions

The condition is summarised in Table 28 below. For more details, including milestones please see Appendix 1.2.

**Table 28. Summary of Conditions**

Condition number	Condition	Performance Indicator
1	<p>There is a mechanism in place for international cooperation in the fishery, between coastal states through the NEAFC for the management of the fishery in international waters (NEAFC, 2007), which can be considered effective since 2010. In contrast, the annual agreement between coastal states to share the annual TAC (the Coastal States Agreement) is not completely effective. Presently, following changes in a (temporary) swap arrangement decided by the EU, Norway has unilaterally set its own quota for 2015, which is well in excess of its TAC share agreed since at least 2007. The dispute has not yet been resolved (May 2015) although negotiation is on-going.</p> <p>Therefore, although NEAFC provides an international framework for cooperation between Coastal States, it does not currently extend to an 'agreement and delivery of management actions consistent with ...</p>	3.1.1

	<p>sustainable management advice'. Furthermore, the unresolved dispute in relation to the Norwegian blue whiting share of the TAC is a clear indication that the management system does not have a mechanism to address disputes that is 'effective in dealing with most issues'</p> <p>There should be evidence of organised and effective cooperation between all affected parties, which delivers outcomes consistent with meeting Principle 1 (As detailed in Condition 1). There should also be evidence of an effective and transparent mechanism for dispute resolution between the parties (UNFSA Article 10 paragraphs a), h) and j) are particularly relevant to the meeting of this condition).</p>	
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### 6.3.2. Recommendations

For this assessment official landings data were obtained for the DPPO and SPSG fleets and CPDSM for the Joseph Roty II. Data were also requested from the Dutch and Irish fisheries authorities (NVWA and SFPA) these were not provided in time to be included in the report. Although the catch patterns for the KFO RSW vessels and PFA freezer-trawlers could be inferred from the available data, **the team recommends that annual catch data are made available in time for any subsequent MSC assessments and surveillance audits.**

### 6.4. Determination, Formal Conclusion and Agreement

Following consideration of all stakeholders' inputs and comments to the Public Comment Draft Report (PCDR), the fishery assessment team concludes that the fishery should be certified against the MSC standard. This determination remains a recommendation pending the completion of the formal objections process and the final certification decision by the MEP official decision making entity.

**(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.**

### 6.5. Changes in the fishery prior to and since Pre-Assessment

No pre-assessment was undertaken for this fishery.

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## Appendices

## Appendix 1. Scoring and Rationales

### Appendix 1.1. Performance Indicator Scores and Rationale

Evaluation table 1 - 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	<b>Guidepost</b>	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.
	<b>Met?</b>	Y	Y	Y
	<b>Justification</b>	The Northeast Atlantic Blue Whiting stock is at a high level in recent years and has been above $B_{lim}$ (1.5 Mt) for the last 20 years. There is no stock recruitment relationship and $B_{lim}$ is set at the lowest observed spawning stock biomass in 1990. ICES' uncertainty about estimates of SSB is medium to low and, with SSB well above $MSY B_{trigger}$ , there is a high degree of certainty that the stock is above the point where recruitment would be impaired. Hence SG60a, SG 80a and SG100a are met.		
b	<b>Guidepost</b>		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.
	<b>Met?</b>		Y	N
	<b>Justification</b>	In the last 5 years the SSB has been well above the biomass reference point ( $SSB_{MP} = B_{pa} = MSY B_{trigger} = 2.25$ Mt), and fishing mortality has fluctuated around (been generally below) its target reference point of $F = 0.18$ (FSMY), and meets SG80b. However, the most recent ICES assessment (Aug. 2015) indicates that F exceeded FSMY in 2014 and SG100b is not met.		

<b>References</b>	<p>ICES. 2014a. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 26 August - 1 September 2014, ICES Headquarters, Copenhagen, Denmark. ICES CM 2014/ACOM: 15. 938 pp.</p> <p>ICES. 2014b. Blue Whiting in Subareas I–IX, XII, and XIV - Advice September 2014. Report of the ICES Advisory Committee 2014. ICES Advice, 2014. Book 9.</p> <p>ICES. 2014e. Report of the Benchmark Workshop on Pelagic Stocks (WKPELA), 17–21 February 2014, Copenhagen, Denmark. ICES CM 2014/ACOM: 43. 341 pp.</p> <p>ICES. 2015a. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 21 - 31 August Pasaia, Spain. ICES CM 2015/ACOM: 15. 512 pp.</p>		
<b>Stock Status relative to Reference Points</b>			
	<b>Type of reference point</b>	<b>Value of reference point</b>	<b>Current stock status relative to reference point</b>
<b>Target reference point</b>	Management plan	B 2.25 Mt F 0.18	SSB (2015) = 4.0 Mt (178%)* F <sub>2014</sub> = 0.43 (239%)* *Note that these values are from the latest ICES assessment (Sept 2015), which has some uncertainties and may not be aligned with the existing reference points.
	MSY	B 2.25 M t F 0.30 per year	SSB (2015) = 4.0 Mt (178%) F <sub>2014</sub> = 0.43 (239%)
<b>Limit reference point</b>	PA limit	B <sub>lim</sub> 1.5 Mt F <sub>lim</sub> 0.48 per year	SSB (2015) = 4.0 Mt (267%) F <sub>2014</sub> = 0.43 (90%)
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>			<b>All UoCS 90</b>
<b>CONDITION NUMBER (if relevant):</b>			<b>N/A</b>

Evaluation table 2 - 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	<b>Guidepost</b>	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.	
	<b>Met?</b>	Y	Y	
	<b>Justification</b>	Reference points have been established based on assessment of the stock, and have been reviewed twice in the last 10 years. Experience shows that the reference points are appropriate to maintain the stock at sustainable levels. Reference points are appropriate for the stock and have been estimated. SAG60a and SG80a are met.		
b	<b>Guidepost</b>		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.
	<b>Met?</b>		Y	Y
	<b>Justification</b>	Reference points are appropriate for the stock and are based on spawning stock biomass and fishing mortality estimated from the stock assessment. The stock size has varied considerably from around the target level in the 1980s and 1990s to well above this level since 1997, though there is no stock-recruit relationship (but there are phases of high and low productivity that tend to influence stock biomass) that would justify $B_{lim}$ on a strictly biological basis. Nevertheless, the limit reference point is set at the lowest observed SSB level (in 1990), at which there is no evidence of an appreciable risk of reproductive capacity being impaired. SG80b and SG100b are met		
c	<b>Guidepost</b>		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.
	<b>Met?</b>		Y	N

<b>Justification</b>	<p>The target reference points have been established based on the stock assessment and reviews by ICES of the implications of a range of values (there been no substantive change since 1998). The target reference points are clearly aimed at and have been demonstrated to be keeping the stock at a level that is consistent with <math>B_{MSY}</math> with a high degree of certainty (apparent since around 2008 when reducing <math>F</math> to below <math>F_{target}</math> allowed the stock to recover from a decline (prior to an upsurge in recruitment). Because the productivity of the stock changes with recruitment phases it is not possible to estimate a single value of <math>B_{MSY}</math>, and <math>F_{MSY}</math> is used as proxy target in this case. ICES advise that the <math>B_{lim}</math> and <math>B_{pa}</math> reference points currently in use are compatible in relation to the two productivity regimes, and that <math>B_{pa}</math> (2.25 Mt) should be retained as MSY <math>B_{trigger}</math> for the MSY framework. Though there has been a degree of precaution in setting the reference levels such that the biomass of blue whiting is kept high, both achieving MSY and the continuing availability of blue whiting to predators (e.g. hake), the most recent assessment (Aug. 2015) has resulted in a downward shift in the SSB estimates and higher <math>F</math> values, and the target reference points may need to be re-evaluated. Thus the target reference points meet SG80c but not SG100c requirements.</p>		
<b>Guidepost</b>		For key low trophic level stocks, the target reference point takes into account the ecological role of the stock.	
<b>Met?</b>		Not relevant	
<b>Justification</b>	Blue whiting is not a low trophic level stock (trophic level 4.1 according to Fishbase). Hence this guidepost is not relevant and not scored		
<b>References</b>	<p>ICES. 2007. Report of the Workshop on Limit and Target Reference Points (WKREF) ICES CM 2007/ACFM:05  ICES. 2012. Report of the Benchmark Workshop on Pelagic Stocks (WKPELA 2012) 13–17 February 2012 Copenhagen, Denmark. ICES CM 2012/ACOM: 47  ICES. 2013a. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 27 August - 2 September 2013, ICES Headquarters, Copenhagen, Denmark. ICES CM 2013/ACOM: 15. 950 pp.  ICES. 2014e. Report of the Benchmark Workshop on Pelagic Stocks (WKPELA), 17–21 February 2014, Copenhagen, Denmark. ICES CM 2014/ACOM: 43. 341 pp.  ICES. 2014a. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 26 August - 1 September 2014, ICES Headquarters, Copenhagen, Denmark. ICES CM 2014/ACOM: 15. 938 pp.  ICES. 2014b. Blue Whiting in Subareas I–IX, XII, and XIV - Advice September 2014. Report of the ICES Advisory Committee 2014. ICES Advice, 2014. Book 9.  ICES. 2015a. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 21 - 31 August Pasaia, Spain. ICES CM 2015/ACOM: 15. 512 pp.</p>		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>			<b>All UoCs 90</b>
<b>CONDITION NUMBER (if relevant):</b>			<b>N/A</b>

Evaluation Table for PI 1.1.3 – Not applicable, only scored if PI 1.1.1 60-80

Evaluation table 3 - 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	<b>Guidepost</b>	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.
	<b>Met?</b>	Y	Y	Y
	<b>Justification</b>	The harvest strategy is defined in the management plan that was agreed for this stock between the four coastal states (Norway, Faroe Islands, Iceland, and EU) in December 2005, with the aim to maintain the SSB of the blue whiting stock at levels above 1.5 M t (Blim) and the fishing mortality rates at levels of no more than 0.32 (Fpa). Though ICES evaluated this management plan in 2006 and found it not to be in accordance with the precautionary approach in a period of low recruitment, a new draft management plan was proposed In July 2008, which ICES considers to be precautionary if fishing mortality in the first year is immediately reduced to the fishing mortality that is implied by the HCR. The main elements of this plan are presented under 1.2.2 below. In essence, the management plan incorporates a harvest control rule (HCR) that requires i) a target fishing mortality (F = 0.18) if SSB is above SSBMP (= Bpa), ii) a linear reduction to F = 0.05 if SSB is between Bpa and Blim, and iii) F = 0.05 if SSB is below Blim (1.5 m t). It is therefore responsive to the state of the stock and its elements have clearly been designed to work together towards achieving stock management objectives reflected in the target and limit reference points (SG60a, SG80a and SG100a satisfied).		
b	<b>Guidepost</b>	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.
	<b>Met?</b>	Y	Y	N

	<b>Justification</b>	<p>The harvest strategy has been fully tested and shown to be responsive to changes in SSB, reducing F as SSB declined 2007 – 2011, and allowing F to increase again as the stock recovered (recruitment driven). SG60b is met.</p> <p>The management plan has been found by ICES to be consistent with the precautionary approach and experience has shown that it is achieving its objectives. SG80 is therefore satisfied. The harvest strategy utilises management by catch control (TAC) to achieve fishing mortality target reference points that has been demonstrated to be keeping the stock at a target level that is consistent with <math>F_{MSY}</math> (there is no corresponding biomass level, as this depends on the phase of high or low recruitment) with a high degree of certainty. This is most clearly apparent since around 2008 when reducing F to below <math>F_{target}</math> allowed the stock to recover from a decline (prior to an upsurge in recruitment) to well above <math>B_{pa}</math>. However, the harvest strategy is currently being re-evaluated in light of the new management plan (yet to be implemented), and there is insufficient evidence exists to show that it will achieve the objectives of maintaining the exploitation rate at target levels. As a consequence, SG100b is not met.</p>		
<b>c</b>	<b>Guidepost</b>	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	<b>Met?</b>	Y		
	<b>Justification</b>	There is extensive monitoring of the blue whiting stock based on a robust assessment with good commercial catch-at-age data and annual surveys (SG60).		
<b>d</b>	<b>Guidepost</b>			The harvest strategy is periodically reviewed and improved as necessary.
	<b>Met?</b>			N
	<b>Justification</b>	<p>A management plan was agreed for this stock between the four coastal states (Norway, Faroe Islands, Iceland, and EU) in December 2005, which was revisited in July 2008 when a new draft management plan was proposed that ICES considers to be precautionary if fishing mortality in the first year is immediately reduced to the fishing mortality that is implied by the HCR. One of the elements of this plan is that the Parties, on the basis of ICES advice, shall review this long-term management plan at intervals not exceeding five years and when the stock is being exploited with a fishing mortality of 0.18 (<math>F_{target}</math>). This was achieved from 2010 onwards and, in May 2013 ICES evaluated a NEAFC request to review a potential new HCR function, including stabilization mechanisms (as required by the 2008 MP). Though the harvest strategy has been periodically reviewed there is no evidence that it is improved as necessary (the 2008 MP was not yet been implemented), and SG100d is not met.</p>		
<b>e</b>	<b>Guidepost</b>	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.

	<b>Met?</b>	Not relevant	Not relevant	Not relevant
	<b>Justification</b>	Not Relevant: sharks are not targeted in this fishery.		
	<b>References</b>	<p>ICES. 2008c. Report of the Working Group on Widely Distributed Stocks (WGWIDE) ICES CM 2008/ACOM:13</p> <p>ICES. 2013b. NEAFC request to ICES to evaluate the harvest control rule element of the long-term management plan for Blue Whiting. Special request, Advice May 2013. Section 9.3.3.1 of ICES advice Book 9.</p> <p>ICES. 2013c. NEAFC request to ICES to evaluate the extra harvest control rule options for the long-term management plan for Blue Whiting, Advice October 2013. Section 9.3.3.7 of ICES advice Book 9.</p> <p>ICES. 2014a. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 26 August - 1 September 2014, ICES Headquarters, Copenhagen, Denmark. ICES CM 2014/ACOM: 15, 938 pp.</p> <p>ICES. 2014b. Blue Whiting in Subareas I–IX, XII, and XIV - Advice September 2014. Report of the ICES Advisory Committee 2014. ICES Advice, 2014. Book 9.</p> <p>ICES 2015 b. Blue Whiting (<i>Micromesistius poutassou</i>) in Subareas I–IX, XII, and XIV (Northeast Atlantic)- Advice September 2015. Report of the ICES Advisory Committee 2015. ICES Advice, 2015. Book 9.</p>		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				<b>All UoCs 85</b>
<b>CONDITION NUMBER (if relevant):</b>				<b>N/A</b>

Evaluation table 4 - 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	<b>Guidepost</b>	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.	
	<b>Met?</b>	Y	Y	
	<b>Justification</b>	<p>The 2005 management plan incorporate a harvest control rule (HCR) that requires i) a target fishing mortality (<math>F = 0.18</math>) if SSB is above <math>SS_{BMP}</math> (<math>= B_{pa} = 2,25Mt</math>), ii) a linear reduction to <math>F = 0.05</math> if SSB is between <math>B_{pa}</math> and <math>B_{lim}</math>, and iii) <math>F = 0.05</math> if SSB is below <math>B_{lim}</math> (1.5 Mt). In July 2008 a new long-term management plan was proposed by the Coastal States, which is consistent with the precautionary approach and aims to ensure harvest within safe biological limits and designed to provide for fisheries consistent with MSY. This plan continues with the existing strategy, aiming with high probability to ensure that the size of the stock is maintained above 1.5 M t (<math>B_{lim}</math>) and the stock is exploited with a fishing mortality of 0.18 (on relevant age groups as defined by ICES). The prime mechanism within the HCR, once the above targets have been met (which they have been since 2010), requires that the TAC is set each year in accordance with the following rules:</p> <ul style="list-style-type: none"> <li>• In the case that SSB is forecast to reach or exceed 2.25 M t (<math>SS_{BMP}</math>) on 1 January of that year, the TAC shall be fixed at the level consistent with <math>F=0.18</math>.</li> <li>• In the case that SSB is forecast to be less than 2.25 M t on 1 January of that year, the TAC shall be fixed that is consistent with: <math>F = 0.05 + [(B - 1.5)(0.18 - 0.05) / (2.25 - 1.5)]</math></li> <li>• In the case that SSB is forecast to be less than 1.5 M t (<math>B_{lim}</math>) on 1 January of that year, the TAC will be fixed that is consistent <math>F = 0.05</math>.</li> </ul> <p>Though the 2008 m has not yet been adopted, both plans have a well defined HCR that is consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached. SG60a and SG80a are satisfied</p>		
b	<b>Guidepost</b>		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.
	<b>Met?</b>		Y	N

	<b>Justification</b>	<p>The HCR as outlined above is designed to take into account the main uncertainties of stock trends and variations in recruitment. The demographics of the blue whiting stock are such that recruitment influences the exploitable biomass (and SSB) relatively gradually, such that the HCR can effectively modify detrimental trends in the latter (though note that lacking an SSB/R relationship there is no biological cause for concern of a reducing SSB). Another uncertainty is the consistency of yield to the fishery, which the HCR addresses by allowing the Parties to discuss the appropriateness of adopting constraints on TAC changes within the plan when the stock is being exploited at a rate consistent with maintaining an SSB exceeding 2.25 MT.</p> <p>To this end, ICES evaluated a potential new HCR function in May 2013, examining a number of alternative F targets in the range of 0.1—0.35 (they were all found to be precautionary up to an F target of 0.32 = Fpa), with only a minimal increase in mean TAC for F targets above 0.3. There are no significant differences in catch, either with or without over the entire time period examined, and the HCR is therefore based solely on fishing mortality considerations in relation to levels of SSB.</p> <p>Although it could be said that this design of the HCR takes a wide range of uncertainties into account, there is no evidence that the draft management plan is actually in force (ICES 2015 states that no international agreement has been obtained with respect a specific HCR to be used for a new management plan for blue whiting), and may not be compatible with the most recent stock assessment. We conclude that whilst SG80b is satisfied, SG100b is not.</p>		
<b>c</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	Y	Y	Y
	<b>Justification</b>	<p>The HCR is based solely on fishing mortality considerations in relation to levels of SSB and uses TAC controls as its main regulatory tool. TAC is an accepted regulatory measure to control exploitation pressure and, for blue whiting, is appropriate and effective considering that there are few if any discards and no slipping in the main directed fisheries, and little bycatch in other fisheries. The TAC is set based on the HCR and ICES' advice. The stock has increased in recent years in response to a decline in fishing mortality achieved through management actions. Hence, the tools in use have been shown to be effective in achieving the exploitation levels required under the harvest control rules (SG60c, SG80c and SG100c are met).</p> <p>However, Norway declared a unilateral increase in its national quota in 2015, which could amount to an increase in 100,000 t in the 2015 TAC. This is only a potential problem if the Norwegian fleet can take it in Norwegian waters. In such a case, the total catch would lie midway between ICES' MSY framework TAC of 1,326,000 t, and ICES Precautionary approach TAC of 1,402,000 t, both of which would leave an SSB in 2016 of over 5 million t, which is well above Bpa/MSYBtrigger of 2,250,000 t. Since it seems unlikely that FMSY will be exceeded, this is deemed to be a P3 issue, and is dealt with under 3.1.1.</p> <p>All SG60 and SG80 criteria are met, and one of the two SG100 criteria is met, giving a score of 90.</p>		

<p><b>References</b></p>	<p>ICES. 2008c. Report of the Working Group on Widely Distributed Stocks (WGWIDE) ICES CM 2008/ACOM:13  ICES. 2013a. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 27 August - 2 September 2013, ICES Headquarters, Copenhagen, Denmark. ICES CM 2013/ACOM: 15. 950 pp.  ICES. 2013b. NEAFC request to ICES to evaluate the harvest control rule element of the long-term management plan for Blue Whiting. Special request, Advice May 2013. Section 9.3.3.1 of ICES advice Book 9.  ICES. 2013c. NEAFC request to ICES to evaluate the extra harvest control rule options for the long-term management plan for Blue Whiting, Advice October 2013. Section 9.3.3.7 of ICES advice Book 9.  ICES. 2014b. Blue Whiting in Subareas I–IX, XII, and XIV - Advice September 2014. Report of the ICES Advisory Committee 2014. ICES Advice, 2014. Book 9.  ICES 2015 b. Blue Whiting (<i>Micromesistius poutassou</i>) in Subareas I–IX, XII, and XIV (Northeast Atlantic)- Advice September 2015. Report of the ICES Advisory Committee 2015. ICES Advice, 2015. Book 9.</p>
<p><b>OVERALL PERFORMANCE INDICATOR SCORE:</b></p>	<p><b>All UoCs 90</b></p>
<p><b>CONDITION NUMBER (if relevant):</b></p>	<p><b>N/A</b></p>

Evaluation table 5 - 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	<b>Guidepost</b>	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.
	<b>Met?</b>	Y	Y	N
	<b>Justification</b>	<p>The blue whiting stock has been well studied since the start of the fishery in the 1970s, and biological data are collected on a regular basis. In particular, an annual internationally coordinated acoustic (and fishing and hydrographical stations) survey has been carried out each year in March-April on the spawning grounds to the west of the British Isles since before the start of the fishery. In its current form, starting in 2004, research vessels from the Russian Federation, Norway, Faroe Islands, the Netherlands and Ireland provide a broad synoptic coverage in relation to the temporal occurrence of spawning aggregations.</p> <p>These data are used together with information from the fishery in the assessments, which have been used to examine the production dynamics of the stocks and estimate reference levels which support the harvest strategy, which is designed to regulate exploitation to achieve MSY and avoid depleting the stock's reproductive capacity. SG60a and SG80a are satisfied.</p> <p>Comprehensive information is available on stock structure, stock productivity, fleet composition, stock abundance and fishery removals. Environmental information is available and has been used to investigate the possible causes of the high and low productive phases in the blue whiting stock (which might help predict recruitment trends in the medium term). However, there has been no attempt to examine quantitatively the ecological role of blue whiting (in relation to hake, for example). Consequently, the SG100a scoring issues are only partially met.</p>		
b	<b>Guidepost</b>	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.
	<b>Met?</b>	Y	Y	Y

	<b>Justification</b>	<p>The annual assessment of the blue whiting stock is in ICES category 1 (invoking surveys as regularly monitoring and good fisheries-dependent data collection) and provides biomass and fishing mortality estimates that are the basis of the HCR (SG60b is met). Fishery removals are well monitored, and discards are known to be negligible in comparison with total international catches and are used in the assessment. Retrospective analyses indicate that the assessment of F and SSB is consistent from year to year, and reviews have shown that reference levels are robust. The level of accuracy and coverage is consistent with the HCR, and SG80b is met.</p> <p>ICES WGWISE considers that the 2014 assessment has a low to moderate uncertainty of the absolute estimate of F and SSB, more certainty about the recent steep decline in F and increase in SSB, but less certainty on the strength of recruiting year-classes (an age-reading workshop is proposed for 2017 due to concern about the consistency of age readings of blue whiting at ages 1 – 3 from surveys). There is, therefore, a good understanding of inherent uncertainties in the information and data and the robustness of the assessment and management to this uncertainty. SG100b is met.</p>	
<b>c</b>	<b>Guidepost</b>		There is good information on all other fishery removals from the stock.
	<b>Met?</b>		Y
	<b>Justification</b>	<p>The main fishery for blue whiting, to the west of the UK and Ireland and in the Norwegian Sea and Northern North Sea, is well sampled and provides almost all the information used in the assessment. Smaller fisheries that take blue whiting as by-catch (the Spanish and Portuguese coastal bottom-trawl fleets, for example) are also well sampled, and blue whiting bycatches in other fisheries are negligible in relative terms. SG80c is satisfied.</p> <p>All SG60 and SG80 criteria are met, and one of the two SG100 criteria is met, giving a score of 90.</p>	
	<b>References</b>	<p>Bailey, R.S. 1982. The population biology of Blue Whiting in the North Atlantic. <i>Advances in Marine Biology</i>, 19: pp 257-355</p> <p>Hatun H, Payne, M.R., and Jacobson, J.A. 2009. The North Atlantic subpolar gyre regulates the spawning distribution of Blue Whiting (<i>Micromesistius poutassou</i>). <i>Canadian Journal of Fisheries and Aquatic Science</i> 66: 759-770.</p> <p>ICES. 2009b. Report of the planning group for pelagic ecosystem surveys (PGNAPES) ICES 2009 RMC:06</p> <p>ICES. 2013a. Report of the Working Group on Widely Distributed Stocks (WGWISE), 27 August - 2 September 2013, ICES Headquarters, Copenhagen, Denmark. ICES CM 2013/ACOM:15. 950 pp.</p> <p>ICES. 2014a. Report of the Working Group on Widely Distributed Stocks (WGWISE), 26 August - 1 September 2014, ICES Headquarters, Copenhagen, Denmark. ICES CM 2014/ACOM: 15, 938 pp.</p> <p>ICES. 2014c. Report of the Working Group of International Pelagic Surveys (WGIPS). ICES CM 2014/SSGESS:01</p>	
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>			<b>All UoCs 90</b>
<b>CONDITION NUMBER (if relevant):</b>			<b>N/A</b>

Evaluation table 6 - 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	<b>Guidepost</b>		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.
	<b>Met?</b>		Y	Y
	<b>Justification</b>	<p>The information and data summarized above have been used in a state-space model (SAM) for the last four years. SAM has relative few model parameters and provides similar model diagnostics and almost identical assessment output compared to the previously used SMS model. Consequently, the perception of the stock has remained unchanged, though using SAM is thought to provide more stable estimates of F and SSB from year to year.</p> <p>Subsequent to the draft assessment report being peer reviewed, the ICES WGwide published the results of its 2015 stock assessment, which is based on the SAM model used previously. ICES considers that this year's assessment (and forecasts) is more uncertain than in previous years, and it has led to a substantial downward revision of the historical SSB and a small upward revision of F. Nevertheless, ICES considers that the assessment is appropriate for the stock and for the harvest control rule, and it clearly takes into account the major features relevant to the biology of the species (growth, maturity, widespread distribution, phasing of production dynamics) and the nature of the fishery. SG80a and SG100a are met</p>		
b	<b>Guidepost</b>	The assessment estimates stock status relative to reference points.		
	<b>Met?</b>	Y		
	<b>Justification</b>	The annual ICES assessment of the blue whiting stock provides biomass and fishing mortality estimates that are relative to reference points and are the basis of the HCR (though reference points have remained as in 2014 despite a shift in the assessment SSB and F values). (SG60b is met).		
c	<b>Guidepost</b>	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.
	<b>Met?</b>	Y	Y	N

	<b>Justification</b>	The assessment model used for blue whiting in Subareas I–IX, XII, and XIV, SAM, offers a flexible way of describing the entire system, and allows a gradual change in exploitation pattern as each new year’s data are added to the time series, which probably stabilizes the estimates of F and SSB from year to year. Thus, uncertainty is taken into account in evaluating stock status (SG60c and SG80c are met). This is indicated by retrospective analyses, and the summary statistics of the stock assessment for blue whiting are presented with confidence limits that allow F and SSB to be evaluated against reference points in a probabilistic way. However, the uncertainty in evaluating stock status relative to reference points brought about by the 2015 assessment has not been taken into account, and SG100c is not met.	
<b>d</b>	<b>Guidepost</b>		The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.
	<b>Met?</b>		Y
	<b>Justification</b>	The assessment model used for blue whiting was reviewed at a benchmark meeting in 2012, when it was decided that the previously used SMS model should be replaced by a state-space model (SAM). SAM provides similar model diagnostics and almost identical assessment output compared to the SMS model, and the perception of the stock remains unchanged. This demonstrates that the assessment is robust, as does the observation that management according to the HCR (which relies solely on the assessment) has achieved its objective. In the past, WGWIDE working groups have conducted alternative assessments (e.g. TIS-VPA and XSA) to check model assumptions and how the different model platforms handle the data. Alternative hypotheses and assessment approaches have been rigorously explored, and SG100d is satisfied.	
<b>e</b>	<b>Guidepost</b>	The assessment of stock status is subject to peer review.	The assessment has been internally and externally peer reviewed.
	<b>Met?</b>	Y	Y
	<b>Justification</b>	The assessment method is peer-reviewed by ICES through the benchmarking process; benchmarking reports are reviewed by several external experts. The annual WGWIDE reports are internally peer-reviewed within ICES by the advisory committee on management (ACOM) before the promulgation of the Annual Advice documents. In addition, the yearly assessment produced by ICES is reviewed annually (in part) by the Scientific, Technical and Economic Committee For Fisheries (STECF) before reaching managers, a procedure that forms part of the management system (STECF, 2014). The STECF review was considered by the team to be an external peer review and as such SG100 is met.	
<b>References</b>		ICES. 2008a. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 21 – 1 September 2008, ICES. 67 pp. ICES. 2012. Report of the Benchmark Workshop on Pelagic Stocks (WKPELA 2012) 13–17 February 2012 Copenhagen, Denmark. ICES CM 2012/ACOM: 47.	

	<p>ICES. 2014a. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 26 August - 1 September 2014, ICES Headquarters, Copenhagen, Denmark. ICES CM 2014/ACOM:15. 938 pp.</p> <p>Nielsen, A., and Berg, C.W. 2014. Estimation of time-varying selectivity in stock assessments using state-space models. Fisheries Research, 158: 96-101.</p> <p>STECF. Scientific, Technical and Economic Committee for Fisheries – Consolidated Advice on Fish Stocks of Interest to the European Union (STECF-14-24). 2014. Publications Office of the European Union, Luxembourg, EUR 27028 EN, JRC 93360, 747 pp.</p>
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>	<b>All UoCs 95</b>
<b>CONDITION NUMBER (if relevant):</b>	<b>N/A</b>

Evaluation table 7 - PI 2.1.1

<b>PI 2.1.1</b>		<b>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</b>		
<b>Scoring Issue</b>		SG 60	SG 80	SG 100
<b>a</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	All UoCs Y	Y	UoCs 1,2,3,4: Mackerel Y Horse mackerel N UoC 5 Y (no retained species)
	<b>Justification</b>	<p>Also see Section 3.5.1.</p> <p>On the basis of declared landings data for the SPSG and DPPO fleets and the Joseph Roty II (blue whiting only), no main retained species were identified for UoCs 2, 4 and 5. Given that the same catching gear is used in the same fishery, the species composition of catches made by the KFO RSW vessels (UoC 3) and PFA freezer-trawlers (UoC 1) can be inferred from these data, SG60 and 80 are therefore met by default.</p> <p>However, the team recommends that annual catch data are made available in time for any subsequent MSC assessments and surveillance audits (a specific recommendation has been made in Section 6.3.2).</p> <p>Small quantities of mackerel and horse mackerel can be retained by the RSW and freezer trawlers (UoCs 1,2,3,4). For mackerel, a benchmark evaluation was carried out for the Northeast Atlantic mackerel stock in 2014, indicating that F has been decreasing in recent years and was estimated to be 0.19 in 2012, below <math>F_{MSY}</math> and <math>F_{pa}</math>. SSB has also increased considerably since 2002 and remains high, above <math>B_{pa}</math> and <math>MSY B_{trigger}</math> (ICES, 2014e and 2014f). The SSB for 2013 is estimated with a precision of +/- 25%, with the lower estimate well above <math>B_{lim}</math> (ICES, 2014a). Based on these findings, there is a high degree of certainty that this stock is within biologically based limits. As such, SG100 is met for mackerel species.</p> <p>For horse mackerel (Western stock), SSB has shown a steady decline since 1988 and was expected by ICES to decline below <math>MSY B_{trigger}</math> in 2014. Fishing mortality has been increasing since 2007 and has been above <math>F_{MSY}</math> since 2012 (ICES, 2014g). For this species there is no high degree of certainty that this stock is fluctuating around its target reference points – SG100 is not met.</p>		
<b>b</b>	<b>Guidepost</b>			Target reference points are defined for retained species.
	<b>Met?</b>			All UoCs Y
	<b>Justification</b>	Target reference points have been defined for both mackerel and horse mackerel. SG100 is met.		

<b>c</b>	<b>Guidepost</b>	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.	
	<b>Met?</b>	All UoCs Y	All UoCs	
	<b>Justification</b>	In the absence of main retained species, SG60 and 80 are met by default.		
<b>d</b>	<b>Guidepost</b>	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.		
	<b>Met?</b>	All UoCs Y		
	<b>Justification</b>	Both mackerel and horse mackerel are Category 1 species (ICES, 2014h) – their stock status is thus known. This scoring issue is therefore met.		
<b>References</b>		<p>ICES. 2014a. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 26 August - 1 September 2014, ICES Headquarters, Copenhagen, Denmark. ICES CM 2014/ACOM:15. 938 pp.</p> <p>ICES. 2014e. Report of the Benchmark Workshop on Pelagic Stocks (WKPELA), 17–21 February 2014, Copenhagen, Denmark. ICES CM 2014/ACOM: 43. 341 pp.</p> <p>ICES. 2014f. Mackerel in the Northeast Atlantic (combined Southern, Western, and North Sea spawning components) - Advice September 2014. Report of the ICES Advisory Committee 2014. ICES Advice, 2014. Book 9.</p> <p>ICES. 2014g. Horse mackerel (<i>Trachurus trachurus</i>) in Divisions IIa, IVa, Vb, VIa, VIIa–c, e–k, and VIIIa–e (Western stock) - Advice September 2014. Report of the ICES Advisory Committee 2014. ICES Advice, 2014. Book 9.</p> <p>ICES. 2014h. Advice basis. In Report of the ICES Advisory Committee, 2014. ICES Advice 2014, Book 1.</p>		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				<b>UoCs 1.2.3.4 95 UoC 5 100</b>
<b>CONDITION NUMBER (if relevant):</b>				<b>N/A</b>

Evaluation table 8 - 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	<b>Guidepost</b>	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.
	<b>Met?</b>	All UoCs Y	Y	Y
	<b>Justification</b>	In the absence of main retained species (see Section 3.5.1), SG60 and 80 are met by default for all UoCs. For the minor retained species, mackerel and horse mackerel, a TAC is in place, which is responsive to stock status through their respective management plans. For mackerel, ICES considers this plan to be precautionary (ICES, 2014f). For horse mackerel, however, ICES currently issues advice on the basis of the MSY approach as the plan is not considered to be precautionary (ICES, 2014g). Nevertheless, in both cases the team felt that the ICES advice framework and TAC setting procedures provide the elements for a strategy. As such, SG100 should be met.		
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 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.
	<b>Met?</b>	All UoCs Y	Y	UoCs 1,2,3,4: N UoC 5 Y
	<b>Justification</b>	In the absence of main retained species, SG60 and 80 are met by default. For mackerel, given the high degree of certainty that this stock is within biologically based limits (see PI 2.1.1), there is some objective basis for confidence that the strategy is working. Furthermore, following the 2014 benchmark, ICES has evaluated the management plan to be precautionary provided that the plan is only partially readopted in its first year, i.e. by not applying the percentage constraints stated in clause 4 of the management plan in calculating the TAC for 2015. This provides a further objective basis for confidence that this strategy will work. Nevertheless, much will depend on the 2015 catch levels and whether these will exceed the recommended TAC. There is therefore no high confidence that the plan will work. SG100 is not met.		

		For horse mackerel, given that SSB has been on a downward trajectory since 1988, despite the introduction of a TAC from 1990, there is no high confidence that the strategy will work. SG100 is not met.		
<b>c</b>	<b>Guidepost</b>		There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	<b>Met?</b>		All UoCs Y	UoCs 1,2,3,4: N UoC 5 Y
	<b>Justification</b>	<p>Compliance with EU regulations is routinely monitored through at sea inspections and upon landing. Given that no systematic non-compliance has been reported for the vessels in any of the UoCs, there is some evidence that the strategy is being implemented successfully. Noting that discarding is prohibited in the NEAFC Convention Area, in Faroese waters and in Norwegian waters, and that all landings are monitored as per the EU regulations, SG80 is met.</p> <p>For mackerel, catch levels in 2015 will provide clear evidence as to whether or not the management plan is being implemented successfully – until then, the team felt that the progress made by the EU, Norway, and the Faroe Islands in reaching an agreement to implement the plan provides some evidence that the partial strategy is being implemented successfully. SG80 should therefore be met but not SG100.</p> <p>For horse mackerel, TACs and catch levels have exceeded ICES advice on some occasions in recent years (e.g. in 2013 and 2010). While this is not consistently the case, it cannot be said that there is clear evidence that the strategy is being implemented successfully. SG100 is not met. However, the decline in catches following the introduction of a TAC provides some evidence that the strategy is being implemented. SG80 is met.</p>		
<b>d</b>	<b>Guidepost</b>			There is some evidence that the strategy is achieving its overall objective.
	<b>Met?</b>			UoCs 1,2,3,4: Mackerel Y Horse mackerel N UoC 5 Y
	<b>Justification</b>	The mackerel stock is within biologically-based limits (see PI 2.1.1), the strategy appears to be achieving its objective and SG 100 is met. The consistent decline of SSB for horse mackerel precludes SG100 from being met.		
<b>e</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	Not relevant to any UoC	Not relevant	Not relevant

<b>Justification</b>	No sharks are retained in this fishery. This scoring issue is therefore not relevant.	
<b>References</b>	ICES. 2014f. Mackerel in the Northeast Atlantic (combined Southern, Western, and North Sea spawning components) - Advice September 2014. Report of the ICES Advisory Committee 2014. ICES Advice, 2014. Book 9. ICES. 2014g. Horse mackerel ( <i>Trachurus trachurus</i> ) in Divisions IIa, IVa, Vb, VIa, VIIa–c, e–k, and VIIIa–e (Western stock) - Advice September 2014. Report of the ICES Advisory Committee 2014. ICES Advice, 2014. Book 9.	
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>		UoC 1,2,3,4 85 UoC 5 100
<b>CONDITION NUMBER (if relevant):</b>		N/A

Evaluation table 9 - 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	<b>Guidepost</b>	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.
	<b>Met?</b>	UoC 1 UoC 2 UoC 3 UoC 4 UoC 5	Y	Y
	<b>Justification</b>	Catch and landings data are recorded by each vessel in electronic logbooks, with the data then fed to the respective fisheries authorities (see Section 3.6.4). There are no discards of from RSW vessels (UoCs mackerel are considered to be negligible by ICES (ICES, 2014f); for horse mackerel, discards are known to take place and are partially estimated (at 3%), but are considered negligible (ICES, 2014g). Accurate and verifiable information is thus available on the catch of all retained species (SG80 is met and part of SG100 met). For all		

		retained species, ICES monitor catch trends and carry out stock assessments where the data allow it. For the fishery under assessment, the data available are sufficient for any increase in risk to the status of affected populations to be detected. SG 100 is thus met.		
<b>b</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	UoC 1 UoC 2 UoC 3 UoC 4 UoC 5	Y	Y
	<b>Justification</b>	As explained in PI 2.1.1 (scoring issue a), the information available on mackerel was sufficient for outcome status to be determined with a high degree of certainty. For horse mackerel, however, there is large uncertainty in the absolute estimates of SSB, but the quantity of horse mackerel caught in the blue whiting fishery is negligible compared to the stock size with discards considered negligible (ICES, 2014g), so the outcome can be estimated with a high degree of certainty. For this reason, SG100 is met.		
<b>c</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	All UoCs Y	Y	UoCs 1,2,3,4: N UoC 5 Y
	<b>Justification</b>	In the absence of main retained species, SG60 and 80 are met by default. For all retained species, fisheries-dependent and independent data continue to be monitored by ICES and are used to issue advice. For both mackerel and horse mackerel, the advice is based on a state of the art stock assessment which is then fed into the parameters of the management plan (for mackerel) or the MSY approach (for horse mackerel) which makes up the strategy. Although the level of information available for these species is adequate to support the strategy, it cannot be evaluated with a high degree of certainty whether this strategy is achieving its objective (see PI 2.1.2). SG100 is not met for UoCs 1,2,3,4, but is met for UoC 5 (no retained species other than blue whiting).		

<b>d</b>	<b>Guidepost</b>		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.
	<b>Met?</b>		All UoCs Y	Y
	<b>Justification</b>	The combination of catch and landings data for the vessels in the UoCs and fisheries-dependent data collected by ICES for all retained species allows for ongoing mortalities to those species to be assessed. SG100 is therefore met.		
<b>References</b>		ICES. 2014f. Mackerel in the Northeast Atlantic (combined Southern, Western, and North Sea spawning components) - Advice September 2014. Report of the ICES Advisory Committee 2014. ICES Advice, 2014. Book 9. ICES. 2014g. Horse mackerel ( <i>Trachurus trachurus</i> ) in Divisions IIa, IVa, Vb, VIa, VIIa–c, e–k, and VIIIa–e (Western stock) - Advice September 2014. Report of the ICES Advisory Committee 2014. ICES Advice, 2014. Book 9.		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				<b>UoCs 1,2,3,4 95</b> <b>UoC 5 100</b>
<b>CONDITION NUMBER (if relevant):</b>				<b>N/A</b>

Evaluation table 10 - 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	<b>Guidepost</b>	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.
	<b>Met?</b>	All UoCs Y	All UoCs Y	UoC 1 N UoC 2 Y UoC 3 Y UoC 4 Y UoC 5 N
	<b>Justification</b>	Though the available observer data represent only a relatively small fraction of the fishing effort in this fishery, the fisheries under assessment appear to be very clean and effectively discard-free, see section 3.5.2. There is no at-sea discarding from RSW vessels (UoCs, 2,3,4), and no main discard species could be identified from the PFA (UoC 1) observer data presented by van Overzee et al. (2013) and the Joseph Roty II electronic logbook data (UoC 5), (see Table 16). SG60 and SG80 are therefore met by default. For the Joseph Roty II, discards of swordfish ( <i>Xiphias gladius</i> ), shortfin squid ( <i>Illex</i> spp.), king of herrings ( <i>Regalecus glesne</i> ), alfonsinos ( <i>Beryx</i> spp.), hake ( <i>Merluccius merluccius</i> ) and saithe ( <i>Pollachius virens</i> ) were recorded in 2013/2014, though none comprised more than 0.3% of the total catch. hk It could not be determined with a high degree of certainty that all bycatch species are within biologically based limits, and SG100 is not met.		
	<b>Guidepost</b>	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.	
	<b>Met?</b>	All UoCs Y	Y	
	<b>Justification</b>	As no main bycatch species were identified, SG60 and SG80 are met by default.		

<b>c</b>	<b>Guidepost</b>	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.		
	<b>Met?</b>	All UoCs Y		
	<b>Justification</b>	No bycatch species were identified in UoCs 2,3,4 and, this scoring issue is met by default. The measures detailed under PI 2.2.2 effectively result in the UoC 1 & 5 fisheries not causing the bycatch species to be outside biologically based limits or hinder recovery.		
<b>References</b>		van Overzee, H., van Helmond, A.T.M., Ulleweit, J., Panten, K. 2013. Discard sampling of the Dutch and German pelagic freezer fishery operating in European waters in 2011 and 2012. CVO report: 13.013. 68 pp. Joseph Roty II electronic logbook discard data		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				UoC 1 80 UoC 2 100 UoC 3 100 UoC 4 100 UoC 5 80
<b>CONDITION NUMBER (if relevant):</b>				<b>N/A</b>

Evaluation table 11 - 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	<b>Guidepost</b>	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.
	<b>Met?</b>	All UoC s Y	Y	Y
	<b>Justification</b>	<p>In the absence of main bycatch species (see Section 3.5.2), SG60 and SG80 are met by default for all 5 UoCs. The vessels in the UoCs use state of the art acoustic equipment (long-range sonar, vertical echo-sounder, net sensors), which combined with the skipper's skill, enable schools of blue whiting to be identified. Catches therefore tend to be clean, as mentioned in the rationale for PI 2.2.1. Note that apart from the PFA freezer vessels and the Joseph Roty II, no processing or sorting takes place aboard the vessels; the catch goes straight into RSW tanks, which negates the possibility of discarding.</p> <p>All vessels under assessment adhere to a strict sustainability code which stipulates that every effort should be made to minimise discarding, with clear reporting requirements. The Joseph Roty II is an exception because its factory can only process large enough blue whiting and no other species, and therefore its fishing strategy makes every effort to minimize discards. The PFA, DPPO, SPSPG and KFO codes of conduct and the bycatch minimisation measures therein are explained in detail in Section 3.5.2. Furthermore, as of the end of 2013, the Joseph Roty II records all discards in its electronic logbook (see Table 16).</p> <p>Also explained in Section 3.5.2 are the regulations in place at EU level which include mesh size restrictions (Council Regulation (EC) No 850/98), a prohibition on high grading, moving on provisions, and catch handling and discharge restrictions on pelagic vessels (Regulation (EC) No 227/2013 of 13 March 2013 amending Council Regulation (EC) No 850/98). Discarding is forbidden in NEAFC, Faroese and Norwegian waters. As of January 2015, the pelagic fleet is now also subject to a landing obligation under the CFP. This implies that all catches of fish subject to catch limits in EU waters will need to be recorded, landed and counted against quota, and also requiring techniques for at-sea monitoring to document compliance with the new regulation. For the fishery under assessment, a <i>de minimis</i> exemption exists for the Joseph Roty II as per the <i>discard plan for certain pelagic fisheries in north-western waters (EU No. 1393/2014)</i> which permits discarding of <i>up to a maximum of 7 % in 2015 and 2016, and 6 % in 2017, of the total annual catch by the vessel targeting Blue Whiting in ICES zones Vb, VI and VII and processing it on board to obtain surimi base.</i> In 2013/24, 3.8% of the catch was discarded, of which 98% was blue whiting.</p>		

		Although the effectiveness of the landing obligation has yet to be assessed (the site visit took place before the regulation was implemented), the team considered that the above provide the elements of a strategy for managing and minimising bycatch and that SG100 should be met.		
<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 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.
	<b>Met?</b>	All UoCs Y	All UoCs Y	UoC 1 N UoC 2 Y UoC 3 Y UoC 4 Y UoC 5 N
	<b>Justification</b>	Based on the van Overzee et al. (2013) observer data and the Joseph Roty II electronic logbook data it is clear that bycatch in this fishery – if any – is minimal. This provides an objective basis for confidence that the strategy is working. SG80 is therefore met. Key components of the strategy (i.e. landing obligation) have yet to be tested however and as such SG100 is not met for non RSW vessels.		
<b>c</b>	<b>Guidepost</b>		There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	<b>Met?</b>		All UoCs Y	UoC 1 N UoC 2 Y UoC 3 Y UoC 4 Y UoC 5 N
	<b>Justification</b>	As per scoring issue b, the Overzee et al. (2013) observer data and the Joseph Roty II electronic logbook data provide some evidence that the strategy is being implemented successfully. As data on the implementation of the landing obligation are not yet available, however, SG100 is not met.		
<b>d</b>	<b>Guidepost</b>			There is some evidence that the strategy is achieving its overall objective.
	<b>Met?</b>			All UoCs Y
	<b>Justification</b>	As per scoring issues b and c, the absence of main bycatch species provides some evidence that the strategy is achieving its overall objective. This scoring issue is therefore met.		

<b>References</b>	<p>SPSG, KFO, PFA and DPPO sustainability policies          van Overzee, H., van Helmond, A.T.M., Ulleweit, J., Panten, K. 2013. Discard sampling of the Dutch and German pelagic freezer fishery operating in European waters in 2011 and 2012. CVO report: 13.013. 68 pp.          Council Regulation (EC) No 850/98 of 30 March 1998 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms          Regulation (EU) No 227/2013 of the European Parliament and of the Council of 13 March 2013 amending Council Regulation (EC) No 850/98 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms and          Council Regulation (EC) No 1434/98 specifying conditions under which herring may be landed for industrial purposes other than direct human consumption          COMMISSION DELEGATED REGULATION (EU) No 1393/2014 of 20 October 2014 establishing a discard plan for certain pelagic fisheries in north-western waters          Joseph Roty II electronic logbook discard data, CDPSM pers. com.</p>		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>			UoC 1 90 UoC 2 100 UoC 3 100 UoC 4 100 UoC 5 90
<b>CONDITION NUMBER (if relevant):</b>			N/A

Evaluation table 12 - 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	<b>Guidepost</b>	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.
	<b>Met?</b>	ALL Uocs Y	All UoCs Y	UoC 1 N UoC 2 Y UoC 3 Y UoC 4 Y

				UoC 5 N
	<b>Justification</b>	In the absence of main bycatch species, SG60 and SG80 are met by default, as is SG100 for UoCs 2,3,4 which do not discard at sea. The only independent source of information on discards in this fishery is the van Overzee et al. (2013) data which represent a minor fraction of the effort by this fishery. While qualitative and some quantitative information is available on bycatch, the assessment team could not be certain about the levels of bycatch (as explained in Section 3.5.2) and it can therefore not be stated that accurate and verifiable information is available on all bycatch. SG100 is therefore not met for UoCs 1 & 5.		
<b>b</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	All UoCs Y	Y	UoC 1 N UoC 2 Y UoC 3 Y UoC 4 Y UoC 5 N
	<b>Justification</b>	In the absence of main bycatch species, SG60 and SG80 are met by default, as is SG100 for UoCs 2,3,4 which do not discard at sea. Because the level and character of discards could not be ascertained (due to low observer coverage) for UoCs 1 & 5, information is not considered sufficient to estimate outcome status with a high degree of certainty, and SG100 is not met.		
<b>c</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	UoC 1 UoC 2 UoC 3 UoC 4 UoC 5	Y	UoC 1 N UoC 2 Y UoC 3 Y UoC 4 Y UoC 5 N
	<b>Justification</b>	In the absence of main bycatch species, SG60 and SG80 are met by default, as is SG100 for UoCs 2,3,4. The same rationale as presented in scoring b applies here to UoCs 1 & 5 and SG100 is not met .		

<b>d</b>	<b>Guidepost</b>		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 effectively of the strategy).	Monitoring of bycatch data is conducted in sufficient detail to assess ongoing mortalities to all bycatch species.
	<b>Met?</b>		All UoCs Y	UoC 1 N UoC 2 Y UoC 3 Y UoC 4 Y UoC 5 N
	<b>Justification</b>	As above, SG80 is met, but not SG100 for UoCs 1 & 5.		
<b>References</b>		van Overzee, H., van Helmond, A.T.M., Ulleweit, J., Panten, K. 2013. Discard sampling of the Dutch and German pelagic freezer fishery operating in European waters in 2011 and 2012. CVO report: 13.013. 68 pp.		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				UoC 1 80 UoC 2 100 UoC 3 100 UoC 4 100 UoC 5 80
<b>CONDITION NUMBER (if relevant):</b>				N/A

Evaluation table 13 - PI 2.3.1

<b>PI 2.3.1</b>		<b>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</b>		
<b>Scoring Issue</b>		SG 60	SG 80	SG 100
<b>a</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	All UoCs Y	Y	N
	<b>Justification</b>	<p>The MSC define ETP species as those that are recognised by national ETP legislation and those that are listed in Appendix 1 of the Convention on International Trade in Endangered Species (CITES), and include the species listed in Annex II of the EC Habitats Directive (92/43/EC) and the Wild Birds Directive (2009/147/EC). The ETP species that could be vulnerable to capture in North East Atlantic offshore pelagic trawl fisheries include bottlenose dolphins (<i>Tursiops truncatus</i>), harbour porpoise (<i>Phocoena phocoena</i>), Basking shark (<i>Cetorhinus maximus</i>) and several species of marine turtle.</p> <p>As explained in section 3.5.3, the available observer data for the PFA, SPSG and KFO fleets, as well as the member state data presented in ICES (2015a), suggest that the blue whiting fishery does not pose a high risk of interactions with ETP species. For most of this fleet, however, limited observer data exist in view of the cost and logistics involved in running these observer programmes and because this fishery is generally perceived as low-risk to ETP species. This is consistent with MSC assessments of other trawl fisheries for small pelagic species in the area (see Southall et al., 2010; Andrews et al., 2010; Lockwood et al., 2009).</p> <p>Although the Joseph Roty II currently does not have observer data, all discards are recorded in the vessel's electronic logbook (as of end 2013). Prior to this, the vessel had a system in place to report shark bycatches to IFREMER from 2012. During 2012 and 2013, no ETP species were caught and, in 2014, 50kg of porbeagle shark (<i>Lamna nasus</i>, probably one specimen) were discarded. No other interactions with potential ETP species were recorded. Further, the PFA, DPPO KFO and SPSG client fleets operate some form of sustainability policy, which requires member vessels to fulfill auto-reporting requirements on interactions with ETP species. To date, none of these auto-reporting forms have indicated systematic interactions with ETP species (In 2013, one porbeagle was caught by a DPPO vessel and subsequently released). No interactions with ETP species have been reported since and in 2014/2015 (E.Sverdrup-Jenson, pers. comm., 27<sup>th</sup> May 2015).</p> <p>On the basis of this information, the team concluded that the blue whiting fishery is highly unlikely to lead to impacts outside national or international conservation targets for ETP species. SG80 is therefore met for all UoCs. However, that observer coverage is too low to ensure a high degree of certainty that the effects of the fishery are within limits of national and international requirements for protection of ETP species, and SG100 is not met. The team stresses the importance of observer data in maintaining the SG80 level and strongly recommends that observer campaigns in the blue whiting fishery are maintained and improved as possible.</p>		

<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>	All UoCs Y	Y	N
	<b>Justification</b>	Although other ETP species could be considered under this PI, interactions with cetaceans are most likely. Interactions with non-cetacean ETP species are highly likely to be rare (based on the observer and auto-reporting data mentioned in scoring issue a), unacceptable impacts are defined here as those that contribute to exceeding the ASCOBANS conservation objective of 1.7% of the estimated population size (currently the most widely cited estimate for impacts on cetacean populations – ICES (2014d)). For the fishery under assessment this is highly unlikely to be the case (see section 3.5.3 for further details). On that basis, SG80 is met. The relatively low level of observer coverage, however, precludes SG100 from being met.		
<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>		All UoCs Y	N
	<b>Justification</b>	On the basis of the observer and auto-reporting data, interactions with cetaceans and other ETP species are perceived to be rare; by extension, any indirect effects are therefore also likely to be rare and would not lead to unacceptable impacts on ETP populations. SG80 is therefore met. In the absence of more extensive observer coverage and more targeted research into indirect impacts on ETP species, however, SG100 is not met.		
<b>References</b>		OSPAR Commission's List of Threatened and/or Declining Species and Habitats (Reference Number: 2008-6) ICES. 2014d. Report of the Working Group on Bycatch of Protected Species (WGBYC), 4–7 February 2014, Copenhagen, Denmark. ICES CM 2014/ACOM: 28. 96 pp. ICES. 2013d. Report of the Working Group on Bycatch of Protected Species (WGBYC), 4–8 February, Copenhagen, Denmark. ICES CM 2013/ACOM: 27. 73 pp. ICES. 2015. Report of the Working Group on Bycatch of Protected Species (WGBYC), 2-6 February 2015, ICES Headquarters, Copenhagen, Denmark. ICES CM 2015\ACOM:26. 82 pp. Andrews, J., Eltink, A., Lockwood, S.J. 2010. MSC Public Certification Report for the Pelagic Freezer-Trawler Association Atlanto-Scandian Herring Fishery. Moody International Certification Report. Lockwood, S., Sverdrup-Jensen, S., Chaudhury, S. 2009. MSC Public Certification Report for the Danish Pelagic Producer Organisation Atlanto-Scandian Herring Fishery. Det Norske Veritas (DNV) Report No. 2009-0003. Southall, T., Medley, P., Carleton, C., Gill, M. and McFadden M. 2010. MSC Public Certification Report for the Scottish Pelagic Sustainability Group Ltd (SPSG) Atlanto-Scandian Herring Fishery. Food Certification International Ltd Report.		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				All UoCs 80
<b>CONDITION NUMBER (if relevant):</b>				N/A

Evaluation table 14 - PI 2.3.2

<b>PI 2.3.2</b>		<p><b>The fishery has in place precautionary management strategies designed to:</b></p> <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>	All UoCs Y	Y	N
	<b>Justification</b>	<p>At international level, the OSPAR convention provides the mechanism for cooperation on the protection of threatened and/or declining species, in addition to the Convention on Migratory Species (Bonn Convention) and Convention on the Conservation of European Wildlife and Natural Habitats (Berne Convention). Harvesting and other utilisation of wild living marine resources in the Norwegian EEZ is covered by the Marine Resources Act which states that '<i>All harvesting and other utilisation of wild living marine resources shall be carried out as in such a way as to minimise impact</i>' and includes provisions on gear selectivity, bycatch, discards, closed areas and seasons, etc. There are no specific fisheries regulations pertaining to protected species as these are covered under the Nature Diversity Act (19 June 2009 No. 100), which sets out – <i>inter alia</i> – regulations governing priority species (Section 24 of the Act). At EU level, several provisions exist which enables management of fisheries impacts on ETP populations in the EEZs of EU member states. All cetacean species are listed on Annex A of EU Council Regulation 338/97 (effectively treating them as CITES species). The EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora) and Birds Directive (Directive 2009/147/EC on the conservation of wild birds) provide the framework for the protection of species and habitats in the EU and to maintain (or restore) populations of designated species at a favourable conservation status, numerous SACs (Special Areas of Conservation) have been designated under the Natura 2000 network. Member States should also take measures to ensure that the mortality levels of certain ETP species are compatible with their being maintained at a favourable conservation status. The EC Habitats Directive further requires Member States to undertake surveillance of the conservation status of these species and establish a system to monitor their incidental capture and killing, to take further research and conservation measures as required to ensure that incidental capture or killing does not have a significant impact on the species concerned.</p> <p>The team considered that the above constitutes a strategy aimed at managing the fishery's impacts on ETP populations, which is designed to be highly likely to achieve national and international requirements. As such, SG80 is met. However, this strategy was not seen as comprehensive in view of the limited observer coverage in this fishery. SG100 is therefore not met.</p>		

<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>	All UoCs Y	Y	N
	<b>Justification</b>	On the basis of the observer and self-reporting data described in section 3.5.2 of the main report, it is highly likely that interactions with and bycatch of ETP species are minimal in this fishery. This provides an objective basis for confidence that the strategy is being effective. SG80 is thus met. However, because observer data are not available for all fleets in this fishery there is no high level of confidence that this is the case. As such, SG100 is not met.		
<b>c</b>	<b>Guidepost</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>		All UoCs Y	N
	<b>Justification</b>	The absence of systematic non-compliance (see Section 3.6.4), together with observer data, provide evidence that the strategy is being implemented successfully. Again, the observer coverage is not considered high enough to provide clear evidence that this is the case; SG100 is therefore not met.		
<b>d</b>	<b>Guidepost</b>			There is evidence that the strategy is achieving its objective.
	<b>Met?</b>			All UoCs N
	<b>Justification</b>	The observer data available are currently not sufficient to enable an analysis that is robust enough to determine whether the strategy is meeting its objective. This scoring issue is not met.		
<b>References</b>		OSPAR Commission's List of Threatened and/or Declining Species and Habitats (Reference Number: 2008-6) Appendices I and II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) Convention on the Conservation of European Wildlife and Natural Habitats Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora Directive 2009/147/EC on the conservation of wild birds		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				All UoCs 80
<b>CONDITION NUMBER (if relevant):</b>				N/A

Evaluation table 15 - PI 2.3.3

<b>PI 2.3.3</b>		<b>Relevant information is collected to support the management of fishery impacts on ETP species, including:</b> <ul style="list-style-type: none"> <li>• <b>Information for the development of the management strategy;</b></li> <li>• <b>Information to assess the effectiveness of the management strategy; and</b></li> <li>• <b>Information to determine the outcome status of ETP species.</b></li> </ul>		
<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>	All UoCs Y	Y	N
	<b>Justification</b>	The observer data described in section 3.5.3 of the main report provide sufficient qualitative and quantitative information for this fishery's impacts on ETP species to be estimated (see PI 2.3.1 – scoring issue a). In this respect, SG80 is met. Because of the low observer coverage, however, impacts cannot be quantitatively estimated with a high degree of certainty. SG100 is not met.		
<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>	All UoCs Y	Y	N
	<b>Justification</b>	As per scoring issue a, the observer data available are sufficient to determine whether the fishery may be a threat to protection and recovery of the ETP species. SG80 is met. Information on the magnitude of all impacts is however not available at this low level of observer coverage. SG100 is not met.		
<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>	All UoCs Y	Y	N

<b>Justification</b>	The information stemming from the observer data, as well as the auto-reporting data described in section 3.5.3 of the main report shows that ETP interactions in this fishery are relatively rare and would enable any increase in risk level to be detected. This information is therefore sufficient for SG80 to be met. Although the information available is adequate to support a comprehensive strategy to manage impacts, minimize mortality and injury of ETP species, it is insufficient to evaluate with a high degree of certainty whether a strategy is achieving its objectives. SG100 cannot be met.	
<b>References</b>	SPSG, PFA and KFO observer data, self-reporting logsheets and Joseph Roty II electronic logbook data (see section 3.5.3 main report)	
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>		All UoCs 80
<b>CONDITION NUMBER (if relevant):</b>		N/A

Evaluation table 16 - PI 2.4.1

<b>PI 2.4.1</b>		<b>The fishery does not cause serious or irreversible harm to habitat structure, considered on a regional or bioregional basis, and function</b>		
<b>Scoring Issue</b>		SG 60	SG 80	SG 100
<b>a</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	All UoCs Y	Y	P
	<b>Justification</b>	Mid-water pelagic trawls are used and operated in the same way by all UoCs, and are designed not to interact with the seabed: damage to the gear is likely to occur before substantial damage to seafloor structures occurs (Donaldson et al., 2010). Pelagic trawls are therefore considered very low-impact gears with respect to benthic habitats (Chuengpagee et al., 2003; Morgan and Chuengpagee, 2003). The vessels in the UoCs fish in deep waters and they are equipped with depth sounders, sonars and trawl sensors, which enable the skippers to maintain control over the position of the net in the water column, thus further reducing the likelihood of interaction. Discarding of nets and cod ends at sea is against regulations and unlikely considering the cost of the gear, and any lost trawl gear is perceived to have a low potential for ghost fishing (Morgan and Chuenpagdee, 2003). Occurrences of gear loss are recorded by PFA, SPSG, KFO and DPPO member vessels and are reported to be very rare. The team considered that, while information on gear interactions with the seabed is inferential, the very nature of the fishery constitutes evidence that it is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm. SG100 is therefore partially met.		
<b>References</b>		<p>Chuengpagee, R., Morgan, L.E., Maxwell, S.M., Norse, E.A. &amp; Pauly, D. 2003. Shifting gears: assessing collateral impacts of fishing methods in U.S. waters. <i>Frontiers in Ecology and the Environment</i>. 1, 10, 517-524.</p> <p>Morgan, L.E. &amp; Chuenpagdee, R. 2003. Shifting gears: assessing collateral impacts of fishing methods in U.S. waters. <i>Pew Science Series</i>. Washington, DC: Island Press.</p> <p>Donaldson, A., Gabriel, C., Harvey, B.J. &amp; Carolsfeld, J. 2010. Impacts of Fishing Gears other than Bottom Trawls, Dredges, Gillnets and Longlines on Aquatic Biodiversity and Vulnerable Marine Ecosystems. Research Document 2010/011. Canadian Science Advisory Secretariat. Fisheries and Oceans Canada.</p>		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				All UoCs 90
<b>CONDITION NUMBER (if relevant):</b>				N/A

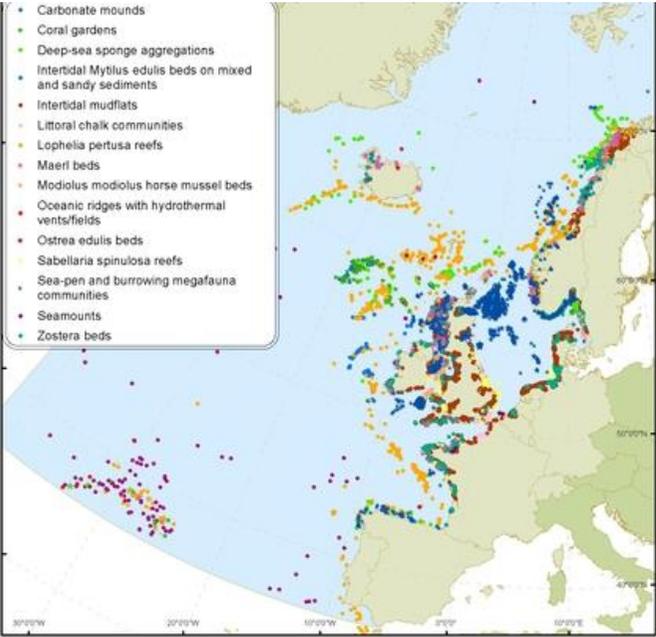
Evaluation table 17 - PI 2.4.2

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	<b>Guidepost</b>	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.
	<b>Met?</b>	All UoCs Y	Y	Y
	<b>Justification</b>	The onboard measures used by the vessels in the UoCs include the use of sophisticated electronics, including depth sounders, sonars and trawl monitoring systems and constitute a partial strategy (SG80 is met). Scanning sonars on all vessels reveal seabed depth and topography ahead of the vessels, so that there is sufficient advance warning of changes in depth or seabed obstructions to allow altering of course or raising of gear (Southall et al., 2010). The trawl sensors provide information on the spread and height of the net opening, depth of the footrope of the net and the clearance between the footrope and the seabed so that control over the position of the net in the water column can be maintained. Vessels are also continually aware of the location of protected deep-sea habitats (as per regulation (EU) No 227/2013), which are plotted into their on-board navigation systems. Note that none of the access restrictions for vulnerable deep-sea habitats prohibit pelagic fisheries from operating in these areas on the basis of low impact (regulation (EU) No 227/2013). Within the Norwegian EEZ habitat regulations apply to bottom gear fisheries only. Specific regulations do exist relating to gear loss, including the duty to search for the gear and to report any lost gear components to the Norwegian Coast Guard (see Norwegian Marine Resources Act). The team therefore felt that there is a strategy in place which incorporates knowledge of how pelagic gear interacts with specific vulnerable habitats in the Northeast Atlantic (the coordinates of which are provided in regulation (EU) No 227/2013). SG100 should therefore be met.		
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/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.
	<b>Met?</b>	All UoCs Y	Y	N
	<b>Justification</b>	Based on the numerous studies assessing habitat impacts of pelagic trawl fisheries (see Chuengpagee et al., 2003; Morgan and Chuengpagee, 2003; Donaldson et al., 2010) there is some objective basis for confidence that the strategy will work. SG80 is met. This has, however, not been specifically tested for the fishery in question and SG100 is not met.		

<b>c</b>	<b>Guidepost</b>		There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	<b>Met?</b>		All UoCs Y	N
	<b>Justification</b>	As per scoring issue b, there is some evidence (inferred from literature on benthic interactions in pelagic fisheries) that the strategy is being implemented successfully. SG80 is met. However, in the absence of fisheries-specific evidence, SG100 is not met.		
<b>d</b>	<b>Guidepost</b>			There is some evidence that the strategy is achieving its objective.
	<b>Met?</b>			All UoCs Y
	<b>Justification</b>	There have been no indications to date of habitat damage in the blue whiting fishery. This provides some evidence that the strategy is achieving its objective. This scoring issue is therefore met.		
<b>References</b>		<p>Southall, T., Medley, P., Carleton, C., Gill, M. and McFadden M. 2010. MSC Public Certification Report for the Scottish Pelagic Sustainability Group Ltd (SPSG) Atlanto-Scandian Herring Fishery. Food Certification International Ltd Report.</p> <p>Chuengpagee, R., Morgan, L.E., Maxwell, S.M., Norse, E.A. &amp; Pauly, D. 2003. Shifting gears: assessing collateral impacts of fishing methods in U.S. waters. <i>Frontiers in Ecology and the Environment</i>. 1, 10, 517-524.</p> <p>Morgan, L.E. &amp; Chuenpagdee, R. 2003. Shifting gears: assessing collateral impacts of fishing methods in U.S. waters. <i>Pew Science Series</i>. Washington, DC: Island Press.</p> <p>Donaldson, A., Gabriel, C., Harvey, B.J. &amp; Carolsfeld, J. 2010. Impacts of Fishing Gears other than Bottom Trawls, Dredges, Gillnets and Longlines on Aquatic Biodiversity and Vulnerable Marine Ecosystems. Research Document 2010/011. Canadian Science Advisory Secretariat. Fisheries and Oceans Canada.</p> <p>Regulation (EU) No 227/2013 of the European Parliament and of the Council of 13 March 2013 amending Council Regulation (EC) No 850/98 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms and Council Regulation (EC) No 1434/98 specifying conditions under which herring may be landed for industrial purposes other than direct human consumption.</p>		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				<b>All UoCs 90</b>
<b>CONDITION NUMBER (if relevant):</b>				<b>N/A</b>

Evaluation table 18 - 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>	SG 60	SG 80	SG 100
<b>a 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>	All UoCs Y	Y	Y
<b>Justification</b>	OSPAR habitat maps are available for the sensitive habitats occurring in the region (e.g. maerl beds, <i>Sabellaria spinulosa</i> reefs), as summarised in the map below. Under the EC Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora), a number of Special Areas of Conservation (SACs) have been designated throughout Europe with the aim of protecting key vulnerable habitats and associated species.		

	 <p>Map of the OSPAR area indicating the distribution and density of habitat data for 15 habitats on the Initial OSPAR List, as supplied by Contracting Parties and other sources up to February 2014 (source: OSPAR.org).</p> <p>Though the distribution of habitat types is therefore known over their range, these habitats are not impacted by pelagic trawls, they are not “<i>vulnerable</i>” to trawl impacts, and they are not relevant to the scoring of this PI. The fishery is only likely to affect pelagic habitats, and unlikely to vulnerable to the impacts of the fishery, and SG100 is met.</p>		
<p><b>b Guidepost</b></p>	<p>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.</p>	<p>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.</p>	<p>The physical impacts of the gear on the habitat types have been quantified fully.</p>
<p><b>Met?</b></p>	<p>All UoCs Y</p>	<p>Y</p>	<p>N</p>
<p><b>Justification</b></p>	<p>Sufficient information is available from scientific and grey literature investigating benthic interactions in pelagic trawl fisheries (see Chuengpagee et al., 2003; Morgan and Chuengpagee, 2003; Donaldson et al., 2010). The spatial extent of vulnerable habitat types is known (see scoring issue a) and the location and timing of use of the fishing gear is known through VMS and logbook data. SG80 is therefore met. The impacts of the gear used in this fishery are likely to be negligible, but they have not been fully tested and quantified and SG100 is therefore not met.</p>		

<b>c Guidepost</b>		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.
<b>Met?</b>		All UoCs Y	Y
<b>Justification</b>	Under Annex IV of the OSPAR convention, contracting parties have a duty to monitor the quality of the marine environment including its habitats as coordinated by OSPAR's Joint Assessment and Monitoring Programme (JAMP) which aims to support the OSPAR Strategies and the EU Marine Strategy Framework Directive (2008/56/EC) and other EU Directives such as the EC Habitats Directive. There is therefore a direct link between the information adopted by OSPAR and the recommendations stemming from the EC Habitats Directive, which requires that habitat distributions are monitored over time within the respective member states' EEZs and are fed into EUNIS (European Nature Information System). Overall, the team considered that sufficient data continue to be collected to detect any increase in risk to vulnerable habitats (SG80 is met) and to measure changes in habitat distributions over time are (SG100 is met).		
<b>References</b>	<a href="http://www.ospar.org">www.ospar.org</a> <a href="http://www.eunis.org">www.eunis.org</a> OSPAR Joint Assessment and Monitoring Programme 2010 – 2014 EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora) Commission Implementing Decision (EU) 2015/72 of 3 December 2014 adopting an eighth update of the list of sites of Community importance for the Atlantic biogeographical region (notified under document C(2014) 9091) Chuengpagee, R., Morgan, L.E., Maxwell, S.M., Norse, E.A. & Pauly, D. 2003. Shifting gears: assessing collateral impacts of fishing methods in U.S. waters. <i>Frontiers in Ecology and the Environment</i> . 1, 10, 517-524. Morgan, L.E. & Chuenpagdee, R. 2003. Shifting gears: assessing collateral impacts of fishing methods in U.S. waters. <i>Pew Science Series</i> . Washington, DC: Island Press. Donaldson, A., Gabriel, C., Harvey, B.J. & Carolsfeld, J. 2010. Impacts of Fishing Gears other than Bottom Trawls, Dredges, Gillnets and Longlines on Aquatic Biodiversity and Vulnerable Marine Ecosystems. Research Document 2010/011. Canadian Science Advisory Secretariat. Fisheries and Oceans Canada.		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>			<b>All UoCs 95</b>
<b>CONDITION NUMBER (if relevant):</b>			<b>N/A</b>

Evaluation table 19 - PI 2.5.1

<b>PI 2.5.1</b>	<b>The fishery does not cause serious or irreversible harm to the key elements of ecosystem structure and function</b>		
<b>Scoring Issue</b>	SG 60	SG 80	SG 100
<b>a Guidepost</b>	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.
<b>Met?</b>	All UoCs Y	Y	N
<b>Justification</b>	<p>Also see Section 3.5.5 for further details. Large-scale oceanic and atmospheric forces are likely to have an impact on the spatial distribution of spawning and feeding grounds and on migration patterns of certain pelagic species, including blue whiting which are sensitive to temperature and salinity and will only spawn in waters with suitable ranges (ICES, 2014a). Hatun, et al. (2009) showed that the spawning distribution of blue whiting is determined by oceanographic conditions to the west of Great Britain and Ireland, which in turn are regulated by the North Atlantic subpolar gyre. Blue whiting recruitment is further influenced by a complex interplay of factors with changes in oceanographic conditions affecting the food availability to larvae and juveniles (the ‘food hypothesis’) and predation on eggs and larvae by other pelagic species (the ‘predation hypothesis’) also playing an important role. With regards to the latter, it is thought that the overlapping distribution of feeding mackerel within the blue whiting spawning grounds suggests that predation from mackerel on Blue Whiting eggs and larvae could be contributing to the collapse in blue whiting recruitment observed (see section 3.3.2). This interaction may have increased significantly both with the growth in the mackerel stock and with the changes observed in mackerel distribution in recent years (ICES, 2014a). It is difficult to single out the likely effects of fisheries exploitation on such a complex ecosystem, though it is unlikely that any one UoC has a potential impact (no or few discards, retained or ETP species) other than through exploiting blue whiting, for which maintaining SSB at sustainable levels remains a key tool in maintaining stock status and ecosystem health. In the absence of a full ecosystem-based approach to fisheries management, monitoring SSB, compliance with the harvest control rule (such as TACs), and an enforced quota regime should deliver most of the management requirements for preventing stock collapse, thereby preventing any effects the fishery may have on the wider ecosystem. As already explained in Section 3.4.2, the blue whiting SSB is well above the reference points defined by ICES and, on this basis, the vessels in the UoCs are highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be serious or irreversible harm. SG80 is met. However, because of the complex North Atlantic environment where the influence of oceanic and atmospheric anomalies coupled with intra- and interspecific interactions is not yet well understood (see Section 3.5.5), the team felt that ‘evidence’ of the fishery’s impact on the ecosystem is currently lacking. SG100 is therefore not met.</p>		
<b>References</b>	<p>Hatun H, Payne, M.R., and Jacobson, J.A. 2009. The North Atlantic subpolar gyre regulates the spawning distribution of Blue Whiting (<i>Micromesistius poutassou</i>). Canadian Journal of Fisheries and Aquatic Science 66: 759-770. ICES. 2014a. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 26 August - 1 September 2014, ICES Headquarters, Copenhagen, Denmark. ICES CM 2014/ACOM:15. 938 pp.</p>		

PI 2.5.1	The fishery does not cause serious or irreversible harm to the key elements of ecosystem structure and function	
OVERALL PERFORMANCE INDICATOR SCORE:		All UoCs 80
CONDITION NUMBER (if relevant):		N/A

Evaluation table 20 - PI 2.5.2

<b>PI 2.5.2</b>		<b>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>		
<b>Scoring Issue</b>		SG 60	SG 80	SG 100
<b>a</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	All UoCs Y	Y	N
	<b>Justification</b>	<p>The key elements contributing to the management of the North Atlantic ecosystem in the context of this fishery are listed in Section 3.5.5. Amongst those listed, the Regulation (EU) No 1380/2013 of the CFP (which requires fishing levels to be set at MSY levels by 2015 where possible, and at the latest by 2020 for all fish stocks) and the joint management plan between the EU, Norway, Iceland and Faroe Islands (which provides the framework for setting an annual TAC in the form of a management plan based on current ICES scientific advice) are key in ensuring that the blue whiting stock is maintained at healthy levels.</p> <p>Amongst the EC Council Regulations which set out provisions to limit ecosystem impacts from fisheries (listed in Section 3.5.5), Directive 2008/56/EC on establishing a framework for community action in the field of marine environmental policy (so-called Marine Strategy Framework Directive) outlines the legislative framework for an ecosystem-based approach to the management of human activities which supports the sustainable use of marine goods and services. The overarching goal of the Directive is to achieve 'Good Environmental Status' by 2020 across Europe's marine environment. To do so, a series of detailed criteria and indicators have been produced by the Commission (see 2010/477/EU: Commission Decision of 1 September 2010 on criteria and methodological standards on good environmental status of marine waters (notified under document C (2010) 5956) Text with EEA relevance) which are used by member states as a blueprint for the implementation of the MSFD. The OSPAR Commission (see Section 3.5.5 for further details) is the main platform through which EU member states coordinate their work to implement the MSFD in the North Atlantic. OSPAR's North-East Atlantic Environment Strategy and the Joint Assessment and Monitoring Programme (JAMP, OSPAR Agreement 2010-4), include the following milestones for contracting parties:</p> <ul style="list-style-type: none"> <li>- by 2012: determination of a set of characteristics for good environmental status for the marine waters and their environmental targets and associated indicators, using Ecological Quality Objectives, where applicable, and other existing tools as appropriate</li> <li>- by 2014: monitoring programmes for the ongoing assessment of the environmental status of their marine waters feeding into the review by the OSPAR Commission of the Joint Assessment and Monitoring Programme by 2014</li> <li>- by 2015: identification of their programmes of measures in order to maintain or achieve good environmental status in their marine waters throughout the OSPAR maritime area</li> <li>- by 2018: first review by the relevant Contracting Parties of the initial assessment of their marine waters, their descriptions of good environmental status, and their environmental targets and associated indicators</li> </ul> <p>The team considered that the above constitutes an overarching strategy, which consists of a plan; however because the MSFD has not yet been fully implemented, not all of SG100 is met; a score of 80 is therefore awarded.</p>		

<b>b</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	All UoCs Y	Y	N
	<b>Justification</b>	<p>The following overarching criteria exist as part of the MSFD (for more detail on indicators see 2010/477/EU: Commission Decision of 1 September 2010 on criteria and methodological standards on good environmental status of marine waters), designed to address all main anthropogenic impacts on the marine environment across EU member states, including fisheries. Some of these criteria are already being met through the various council directives listed in Section 3.5.5. For the MSFD's development, the Commission consulted all interested parties, including regional sea conventions, in particular on the scientific and technical assessment prepared by the Task Groups set up by the Joint Research Centre and ICES to support the development of criteria and methodological standards. The developed indicators are therefore based on well-understood functional relationships between anthropogenic impacts (including fisheries) and the marine environment's ecosystem components. :</p> <p>Descriptor 1: Biological diversity is maintained. The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climate conditions.</p> <p>Descriptor 2: Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystem</p> <p>Descriptor 3: Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.</p> <p>Descriptor 4: All elements of the marine food webs, to the extent that they are known, occur at normal abundance and diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity.</p> <p>Descriptor 5: Human-induced eutrophication is minimised, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algal blooms and oxygen deficiency in bottom waters.</p> <p>Descriptor 6: Sea-floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected</p> <p>Descriptor 7: Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems.</p> <p>Descriptor 8: Concentrations of contaminants are at levels not giving rise to pollution effects</p> <p>Descriptor 9: Contaminants in fish and other seafood for human consumption do not exceed levels established by Community legislation or other relevant standards</p>		

		<p>Descriptor 10: Properties and quantities of marine litter do not cause harm to the coastal and marine environment. Descriptor 11: Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment</p> <p>Some of the key strategic objectives of the OSPAR Commission in the context of this fishery are listed below. Each of these have specific operational objectives and measurable indicators and targets are due to be developed and implemented, either by Contracting Parties or, where appropriate, within the OSPAR Commission:</p> <p>to halt and prevent by 2020 further loss of biodiversity in the OSPAR maritime area, to protect and conserve ecosystems, and to restore, where practicable, marine areas which have been adversely affected through <i>inter alia</i> monitoring and assessment, targeted actions for the protection and conservation of species, habitats and ecosystem processes, and developing an ecologically coherent OSPAR network of well-managed marine protected areas (“the OSPAR Network”)</p> <p>to ensure integrated management of human activities in order to reduce impacts on the marine environment, taking into account the impacts of, and responses to, climate change and ocean acidification;</p> <p>to facilitate and coordinate the work of relevant Contracting Parties in achieving good environmental status under the EU Marine Strategy Framework Directive (MSFD) by 2020.</p> <p>On the basis of the above information, the team considered that both the MSFD and the OSPAR Strategy provide the framework for a plan, which restrains impacts on the ecosystem to ensure that human activities, including fisheries, do not cause serious or irreversible harm. However, because the MSFD has not yet been fully implemented and OSPAR measurable indicators and targets are still due to be developed and implemented, SG100 is only partially met and a score of 80 is awarded.</p>		
c	<b>Guidepost</b>	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.
	<b>Met?</b>	All UoCs Y	Y	N
	<b>Justification</b>	Management measures put in place for the blue whiting fishery (through the CFP and the joint management plan between the EU, Norway, Iceland, and Faroe Islands) have thus far succeeded in maintaining the stock in a healthy state. There are no issues in this fishery with retained or discarded bycatch, benthic habitats or ETP species. On this basis, the partial strategy is considered likely to work and SG80 is met. In the absence of a fully implemented ecosystem management strategy, however, SG100 is not met.		
d	<b>Guidepost</b>		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.
	<b>Met?</b>		All UoCs Y	N

	<b>Justification</b>	The reduce scope for ecosystem impacts and lack of concern about systematic non-compliance in the fishery is evidence that measures in place (see Section 3.5.5) are being implemented successfully by the fishery. SG80 is therefore met. However because the strategy is not yet fully in place, SG100 is not met.
<b>References</b>	<p>2010/477/EU: Commission Decision of 1 September 2010 on criteria and methodological standards on good environmental status of marine waters</p> <p>Regulation (EU) No 1380/2013 Of The European Parliament and of The Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC</p> <p>Directive 2008/56/EC on establishing a framework for community action in the field of marine environmental policy</p> <p>Joint Assessment and Monitoring Programme (JAMP, OSPAR Agreement 2010-4)</p>	
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>		<b>All UoCs 80</b>
<b>CONDITION NUMBER (if relevant):</b>		<b>N/A</b>

Evaluation table 21 - 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	<b>Guidepost</b>	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.	
	<b>Met?</b>	All UoCs Y	Y	
	<b>Justification</b>	<p>See Section 3.5.5 or further details.</p> <p>The EU Data Collection Framework (DCF; Council Regulation (EC) 199/2008; EC Regulation 665/2008; Decision 2008/949/EC) establishes a framework for the collection of economic, biological and transversal data by EU Member States. In addition, Article 11 of the MSFD requires EU Member States to establish and implement coordinated monitoring programmes for the on-going assessment of the environmental status of their marine waters. There is considerable overlap between the data collection requirements for the DCF and the MSFD. However, while the DCF focuses on the collection of marine environment data in support of stock assessments, the MSFD focuses on marine ecosystem indicators such as physical and chemical features, habitat type, biological features and hydro-morphology.</p> <p>ICES and the various Working Groups therein routinely collect and assess information on inter alia fisheries performance, stock status and bycatch species (e.g. WGBYC, WGWIDE, WGBIE). Although the traditional ICES approach to fisheries science and management is based on single-species dynamics, mostly without considering environmental or ecosystem interactions of drivers, work is being done, including by the Working Group on the Integrated Assessments of the Norwegian Sea (WGINOR) which aims to conduct and further develop Integrated Ecosystem Assessments for the Norwegian Sea as a step towards implementing the ecosystem approach. At the 2014 Working Group for the Bay of Biscay and the Iberian waters Ecoregion (WGBIE), IFREMER also put forward a proposal for an ecosystem survey in the English Channel, extending westwards from the current Channel Ground Fish Survey which is being carried out in the Eastern Channel, and moving from a groundfish survey to an ecosystem sampling survey (physico-chemical environment, plankton, megabenthos, all fish, birds and marine mammals observations). The first survey was carried out in late 2014 (ICES, 2014j). A description of other surveys, which contribute to our understanding of the Bay of Biscay and the Iberian waters ecoregion is given in ICES (2014j). The INFERNO project ‘Effects of interactions between fish populations on ecosystem dynamics and fish recruitment in the Norwegian Sea’ focused on the hypothesis that the planktivorous fish populations feeding in the Norwegian Sea have interactions that negatively affect individual growth, mediated through depletion of their common zooplankton resource. The project was funded and lasted for the period 2006-2009 and involved cooperation with scientists from Russia, the Faroe Islands and Iceland (Huse et al., 2012). International ichthyoplankton surveys have been carried out in the</p>		

		<p>Norwegian Sea since the mid-1990s and in recent years these have transitioned into ecosystem surveys that capture most of the key components of the ecosystem: the International Ecosystem Survey in the Nordic Seas (IESNS) is aimed at observing the pelagic ecosystem with particular focus on Atlanto-Scandian herring and blue whiting in the Norwegian Sea. The survey is carried out by the Faroes, Iceland, Norway, Russia and the EU (ICES, 2014a). Datasets of this type are a firm foundation for undertaking integrated assessment of ecosystem status in the Norwegian Sea. A multispecies fisheries model and ecosystem model are being set up with the aim of investigating the effects of existing single species and alternative multispecies harvest control rules on ecosystem structure and functioning (ICES, 2014i). The team considered that the above information is thus adequate to broadly understand the key elements of the ecosystem. SG80 is met.</p>		
<b>b</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	All UoCs Y	Y	N
	<b>Justification</b>	The studies listed in scoring issue a and particularly the work currently being undertaken by WGINOR provides evidence that the main impacts of the fishery on key ecosystem elements are being investigated with some having been investigated in detail (e.g. INFERNO). SG80 is therefore met. Not all interactions have been investigated however and SG100 is thus not met.		
<b>c</b>	<b>Guidepost</b>		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.
	<b>Met?</b>		All UoCs Y	N
	<b>Justification</b>	As detailed in Sections 3.5.1,3.5.2 and 3.5.3 the main functions of the ecosystem components and how these are impacted by the fishery are known. SG80 is therefore met. However, because of the low level of observer coverage in this fishery as a whole, it cannot be said that all impacts of the fishery on particular ETP and bycatch species are identified. SG100 is not met.		
<b>d</b>	<b>Guidepost</b>		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.
	<b>Met?</b>	All UoCs Y	Y
	<b>Justification</b>	The available observer data, logbook data, RSW vessel landings data and ICES survey data provide sufficient information on the impacts of the fishery on the components and elements to allow the main consequences for the ecosystem to be inferred. SG100 is met.	
<b>e</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	All UoCs Y	Y
	<b>Justification</b>	Information on key elements of the ecosystem continues to be collected under the various EU Directives (DCF, Marine Strategy Framework Directive, Habitats Directive), the OSPAR Convention and the ICES working groups (WGINOR, WGWIDE, WGBYC, WGBIE) so that any increase in risk level would be detected. Information on catch composition, which is likely to be the similar for all vessels using mid-water trawls in the blue whiting fishery, with some spatio-temporal variation, is sufficient is sufficient to support the development of strategies to manage ecosystem impacts, should this be considered necessary. SG100 is met.	
<b>References</b>	<p>ICES. 2014i. 2nd Interim Report of the Working Group on Integrated Assessments of the Norwegian Sea (WGINOR), 18-22 August 2014, Torshavn, Faroe Islands. ICES CM 2014/SSGRSP:07. 25 pp.</p> <p>ICES. 2014j. Report of the Working Group for the Bay of Biscay and the Iberian waters Ecoregion (WGBIE), 7–13 May 2014, Lisbon, Portugal. ICES CM 2014/ACOM:11. 714 pp.</p> <p>Huse, G., Holst, J.C., Utne, K., Nottestad, L., Melle, W., Slotte, A., Ottersen, G., Fenchel, T. and Uiblein, F. 2012. Effects of interactions between fish populations on ecosystem dynamics in the Norwegian Sea - results of the INFERNO project, Marine Biology Research, 8:5-6, 415-419.</p> <p>ICES. 2014a. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 26 August - 1 September 2014, ICES Headquarters, Copenhagen, Denmark. ICES CM 2014/ACOM:15. 938 pp.</p>		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>			<b>All UoCs 90</b>
<b>CONDITION NUMBER (if relevant):</b>			<b>N/A</b>

Evaluation table 22 - PI 3.1.1

<b>PI 3.1.1</b>		<p><b>The management system exists within an appropriate legal and/or customary framework which ensures that it:</b>  <b>Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2; and</b>  <b>Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood;</b>  <b>and</b>  <b>Incorporates an appropriate dispute resolution framework.</b></p>		
<b>Scoring Issue</b>		SG 60	SG 80	SG 100
<b>a</b>	<b>Guidepost</b>	There is an effective national legal system and a framework for cooperation with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2	There is an effective national legal system and organised and effective cooperation with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2.	There is an effective national legal system and binding procedures governing cooperation with other parties which delivers management outcomes consistent with MSC Principles 1 and 2.
	<b>Met?</b>	Y	N	N
	<b>Justification</b>	<p>For European member states, the CFP and management measures are overarching and transposed into the national legal systems. Through the European systems of data collection, collaborative research and monitoring, control and surveillance fight IUU fishing activities, all EU Member States involved in the blue whiting fishery (DE, DK, FR, IE, LT, NL, UK) have effective management frameworks and legal systems in place that are consistent with MSC Principles 1 and 2. The other coastal states (Faroe Islands, Iceland and Norway) cooperating to manage the fishery also have legal systems that are proven to deliver effective fisheries management at national level and with regards to EU vessels fishing in their waters.</p> <p>NEAFC provides an international cooperation framework to manage the blue whiting shared and straddling stock (as per MSC 1.3 CBA 4.2.1.3 and 4), and has a specific Blue Whiting WG overseeing the 2005 CS agreement. It obtains scientific advice from ICES on the basis of research surveys and data collection from all CS fisheries research laboratories, and convenes annual meetings to set an agreed TAC and % CS shares. SG60 is met.</p> <p>Following an independent performance review (OECD 2009) NEAFC has been able to agree TACs for blue whiting equal to those set by ICES since 2010. It has also developed an effective legal framework to control access and manage catches on the High Seas in its Regulatory Area (NEAFC, 2014a, b).</p> <p>However, NEAFC's agreement is conditional on coastal states agreeing % TAC in their national jurisdictions annually and recent changes in the geographical distribution of catches (NEAFC, 2013) are upsetting the status quo. The Blue Whiting CS agreement discussions broke down in December 2014. Although discussions are ongoing, Norway has set its national quota for 2015 in excess</p>		

		of the previously agreed share. Given the current stock size and limited catch opportunities in Norwegian waters, this may not have immediate consequences for P1. However, at this time international cooperation does not extend to an 'agreement and delivery of management actions consistent with sustainable management advice' and therefore cannot be considered effective, and SG80 and SG100 are not met.		
<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	N	N
	<b>Justification</b>	<p>Coastal states cooperating through NEAFC (European member states (collectively and individually), Faroe Islands, Iceland and Norway) all have mechanisms of dispute resolution that are transparent and considered to be effective at national level. Fishing companies can contest administrative decisions regarding fishing access, alleged contraventions of fisheries regulation or penalties. Decisions from both administrative and criminal systems may be appealed in a local, national and even the European Court.</p> <p>The NEAFC Convention (NEAFC, 2007) has mechanisms for the peaceful settlement of disputes, but it only applies to matter regarding its RA.</p> <p>The annual Coastal States (CS) agreement is the fundamental mechanism to achieve management based on the agreed harvest strategy endorsed as precautionary by ICES. The core of the agreement sets the annual allocation between CS (including the EU), based on the advised and agreed annual TAC. Presently, the allocation is negotiated annually outside a legally binding long-term agreement. For blue whiting, although the allocation key has remained the same since 2007, it has also relied on several bilateral access agreements and temporary swaps arising from other fisheries also in the NEAFC area. In any case, NEAFC has no decision-making role (and therefore no dispute settlement mechanisms) in matters of fishing opportunities allocation between CS. Furthermore, the current 2-stage decision making process of allocations means that %TAC shares in the RA cannot be allocated until the CS have reached on their allocation. Disputes relating to conservation and management measures in areas under national jurisdiction of Coastal States are governed by the provisions of Section 3 of Part XV of UNCLOS, which may be submitted to compulsory conciliation under Section 2 of Annex V of UNCLOS although the report of the conciliation commission, including its conclusions or recommendations, is not binding upon the parties in dispute (NEAFC, 2014a).</p> <p>Disputes that have arisen in the past have found some resolve, but as the latest dispute proves, although some mechanisms exist through bilateral negotiations, they cannot be considered to be effective or appropriate in the context of the fishery, so only SG60 is 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
	<b>Justification</b>	<p>The historical fishing rights of countries particularly depending on fishing for food and livelihood are generally respected, observed and legally committed to through the national CS legal systems, in Norway and the Faroe Islands in particular, the European CFP and NEAFC. This follows from the established allocation of quota shares based on historical fishing. The blue whiting fishery is an offshore midwater fishery, but fisheries play an important role for food and livelihood in many coastal communities of NEAFC CP. The NEAFC Declaration recognises social benefits as part of sustainable management insofar as it requires that NEAFC ensure the long-term conservation and optimum utilization of the fishery resources in the Convention Area, providing sustainable economic, environmental and social benefits (NEAFC, 2007).</p> <p>The CFP (2013) also requires that fisheries are managed in a way that is consistent with the objectives of achieving economic, social and employment benefits, and the principle of relative stability seeks to maintain historic fishing entitlement in traditional fishing regions and communities. Therefore SG 100 is met.</p>		
<b>References</b>	<p>NEAFC, 2007. North East Atlantic Fisheries Commission “New” Convention, with amendments in 2004 and 2005, 16p.  NEAFC, 2013. Report of the NEAFC Working Group on collating information on the distribution of all life stages of Blue Whiting in the North-East Atlantic and the distribution of catches from the stock. London 26-28 November 2013, 155p.  NEAFC, 2014a. Report of the Performance Review Panel, October 2014, 136p.  OECD, 2009. Strengthening Regional Fisheries Management Organisations, 127p.  Regulation (EU) No 1380/2013 Of The European Parliament and of The Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC  Faroe Islands, 2015. Faroes Islands Fisheries &amp; Aquaculture, Responsible management for a sustainable future; Løkkegaard, et al.  2007. Report on the Faroese fisheries regulation:  Norway, 2008. Marine Resources Act; Gullestad, et al, 2012. Changing attitudes 1970 – 2012. Evolution of the Norwegian management framework to prevent overfishing and to secure long-term sustainability,</p>			
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				<b>All UoCs 65</b>
<b>CONDITION NUMBER (if relevant):</b>				<b>1</b>

Evaluation table 23 - PI 3.1.2

PI 3.1.2		The management system has effective consultation processes that are open to interested and affected parties. The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties		
Scoring Issue		SG 60	SG 80	SG 100
a	<b>Guidepost</b>	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.
	<b>Met?</b>	Y	Y	Y
	<b>Justification</b>	<p>The Coastal States (CS) involved in the Blue Whiting fishery CS Agreement (EU, Faroe Islands, Norway, Iceland) have allowed representation and active participation of organisations and individuals in their fisheries management system and international negotiation delegations for a long time. The EU pelagic fleet local knowledge and economic interests are well represented at national and at EU levels, providing input to management decisions through Fishermen’s (FO) and POs’ (PO). The European Pelagic Advisory Council (PELAC) brings together a wide range of stakeholders.</p> <p>The European CFP, national EU fisheries management authorities, those coastal states (CS), the Faroe Islands and Norway in particular, and NEAFC have advisory committees or joint management arrangements where POs, scientists, managers and environmental NGOs have input and well understood responsibilities in all areas of the management process, SG 100 is met.</p>		
b	<b>Guidepost</b>	The management system includes consultation processes that obtain relevant information from the main affected parties, including local knowledge, to inform the management system.	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.	The management system includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information and explains how it is used or not used.
	<b>Met?</b>	Y	Y	N

	<b>Justification</b>	<p>All coastal states have a long tradition of continuous consultation and close cooperation between government agencies and the private sector. PFA, DPPO, KFO, SPSG and CDPSM report that they are involved in continuous and open consultations with national management authorities and other relevant stakeholders.</p> <p>The situation is similar at the international level, where user-groups participate in Coastal State negotiations, and NGOs participate at meetings in regional organizations such as the Pelagic Advisory Council (PELAC) and OSPAR. The PELAC is the main consultation mechanism through which industry engages with scientists and management authorities (CFP Reg. No 1380/2013). It includes European industry and environmental NGO representatives ensuring local knowledge is considered within the management system. The PELAC actively develops policy and advice to the European Commission, which are considered as part of the EC's management system. For the CS Agreement, discussions take place at least twice a year and reflect decisions made through co-operative national fisheries management institutions in Norway and the Faroe Islands.</p> <p>All stakeholders report EU consultation processes to be inclusive and transparent, with management authorities displaying consideration of the information obtained from stakeholders and how it is used. However, negotiations between EU and Norway are not transparent. Most recently, as the CS negotiations broke down, no explanation was provided on how the information used in the past was used or not used. Only SG 80 is met.</p>	
<b>c</b>	<b>Guidepost</b>		<p>The consultation process provides opportunity for all interested and affected parties to be involved.</p> <p>The consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement.</p>
	<b>Met?</b>	Y	Y
	<b>Justification</b>	<p>The consultation processes provide opportunity for all interested and affected parties to be involved at both national and international level. For instance, fishing industry representatives are thought to have been instrumental in devising the CS Agreement in the blue whiting fishery that was agreed annually between 2207 and 2014 (Bjørndal and Ekerhovd, 2014). Stakeholders consulted during the assessment report that management authorities actively facilitate their involvement, for instance through formal invitations to take part in meetings, and more widely by seeking the advice of stakeholders on their own initiative, not just responding to queries.</p>	
<b>References</b>	<p>Declaration on the Interpretation and Implementation of the Convention on the Future Multilateral Cooperation in North-East Atlantic Fisheries (North East Atlantic Fisheries Commission “new” Convention), 2007; EU-Faroes, 2014.</p> <p>Regulation (EU) No 1380/2013 Of The European Parliament and of The Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC</p> <p>www.pelagic-rac.org - WG1 reports</p> <p>Bjørndal, T. and N.-A. Ekerhovd 2014. Management of Pelagic Fisheries in the North East Atlantic: Norwegian Spring Spawning Herring, Mackerel and Blue Whiting. Marine Resource Economics 29 (1), 69-83.</p>		

	<p>Gullestad, P A Aglen, A Bjordal et al, 2012. Changing attitudes 1970 – 2012. Evolution of the Norwegian management framework to prevent overfishing and to secure long-term sustainability, ICES ASC 2012/L:05, 24p. Hegland, T.J and Hopkins CCE, 2014. Towards a new fisheries effort management system for the Faroe Islands? Controversies around the meaning of fishing sustainability. Maritime Studies 13:12, 24 p..</p>
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>	<b>All UoCs 90</b>
<b>CONDITION NUMBER (if relevant):</b>	<b>N/A</b>

Evaluation table 24 - 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
	Justification	<p>The main objective of the newly (2013) reformed European Common Fisheries Policy (CFP), which is binding for all member states, is to ensure that fishing and aquaculture activities contribute to long-term environmental, economic, and social sustainability. The EU is contracting party to UNCLOS and that the CFP provides for the implementation of the UN Fish Stocks Agreement relating to the conservation and management of straddling (and highly migratory) fish stocks, and promotes compliance with international conservation and management measures by fishing vessels on the high seas.</p> <p>The CFP regulation preamble also provides clear environmental long-term objectives, to:</p> <ul style="list-style-type: none"> <li>• maintain or restore marine resources at levels which can produce the MSY both within sea areas under national jurisdiction and on the high seas,</li> <li>• to apply the precautionary approach widely to conservation, management and exploitation of fish stocks, taking into account available scientific data;</li> <li>• to ensure coherence with the fisheries targets laid down in the Strategic Plan for Biodiversity 2011 – 2020, and with the biodiversity targets adopted by the European Council of 25 and 26 March 2010.</li> </ul> <p>The other NEAFC non-EU coastal states (Iceland; Faroe Islands, 2015; Norway, 2008) also have fisheries policies that define clear long-term objectives consistent with the MSC Principles and Criteria and with the precautionary approach to fisheries management, as defined, e.g., in the FAO Code of Conduct for Responsible Fisheries. The long-term management plan agreed by the five coastal states for the blue whiting stock (CS Agreement, 2014) was developed to be consistent with the precautionary approach, and to ensure harvest remain within safe biological limits consistent with the MSY, in accordance with ICES advice. SG100 is met.</p>		
References	Regulation (EU) No 1380/2013 Of The European Parliament and of The Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC			

	CS Agreement, 2014. Agreed record of conclusions between Iceland; the European Union, The Faroe Islands and Norway on the management of Blue Whiting in the North East Atlantic in 2014 including Arrangement for the Long-Term Management of the Blue Whiting stock (Oslo, 28 March 2014).
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>	<b>All UoCs 100</b>
<b>CONDITION NUMBER (if relevant):</b>	<b>N/A</b>

Evaluation table 25 - PI 3.1.4

<b>PI 3.1.4</b>		<b>The management system provides economic and social incentives for sustainable fishing and does not operate with subsidies that contribute to unsustainable fishing</b>		
<b>Scoring Issue</b>		SG 60	SG 80	SG 100
<b>a</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	Y	Y	Y
	<b>Justification</b>	<p>The management system provides economic and social incentives through a transparent allocation of resources (quota) at a level compatible with sustainable fishery management. Active participation in management provides fishing firms with an improved understanding and sense of fairness and improved legitimacy of management measures, in the EU, Norwegian and Faroes systems. The fishing industry's active involvement in the CFP reform and in the Operational Programming (OP) of the new European Fisheries Fund (EFF 2007-2013 and EMFF) has helped identify support to help fishing vessels comply with the new landing obligations (on-board cameras, e-logbooks, gear selectivity etc.).</p> <p>Prior to 2007, European structural funds (FIFG) have been used to co-finance some of the EU pelagic fleet expansion and modernization (for the Joseph Roty II surimi factory in 2004-5), but it hasn't been the case since then. The EFF introduced annual member states reports on fishing fleet capacity, and annual reviews of compliance with OP and eligibility criteria, that are consistent with outcomes expressed by MSC Principles 1 and 2 (EC 2006 and EFF 2014) to ensure that perverse incentives do not arise. Incentives provided by EFF and its successor, the EMFF, and by associated national support to the fishing industry are considered explicitly in the annual reviews and formally evaluated (ex-ante, mid-term and ex-post). Norway stopped subsidies to its fisheries sector by 2005 (Gullestad et al, 2012), and there is no record of subsidies in the Faroese management system (Løkkegaard et al 2007). Both systems provide SG100 is met</p>		
	<b>References</b>	<p>Regulation (EU) No 1380/2013 Of The European Parliament and of The Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC</p> <p>Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund (EMFF)</p> <p>Seventh annual report on implementation of the European Fisheries Fund (2013), COM(2014) 738 final  <a href="http://ec.europa.eu/fisheries/cfp/emff/index_en.htm">http://ec.europa.eu/fisheries/cfp/emff/index_en.htm</a> and for EFF see <a href="http://ec.europa.eu/fisheries/cfp/eff/index_fr.htm">http://ec.europa.eu/fisheries/cfp/eff/index_fr.htm</a></p>		

	<p>Gullestad, P et al, 2012. Changing attitudes 1970 – 2012. Evolution of the Norwegian management framework to prevent overfishing and to secure long-term sustainability, ICES ASC 2012/L:05, 24p. Løkkegaard, J., et al 2007. Report on the Faroese fisheries regulation: the Faroe model.</p>
<p><b>OVERALL PERFORMANCE INDICATOR SCORE:</b></p>	<p><b>All UoCS 100</b></p>
<p><b>CONDITION NUMBER (if relevant):</b></p>	<p><b>N/A</b></p>

Evaluation table 26 - 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	<b>Guidepost</b>	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.
	<b>Met?</b>	Y	Y	P
	<b>Justification</b>	<p>Long-term objectives for the blue whiting fishery are clearly defined in the management plan included in the annual CS Agreement: fisheries consistent with the precautionary approach intended to constrain harvesting within safe biological limits and designed to provide for sustainable fisheries, the NEAFC Convention (2007), the CFP (2013), Norway Marine resources Act (2008) and the Faroe Islands (2015) Fisheries Policy.</p> <p>The management plan provides for specific reference points for spawning stock biomass and fishing mortality. Short-term objectives explicitly addressed in EU and coastal state legislation include that TACs are not exceeded, that discarding does not take place (Principle 1) and that catch of non-target species is minimized (Principle 2). Short-term objectives are well defined and performance can be measured through the European Fisheries Control Agency Western Waters Joint Deployment Plan (see 3.2.3). Well-defined and measurable long-term objectives consistent with achieving the outcomes of MSC Principles 1 are explicit through the fishery's management plan biological reference points. For Principle 2, both Norwegian and Faroes policies have quantified objectives regarding MPAs, interactions with juvenile fish or bycatch species. However, in the management plan, the long-term objectives are less defined and measurable for Principle 2, a partial score is given for SG100.</p>		
<b>References</b>		<p>CS Agreement on the management of Blue Whiting in the NE Atlantic, 2014.            NEAFC "New" Convention, 2007.            Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC            Norway, 2008. Marine Resources Act and Norway            Faroe Islands, 2015. Faroes Islands Fisheries &amp; Aquaculture, Responsible management for a sustainable future, Ministry of Fisheries and Natural Resources</p>		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				<b>All UoCs 90</b>
<b>CONDITION NUMBER (if relevant):</b>				<b>N/A</b>

Evaluation table 27 - 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	<b>Guidepost</b>	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.	
	<b>Met?</b>	Y	Y	
	<b>Justification</b>	Decision-making processes for the fishery are in place, with the European Council of ministers agreeing the fishery's TAC from ICES scientific advice and previously discussed at the Pelagic Advisory Council (PELAC). TAC shares between Coastal States and ICES-recommended management plan are agreed annually at the CS meeting and then by NEAFC for its Regulatory Area. NEAFC's recommended TAC has been in line with ICES recommended TAC since 2010, and so have total catches, which demonstrate a well-established commitment of coastal states, to follow and achieve the fishery-specific objectives, SG80 is met.		
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	Y
	<b>Justification</b>	The decision-making procedures established at European level identify serious and other important issues regarding the resource and ecosystem through annual research surveys and scientific working group meetings (WG WIDE ICES, 2014a). Meetings are prepared with stakeholders at the Pelagic Advisory Council (PELAC) WG1 where results are presented as they become available. Stakeholders met and contacted for this assessment agree that the process is open, transparent and timely. ICES advice is based on data from catches, stock status, wider ecosystem indicators and cooperative research activities, which estimates, monitors and evaluates the effect of management decisions, such as for the 2008 EU regulation on landing obligations effective from January 2015 in the fishery. The management system also responds to issues raised by the PELAC. Decision processes at NEAFC, in bilateral negotiations and the CS Agreement are based on ICES recommendations described above and consider wider implications (NEAFC 2014c, CS Agreement 2014). SG 100 is met.		

<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>c</b>	<b>Guidepost</b>		Decision-making processes use the precautionary approach and are based on best available information.	
	<b>Met?</b>		Y	
	<b>Justification</b>	ICES scientific advice (2014a) and the Blue Whiting management plan are consistent with the precautionary approach and used by Coastal States and by NEAFC as such, SG80 is met.		
<b>d</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	Y	Y	N
	<b>Justification</b>	Information on fishery performance with respect to scientific advice and harvest control is available from ICES. Management Plans are discussed and endorsed by PELAC where non-EU CS are also actively involved. The European Fisheries Control Agency, in cooperation with the CS Norwegian and Faroese Coast Guard agencies, report annually and national control agencies provide information on fishing activities and compliance; information on landings from the fishery is available to stakeholders almost in real time. Management authorities provide explanations in feedback to the PELAC and CS Agreement parties, along with minutes of meetings. However, formal reporting on all these matters are not available to all interested stakeholders. SG100 is not met.		
<b>e</b>	<b>Guidepost</b>	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.

<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>Met?</b>	Y	Y	N
	<b>Justification</b>	The management authority is not subject to continuing court challenges. There is ample evidence at national (including Norwegian and Faroese), European and NEAFC level that management authorities work proactively to avoid legal disputes through strengthened consultations with stakeholders. However, although NEAFC is proactive to avoid legal disputes, this is not the case for the CS Agreement process, only SG80 is met.		
	<b>References</b>	ICES. 2014a. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 26 August - 1 September 2014, ICES Headquarters, Copenhagen, Denmark. ICES CM 2014/ACOM: 15, 938 pp. CS Agreement, 2014. Agreed record of conclusions of fisheries consultations between the European Union, the Faroe Islands, Iceland and Norway on the Management of Blue Whiting in the North-East Atlantic in 2014. Oslo, 28 March 2014, 6 p. PELAC WG1 correspondence to DG MARE on stock advice and management plans (from <a href="http://www.pelagic-ac.org/correspondence/recommendations">http://www.pelagic-ac.org/correspondence/recommendations</a> ) NEAFC. 2014a. Report of the Performance Review Panel, October 2014, 136p.		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				<b>All UoCs 80</b>
<b>CONDITION NUMBER (if relevant):</b>				<b>N/A</b>

Evaluation table 28 - 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	<b>Guidepost</b>	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.
	<b>Met?</b>	Y	Y	Y
	<b>Justification</b>	<p>The fishery under assessment takes place in European, international, Faroese and Norwegian waters, where MCS systems are highly developed. Since 2012, the Europe has specific MCS arrangements in place to control the pelagic fisheries (mainly mackerel, herring, horse-mackerel, anchovy and blue whiting) in Western Waters (WW<sup>14</sup>, Commission Decision 2012/807/EU). On the basis of a long-term risk analysis undertaken by all member states agencies concerned for each fishery including blue whiting, the European Fisheries Control Agency (EFCA) coordinates a Joint Deployment Plan (JDP), which covers all potential risk factors, from vessels to land transport. The MCS WG created within the CS Agreement in 2013 is assisting with the risk-based approach (EU-Faroes, 2014).</p> <p>Zones and Port entries are monitored, as are landings and first sales operations for all EU vessels. Electronic logbooks are in place on all vessels of the countries involved in the fishery, including those fishing only in NEAFC RA waters. The EU and NEAFC have arrangements in place with all CS for timely information exchange. All catches landed in the NEAFC area are reported to the flag states under the port state control regime.</p> <p>A risk-based framework aimed at utilizing resources to optimize compliance at any given moment is applied, implying that priorities are regularly amended. Also, the allocation of fixed quota shares gives incentives for sustainable fishing operations, as the quota can be temporary or permanently lost in the case of serious infringements. Introduction of the Landing Obligation under the reformed CFP (from January 2015 in pelagic fisheries) takes a results-based approach requiring vessel operators to find ways to avoid or minimize by-catch for which they have no quota, SG100 is met.</p>		

<sup>14</sup>Western waters are EU waters of ICES sub-areas V, VI, VII, VIII and IX and in EU waters of CECAF 34.1.11

<b>b</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	Y	Y	Y
	<b>Justification</b>	<p>The EU members states all have effective judicial systems that impose sanctions for non-compliance with fisheries management measures, and arrangement to exchange information and recognize sanctions imposed on vessels found to be non-compliant in other EEZ (Norway or Faroes) or NEAFC RA. In particular, vessels can taken away from the fishing grounds and detained for inspections and possible sentencing in CS courts, measures that have high potential economic costs. Any quota-related infringement (catch kept or discarded) are passed on to the POs and taken out of national and EU quotas.</p> <p>The comprehensive enforcement system combined with the reported level of compliance makes it reasonable to assume that the systems in place provide effective deterrence, SG100 is met.</p>		
<b>c</b>	<b>Guidepost</b>	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.
	<b>Met?</b>	Y	Y	Y
	<b>Justification</b>	<p>Inspection statistics indicate that all risk factors are covered and there is a high degree of confidence that compliance is high across the various fleet and vessels. On the basis of the comprehensive EFCA JDP results, it is reasonable to conclude that the system provides for effective deterrence. The close implication of stakeholders in the design of management and conservation measures through the PELAC and the POs (POs) give high legitimacy to the management system, which also contributes to increased levels of compliance in the fishery, including the provision of information necessary for effective management of the fishery.</p>		
<b>d</b>	<b>Guidepost</b>		There is no evidence of systematic non-compliance.	
	<b>Met?</b>		Y	
	<b>Justification</b>	<p>The level of compliance in the blue whiting fishery is closely monitored and generally high. There are no indications of systematic non-compliance, SG80 is met.</p>		
<b>References</b>		<p>Council Regulation (EC) No 1005/2008 establishing a Community system to prevent, deter, and eliminate IUU fishing EC, 2012. Commission implementing decision of 19 December 2012 establishing a specific control and inspection programme for pelagic fisheries in Western Waters of the North East Atlantic, 10p. Commission Decision 2012/807/EU</p>		

	<p>EFCA, 2014. European Fisheries Control Agency Operational reports for Joint Deployment Plan and joint campaigns for Pelagic fisheries in Western Waters 2014, 5 p. from <a href="http://efca.europa.eu/pages/home/jdp_north.htm">http://efca.europa.eu/pages/home/jdp_north.htm</a>          NEAFC Scheme for Control and Enforcement, 2014 and IUU vessel list and PSM from <a href="http://www.neafc.org/mcs">http://www.neafc.org/mcs</a>          Interviews during site visits and email correspondence with national enforcement authorities          EU-Faroes, 2014. Agreed Record on Conclusions of Fisheries Consultations between the European Union and the Faroe Islands</p>
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>	<b>All UoCS 100</b>
<b>CONDITION NUMBER (if relevant):</b>	<b>N/A</b>

Evaluation table 29 - PI 3.2.4

PI 3.2.4		The fishery has a research plan that addresses the information needs of management		
Scoring Issue		SG 60	SG 80	SG 100
a	<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>	Y	Y	N
	<b>Justification</b>	<p>The ICES stock assessment process shows that a comprehensive and documented research plan exists with a strategic approach to P1 aspects for this and other ICES assessed species. 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. ICES (WGWIDE) also explore ecosystem aspects such as changes to migration patterns. Stock distribution patterns are being explored as part of the approach to resolving the quota allocation issue (e.g. see URL below). Further research on P2 does exist at member state level; for example the Pelagic Advisory Council identifies research needs through its documented Annual Strategic Plan (which sets out the work for the year ahead).</p> <p>These mechanisms illustrate that P1 &amp; P2 aspects are addressed in a strategic manner in what equates to a research plan. That plan does provide the management system with timely information in order to achieve P1 &amp; 2 objectives.</p> <p>NEAFC has a MoU with ICES to obtain annual scientific advice, and to request queries, including ecosystem and Climate Change effects of the ecosystem of its Convention area and small pelagic species fisheries in particular.</p> <p>There is some research on P3 issues, but these are not part included in a comprehensive plan, SG 100 is not met.</p>		
b	<b>Guidepost</b>	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.

	<b>Met?</b>	Y	Y	Y
	<b>Justification</b>	Research plans and results are presented regularly to PELAC and are publicly available from the ICES website, and also as scientific journal articles. They are also actively disseminated to all interested parties, primarily through emailing lists. SG100 is met		
	<b>References</b>	ICES. 2014a. Report of the Working Group on Widely Distributed Stocks (WGWIDE), 26 August - 1 September 2014, ICES Headquarters, Copenhagen, Denmark. ICES CM 2014/ACOM: 15, 938 pp. NEAFC MoU with ICES and regular requests from <a href="http://www.neafc.org">http://www.neafc.org</a>		
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>				<b>All UoCs 90</b>
<b>CONDITION NUMBER (if relevant):</b>				<b>N/A</b>

Evaluation table 30 - 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>Guide post</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>	The fishery's management plan is reviewed by ICES and by STECF (2014). National management systems are reviewed by the European Commission through annual reports from Member states on fishing capacity, and compliance issues that may have been identified by the EFCA. ICES advice, the CFP and national management systems are subject to regular evaluation through benchmarking. However, mechanisms are not in place to review <i>all</i> parts of the management system. For instance, the coastal states management cooperation itself is not subject to review by means of any established mechanism, only SG80 is met..		
<b>b</b>	<b>Guide post</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>Justification</b>	The CFP is reviewed internally and externally by independent evaluators and for some aspects occasionally by the European Court of Auditors, as are national management systems by Auditors General. ICES advice is subject to regular external review, e.g. by STECF on behalf of the EU or directly by the coastal states. The management plan is subject to regular external review by ICES, to determine the impact and precautionary nature. Each year ICES retrospectively evaluates the CSA's outcome, in the form of national quotas and landings relative to the TAC. The NEAFC has regular performance reviews of its performance as an RFMO, which includes discussions of some aspects of the CSA, such as dispute resolution, but regular external review of the CSA specifically for the blue whiting fishery does not take place. Only SG80 is met.		
<b>References</b>		ICES, 2014b. Blue Whiting in Subareas I–IX, XII, and XIV - Advice September 2014. Report of the ICES Advisory Committee 2014. ICES Advice, 2014. Book 9. ICES, 2013b and c. NEAFC requests to ICES STECF, 2014. Review of scientific advice for 2015. NEAFC. 2014a. Report of the Performance Review Panel, October 2014, 136p.		

PI 3.2.5	<p>There is a system of monitoring and evaluating the performance of the fishery-specific management system against its objectives</p> <p>There is effective and timely review of the fishery-specific management system</p>	
<b>OVERALL PERFORMANCE INDICATOR SCORE:</b>		<b>All UoCs 80</b>
<b>CONDITION NUMBER (if relevant):</b>		<b>N/A</b>

## Appendix 1.2 Conditions

Table 29. Condition 1

<b>Performance Indicator</b>	3.1.1
<b>Score</b>	65
<b>Rationale</b>	<p>SI: 3.1.1 a) SG80: There is an effective national legal system and organised and effective cooperation with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2. Currently, international co-operation does not extend to an 'agreement and delivery of management actions consistent with sustainable management advice' and therefore SG80 is not met.</p> <p>3.1.1 b) SG 80: 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.</p> <p>The ongoing disputes in relation to the Norwegian share of the blue whiting TAC clearly indicate that the management system does not have a mechanism to address disputes that is 'effective in dealing with most issues' and so SG80 not met.</p>
<b>Condition</b>	<p>The SG80 requirements for SI a) and b) above must be met.</p> <p>There should be evidence of organised and effective cooperation between all affected parties, which delivers outcomes consistent with meeting Principle 1. There should also be evidence of an effective and transparent mechanism for dispute resolution between the parties (UNFSA Article 10 paragraphs a), h) and j) are particularly relevant to the meeting of this condition).</p>
<b>Milestones</b>	<p>Year 1. Communication should have begun or continued with relevant parties to promote cooperation on delivery of outcomes consistent with meeting the requirements of Principle 1 and achieving a suitable means of dispute resolution. The Client Group shall provide documented evidence of correspondence, meetings, representations etc.</p> <p>Year 2 and Year 3. It is understood that the condition could be closed at any time. Year 2 and 3 should therefore provide information on all relevant correspondence, meetings, representations undertaken and the prevailing situation regarding cooperation between parties and dispute resolution.</p> <p>Year 4. The SG80 requirements should be met. At the time this is achieved, this PI will be rescored at 80 or more.</p>
<b>Client action plan</b>	<b>See Appendix 5</b>
<b>Consultation on condition</b>	<p>The wording for the condition and milestones was agreed with CABs for the other Coastal States pelagic fisheries (North East Atlantic mackerel and Atlanto-Scandian herring) during teleconference Harmonisation meetings 16 March 2015 and 23 October 2015 (see Appendix 7).</p>

## Appendix 2. Peer Review Reports

### Appendix 2.1 Peer Review 1

#### Overall Opinion

<b><i>Has the assessment team arrived at an appropriate conclusion based on the evidence presented in the assessment report?</i></b>	<b>Yes/No</b>  <b>YES</b>	<b>Certification Body Response</b>
<p><u>Justification:</u></p> <p>The scoring of P2 and P3 is appropriate and in general sufficient evidence is provided. However, the issue of no agreement between the Coastal States on the TAC share and its implications on the harvest strategy and HCR does not have a simple solution and it is open to discussion. P1 scoring should be done more precautionary and thus the score for 1.2.2 should be lowered.</p>		<p>We have re-evaluated the P1 scoring in light of PR comments and the new advice available from ICES (Oct. 2015), harmonizing (as necessary) with the ongoing MSC Faeroese blue whiting assessment.</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>Yes/No</b>  <b>YES</b>	<b>Certification Body Response</b>
<p><u>Justification:</u></p> <p>The only condition present is well written and the guidepost well established. Any additional recommendation is suggested.</p>		<p>No comment</p>

If included:

<b><i>Do you think the client action plan is sufficient to close the conditions raised?</i></b>	<b>Yes/No</b>  <b>Yes</b>	<b>Certification Body Response</b>
<p><u>Justification:</u></p> <p>The action plan is well written with three main activities to be undertaken so that the condition is closed in 5 years. Although it is difficult to influence Coastal States negotiations outcomes, the actions proposed are likely to have some impact.</p>		<p>No comment</p>

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#### **General Comments on the Assessment Report (optional)**

The major issue with this assessment is related to the harvest strategy and the management of the fishery and the fact that international agreements on the TAC share have not been reached by the NEACF Coastal States, and thus individual countries have set unilateral quotas that inevitably lead to TAC overshoots. A harmonization meeting on this issue was organized, which clarified the assessment and scoring difficulties and how it should be dealt with in P3. For P1 some discussion was presented but no agreement was reached. [The text has been amended to rectify and clarify these points.](#)

The assessment team has scored P3 accordingly with the agreement made at the harmonization meeting, but has taken a less precautionary view in P1. Since there is a real possibility of TAC overshoot due to unilateral TAC shares above historical agreements, and that the most recent TACs have not been set according to the HCR and Fmsy is likely to be surpassed, SI 1.2.2c should be reviewed and rescored. [The text has been amended to clarify the basis for scoring, which still recognizes that \(up to 2015\) the blue whiting fishery has been managed sustainably and according to plan \(though not necessarily following ICES advice\). The report has also been updated to take account of ICES most recent perception of stock status \(published Oct. 2015\), which may have some influence on future management decisions.](#)

Page 59-60 – “Overall, the institutions managing the Blue whiting stock have been increasingly effective at following the scientific advice. The overall TAC and catches have coincided with ICES advice since 2010 (Figure 9)”. – this is not true as the official ICES advice, which followed the 2008 management plan, was overpassed in the 2014 and 2015 TAC. Please review text and figure 10. [Text amended as necessary.](#)

**Performance Indicator Review**

*Please complete the table below for each Performance Indicator which are listed in the Certification Body's Public Certification Draft Report.*

Performance Indicator	Has all the relevant information available 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.	Certification Body Response
1.1.1	yes	yes	NA	Rationale and scoring is appropriate. However, there is some inconsistency in the value of the TRP: is it Fmsy (0.3) or Fmp (0.18) in SI 1.1.1b?	This has been clarified in the text
1.1.2	yes	no	NA	In SI 1.2.2.c the target reference point used by ICES, Bpa, as proxy for MSY Btrigger and Fmsy will allow the stock to be maintained at a level consistent with BMSY so SG 80 is reached. However, it will not achieve higher biomass levels and does not take into account the ecological role of the stock with a high degree of certainty. Therefore	Agreed, and text and score amended accordingly

Performance Indicator	Has all the relevant information available 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.	Certification Body Response
				SG 100 is not met.	
1.1.3	NA	NA	NA		No comment
1.2.1	yes	yes	NA	Rationale and scoring is appropriate.	No comment
1.2.2	Yes	no	NA	In SI 1.2.2b the conclusion that SG 100 is not met is correct but the rationale is not clear since the justification is based on the lack of a specific HCR, while the correct argument is that the HCR does not take into account a wide range of uncertainties. In SI 1.2.2c SG100 is not met because, contrary to what is stated, the most recent TACs have <u>not</u> been set according to the HCR and scientific advice, and Fmsy <u>is</u>	Agreed, and text amended accordingly. In fact, the TACs up to 2015 have been set according to the HCR, but the evidence that this may not be the case (lacking a current management plan) for 2016 will only be known in the New Year. The complicating factor here is the new ICES advice, which is based on a revised F estimate and appears to be considered less robust than in recent years.

Performance Indicator	Has all the relevant information available 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.	Certification Body Response
				likely to be surpassed due to the unilateral increase of quota share by one CS, which will lead to "the total catch lie midway between ICES' MSY framework TAC of 1,326,000 t, and ICES Precautionary approach TAC of 1,402,000 t," i.e. between Fmsy (0.3) and Fpa (0.32).	
1.2.3	Yes	Yes	NA	Rationale and scoring is appropriate	No comment
1.2.4	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
2.1.1	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment

Performance Indicator	Has all the relevant information available 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.	Certification Body Response
2.1.2	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
2.1.3	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
2.2.1	No	No	NA	SI c – even if no main bycatch species are caught, this SI refers to all bycatch species so a description of the measures is still applicable.	Agreed, and text and scores by UoC amended accordingly.
2.2.2	No	Yes	NA	Scoring is appropriate. However, there are several references to Overzee et al. (2013) but only 1 blue whiting trip has been sampled in this study, while there are no references to the SPSG observers programme, which also recorded catch.	Agreed, and text amended accordingly. The SPSG observers programme is mentioned in the background text, and an appropriate reference is now made in the scoring comments.

Performance Indicator	Has all the relevant information available 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.	Certification Body Response
2.2.3	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
2.3.1	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
2.3.2	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
2.3.3	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
2.4.1	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment

Performance Indicator	Has all the relevant information available 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.	Certification Body Response
2.4.2	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
2.4.3	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
2.5.1	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
2.5.2	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
2.5.3	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
3.1.1	Yes	Yes	Yes	Rationale and scoring is appropriate. However, "Following an	Agreed, and text and score amended accordingly

Performance Indicator	Has all the relevant information available 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.	Certification Body Response
				independent performance review (OECD 2009) NEAFC has been able to agree TACs for Blue Whiting equal to those set by ICES since 2010." ICES does not set TACs, ICES advices on TACs and ICES official advice, that follows the 2008 management plan, has not been followed for the 2014 and 2015 TACs.	
3.1.2	Yes	No	NA	SI 3.1.2b. The Coastal States agreements negotiation, as with many other international fisheries agreement negotiations are known for not being transparent, and several stakeholders, particularly NGOs, have stated this publically. Also, it is usually unclear how stakeholder's opinion are taken into	This point is taken. SI 3.1.2b scored down to 80

Performance Indicator	Has all the relevant information available 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.	Certification Body Response
				account in TAC decisions, particularly in international negotiations. Thus SG 100 is not met. Therefore either strong backup information is given to the statement "All stakeholders report consultation processes to be inclusive and transparent, with management authorities displaying consideration of the information obtained from stakeholders and how it is used" or this SG needs to be rescored.	
3.1.3	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
3.1.4	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment

Performance Indicator	Has all the relevant information available 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.	Certification Body Response
3.2.1	Yes	No	NA	Rationale and scoring is appropriate.	No comment
3.2.2	No	No	NA	SI 3.2.2a states correctly that " formal reporting on all these matters are not available to all interested stakeholders. SG100 is not met.' But SG100 is given. The PI score should be 80, not 90.	Yes, thank you. The score has been corrected
3.2.3	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
3.2.4	Yes	Yes	NA	Rationale and scoring is appropriate.	No comment
3.2.5	No	Yes	NA	Rationale and scoring is appropriate. Please note that	The reference was provided in 3.2.2 and will be

Performance Indicator	Has all the relevant information available 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.	Certification Body Response
				<p>NEAFC just released a performance review and although it is not a review mechanism on itself it could be mentioned.</p> <p><a href="http://www.neafc.org/node/11708">http://www.neafc.org/node/11708</a></p>	added to 3.2.5 Thank you

**Any Other Comments**

Comments	Certification Body Response
None	No Comment

## Appendix 2.1 Peer Review 2

### Overall Opinion

<p style="color: #0056b3; margin: 0;"><i>Has the assessment team arrived at an appropriate conclusion based on the evidence presented in the assessment report?</i></p>	No	<p style="margin: 0;"><b>Conformity Assessment Body</b> <b>Response</b></p>
<p><u>Justification:</u></p> <p>The evidence presented in the report is lacking in several significant aspects, and the assessment team appears to have mistakenly identified 5 UoCs where there only seems to be one. These issues require attention.</p> <p>If there are indeed 5 UoCs, an appropriate assessment outcome would seem to be:-</p> <ul style="list-style-type: none"> <li>P1 – all UoCs pass because stock status is fine.</li> <li>P2 – there is only adequate information for CDPSM and (perhaps) the PFA; inadequate information for all other UoCs.</li> <li>P3 – if information deficiencies about non-EU waters are addressed, all UoCs should pass.</li> </ul> <p>If the information deficiencies in the report can be rectified, I would support the view that those UoCs for which adequate information can be presented in respect of all Performance Indicators should be certified.</p> <p>Some more specific comments on key aspects of the report are made below.</p> <ul style="list-style-type: none"> <li><b>Units of certification</b> – there are several issues here:-               <ul style="list-style-type: none"> <li><b>Definition &amp; distinction</b> – the distinction between UoCs in the report does not follow the MSC definition of UoCs. The only distinction that seems to exist between the UoCs in this report is that they are fleets of vessels owned by different companies; unless there are differences in the “fishing method/gear and practice” between these companies (and none is specified), it seems that there should really be only one UoC.</li> <li><b>Assessment outcome</b> – having identified (incorrectly) 5 separate UoCs at the start of the report, there is no separate analysis of each UoC or distinction between them in the rest of the report.</li> </ul> </li> </ul>	No	<p>The assessment team has considered the PR comments about the number of UoCs, and concluded that 5 UoCs are justified. Their national management regimes differ to some extent and, probably more importantly, there are differences in fishing operations, specifically in the way that the catch is stored or processed on board which has implications for P2 scoring.</p> <p>We have now included an analysis of the separate outcomes and scores for each UoC, where necessary, identifying them where appropriate, and indicating the level of information (within and between UoCs, and harmonizing with other relevant MSC assessments).</p> <p>Although the PR considers there to be a paucity of information in the report with regard to some aspects, we believe that the information on <b>retained non-target species</b> is adequate for scoring purposes, and note that the information on <b>Discarding of Non-target species</b> – is not relevant to three of the 5 UoCs (Vessels using RSW Tanks cannot discard at sea), and not in Faroese or Norwegian waters (discard prohibitions).</p> <p>We hope that this is now made clear in the report, and that any illusions of <b>circular logic</b> have been rectified by demonstrating harmonization with other MSC assessment reports, rather than using them solely as evidence bases.</p>

- **Patchy information** – for Principle 2, the information presented in the report is very patchy. It appears that for some of the UoCs there is little or no information available about impacts on retained, discarded or ETP species.

It is not clear how (or why) gaps in knowledge for one UoC are filled by information from other UoCs: if the UoCs are independent, the information would not be automatically transferable between them; and if the information is transferable between the UoCs then the level of inter-dependence would strongly suggest that they are not separate UoCs.

- **Circular logic** – in some parts of the report, particularly P2, the authors have cited MSC assessment reports that were carried out several years ago for some (but not all) of the UoCs under assessment as an evidence base for statements in the text (specifically Southall et al, 2010; Andrews et al, 2010; Lockwood et al, 2009). This is not appropriate.

While the report should harmonise where necessary with previous assessments, they do not provide an evidence base to support statements about impacts of the UoCs under consideration here on P2 components.

- **Adequacy of information** – there is a paucity of information in the report with regard to the following:-
  - **Retained non-target species** – a major omission from the report are landings records for all of the vessels in all of the UoCs up to the most recent complete year (for the PFA fleet, the report relies on third-party data for one vessel in 2012). If this is a well managed and regulated fishery, these up to date data should be readily available and presented in the report.
  - **Discarding of Non-target species** – the only verifiable information about impacts on non-target species is for trawling from 1 observer trip conducted several years ago aboard one vessel in just part of the geographic area of the fishery. This information would seem scarcely adequate for an assessment of just the PFA trawl vessels to which it relates; how this can be extrapolated to apply to the activities of all 74 vessels in the 4 different UoCs is not at all clear.
- **Fine words but no outputs** - In several parts of the report (particularly with regard to discarded non-target species), the authors assure the reader that there are various information-gathering initiatives and client policies in place, but no evidence is presented to show that any data have emerged from these initiatives (with the notable exception of the CDPSM, who have provided the only self-

<p>sampling data in section 3.5.2 of the report). This is a significant concern – the fine words need to be supported by outputs if they are to be relevant to the scoring of PIs 2.1.3, 2.2.3 and so on.</p> <ul style="list-style-type: none"> <li>• <b>Traceability</b> – following the comments about “circular logic” above, it is not appropriate to cite a 2010 MSC assessment as evidence of the traceability arrangements in place for the PFA fleet. The team should demonstrate that they have examined these arrangements themselves, rather than rely on a 5-year old report.</li> </ul> <p>I would respectfully suggest that the team should re-define the UoCs, review the information that has been presented to them by the clients for each and identify where there are gaps and reflect this in the scoring of each UoC independently, as the MSC CR indicates.</p>	
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<p><i>Do you think the condition(s) raised are appropriately written to achieve the SG80 outcome within the specified timeframe?</i></p>	<p>No</p>	<p>Conformity Assessment Body Response</p>
<p><u>Justification:</u></p> <p>There is only one condition of certification, relating to PI3.1.1. For this PI, Sla and Slb both scored less than 80.</p> <p>The wording of the condition is not outcome-oriented for each of the SIs that score less than 80. It requires the client fishery to “work with” various parties to “support the resolution” of the dispute and to “re-establish an effective international cooperation mechanism”.</p> <p>It is clear that part of this condition relates to the narrative and metric form of Sla (cooperation), but less clear how it relates to Slb, which requires that there is a mechanism in place for the resolution of disputes.</p> <p>It would seem appropriate to revise the condition so that it also addresses the shortcomings of the fishery with respect to Slb more specifically.</p>		<p>A new condition has been drafted after a comprehensive harmonization process, facilitated by the MSC.</p> <p>The text in the Summary of Conditions table and Appendix 1.2 Conditions has been modified accordingly</p>

If included:

<i>Do you think the client action plan is sufficient to close the conditions raised?</i>	No	Conformity Assessment Body Response
<p><u>Justification:</u></p> <p>The action plan represents all that could be expected of the client fisheries, and is comparable with similar action plans for shared stocks in the North-Eastern Atlantic.</p> <p>The successful implementation of the condition is dependent on parties other than the client fisheries and the CAB. It is not clear that these other “relevant entities” have been consulted about the action plan, nor whether they are likely to support its implementation.</p> <p>If evidence is presented of consultation with, and support from, the relevant entities, then these concerns will be addressed.</p>		<p>Evidence is now presented of consultation with, and support from, other client fisheries to which this management failing applies, so this concern is addressed.</p>

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## General Comments on the Assessment Report (optional)

### 1. Executive Summary

No comments.

### 3.1 Scope of certification

It is stated that the fishery under assessment is not subject to a controversial unilateral exemption to an international agreement. More evidence needs to be provided to demonstrate that this is in fact the case for the blue whiting fishery and to bring it in to line with the conclusions reached for other fisheries.

Section 4.1 of the report shows that when the Faroe Islands allocated a herring quota outside the terms of the Coastal States Agreement for Norwegian Spring-Spawning Herring, the Faroese Pelagic Organisation's MSC assessment was found to be out of scope.

The situation for this fishery is similar. The status of the Coastal States Agreement for blue whiting is uncertain, in this instance because of action by Norway in declaring a TAC higher than the historical allocation key. Because of this, the argument that the fishery remains "in scope" needs to be strengthened both within sections 3.1 and 4.1. [This has been done.](#)

### 3.1 Unit of Certification

There are a couple of items in this section that require attention:-

- **Interpretation:** the MSC CR defines a unit of certification as "*The target stock(s) combined with the fishing method/gear and practice (including vessel/s) pursuing that stock.*" This definition does not seem to have been correctly applied in this assessment. For instance:-
  - **Distinction between UoCs:** it is not clear on what basis the UoCs are distinguished from one another under a correct application of the MSC definition. The MSC definition of a UoC is blind to vessel ownership and national boundaries (as evidenced by the PFA group which is international and comprises several companies). Given that the vessels are all prosecuting the same stock, and using the same fishing method, there would seem to be just 1 UoC under assessment: pelagic trawling.

The only clear distinctions between the UoCs that emerge from their description are to do with the storage of the catch aboard the vessels, and the organisations that they belong to.

The PFA vessels are all freezer trawlers; the CDPSM vessel is described as a "surimi paste pelagic freezer trawler"; and all of the other vessels are either RSW or FSW vessels. In each case the distinction relates to catch storage rather than capture and is not a basis for distinguishing UoCs.

Catch storage aside, the only clear distinction between the vessels in each UoC (which fish for the same stock using the same gear) is that they are

members of different organisations. The significance of this is not explained here or anywhere else in the report.

- **Implementation** – following the comments above, if there are indeed 5 distinct UoCs, then they should each stand alone, with evidence presented for each UoC to support its scoring against each PI.

It is not, for example, appropriate to conclude that the KFO fishery has no “main” retained species when absolutely no data are presented about the retained catch from the KFO “UoC” (section 3.5.1 / PI 2.1.1).

If the assessment team considers that there is more than 1 UoC, then evidence needs to be presented in the report to demonstrate that there are sufficient differences in fishing practices between the UoCs to warrant this. This, in turn, should be reflected in the assessment results and the determination, with adequate information being presented for each UoC for each PI.

We have treated the assessed fishery as containing 5 UoCs, pointing out the evidence that there are sufficient differences in fishing practices between the UoCs to warrant this (specifically with respect to P2). It should also be pointed out that although the MSC provide a definition for what determines a Unit of Certification this does not mean that this is the only determination by which this can be reached. The requirements specified in the MSC CR should certainly be used as a minimum (ie. Different gear types and management units) but the team do not believe this stops them from making further differentiations in the UoCs as is deemed appropriate.

The team does agree that the data presented though did not provide suitable determination between these separate UoCs. This has now been reflected in the assessment results and the determination, with information being presented for each UoC where this differs by PI (not for P1 or P3).

### 3.3.1 Target stock definition

It is implied in the text that there are two biologically distinct blue whiting stocks that are managed for convenience as a single stock. However, later on (in section 3.3.4) it is stated that “...the EU divides its [TAC] allocation between the Northern (90.70%) and Southern portions of the Blue Whiting stock.”

If this is the case, then the stock management implications should be explored in the text; and if not, the text should be amended to correct this.

It would be nice to see a rather better map of the stock(s) relative to the management unit and also the areas covered by the UoC. This would assist the reader, particularly when considering the access to TACs allocated to different areas described in section 3.3.4 of the report.

There was a compilation error on the PDR, and the relevant text has been re-instated.

### 3.3.4. TAC, quotas and catches

There are some comments in this text that require further explanation.

It is stated that the Faroe Islands stopped access to their waters between 2011 and 13 and that there was no quota transfer from EU to the Faroes in 2014 and 2015. This issue requires further explanation; it sound very much like an international dispute of some description, which should be reflected elsewhere in the report, in the commentary under Principle 3 (where this isn't mentioned) and / or in the scoring of PIs under Principle 1 and 3.

The text refers to inter-annual flexibility of 10% in the TAC, but this is not explained further. An explanation is required to describe how this is managed.

The text has been amended to clarify this point.

#### 3.4.4.1 Fishery management plan

This section contains the following text:-

Discussions with the client revealed that there were no objections to the 2008 management plan, which, though obsolete, is still used for advice during this transition period. A new management plan was developed by EU and the industry via the Pelagic Advisory Council, which incorporates two trigger points at high and low recruitment phases with a motivation to stabilize production for the fishery as well as sustainability of the resource.

The EC is expected to provide text on a new management plan to be adopted late in 2015. Meanwhile, it is recognised that  $F=0.18$  is no longer valid for MSY and that the EC is being precautionary and will not set the 2015 TAC above  $F_{MSY}$  (0.30). It has been noted that any reduction in  $F$  due to management leads to a large drop in the TAC and could be regarded as over-zealous given the good state of the Blue Whiting stock (2011 illustrates this).

In May 2013 ICES evaluated a NEAFC request to review a potential new HCR function (ICES 2013b, 2013c). A number of alternative  $F$  targets in the range of 0.1—0.35 were evaluated for the current HCR and found to be precautionary up to an  $F$  target of 0.32 (corresponding to  $F_{pa}$ ), with only a minimal increase in mean TAC for  $F$  targets above 0.3. There are no significant differences in catch either with or without stabilization mechanisms in the current HCR over the entire time period examined, and the HCR is therefore based solely on fishing mortality considerations in relation to levels of SSB.

No international agreement has been obtained with respect a specific HCR to be used for a new management plan for Blue Whiting. The TAC for 2014 was set to 1.2 Mt equivalent to an  $F$  of around 0.23.

[Underlining added for emphasis]

This would seem to indicate that there is presently no agreed management plan (i.e. HCR) in place for the stock. This should either be explained in the text or reflected in the scoring of the relevant PIs.

Though the proposed 2008 management plan for this stock has not been formally adopted, the fishery is still being managed to achieve sustainability (though the outcome for 2016 is not yet known) using the established HCR. This is now more fully explained in the text.

#### 3.4.5.1 Data used in the assessment

The text states that:-

*Most of the Blue Whiting caught in directed fisheries are sold as frozen blocks of whole fish, surimi paste or for reduction to fishmeal and discards are thought to be small. Though discarding at rates of up to 40% occurs in the fisheries for human consumption and as bycatch in fisheries directed towards other species, the overall quantities involved are small. A study carried out to examine discarding in the Dutch fleet in 2002–2007 found that Blue Whiting are not selected and discarded for length reasons (Borges et al., 2008). Estimates of discards are not included in the Blue Whiting assessment.*

[Underlining added for emphasis]

This text raises a couple of concerns:-

- What is the actual figure (tonnage) of discarding from the human consumption fishery?
- What are the implications of not estimating discarding for the stock assessment?

It would be reassuring if this information was presented in the report. [This has now been added.](#)

#### 3.5.2 Discarded species

This section opens with a reference to 2014 ICES advice on blue whiting, stating that “ICES considers discards in this fishery to be negligible (ICES, 2014b)”. I have searched this report for the word “discard” and the only use of it in in the advice is in connection with blue whiting, and not for non-target species. The use of this information is inappropriate here.

The only “hard” information presented in this entire section are the discard work carried out aboard one PFA vessel and reported in van Overzee et al, 2013; and some self-sampling work carried out by the Joseph Roty II in 2013-14.

Anecdotal information is presented in the text, which suggests that there are no recent (post 2012) observer records for the PFA; none for DPPO; limited information for KFO; none for SPSPG; and none for CDPSM.

A table in the report indicates that all of the UoCs apart from KFO have their own self-sampling procedures in place. There is no evidence presented in the report to show that these initiatives are anything more than fine words – where are the outputs from all of this monitoring?

Further to this, it is stated that all of the RSW and FSW vessels working in the fishery are incapable of discarding at sea. This being the case, shouldn't there be some factory records of the catch composition? (And if not, why not? It should be much easier to examine catch composition ashore upon landing of the unsorted catch rather than at sea).

Finally, the UoC extends from the Straits of Gibraltar to the Arctic Circle, and covers a geographic area of over 11.25 million km<sup>2</sup>. The only observer data on discards comes from a single trip on one vessel in ICES areas VIa, VIIb and VIIc (to the west of Scotland, and covering just over 300,000km<sup>2</sup>). For 97% of the geographic area of the fishery it seems that there is no information available to describe catch composition and discards.

In summary, there are 74 vessels in the 5 UoCs. Only one vessel in one UoC seems to have presented any data to the assessment team; and there are observer records for only one trip on one other vessel from several years ago. Nevertheless 4 of the 5 UoCs claim to have systems in place for gathering information on catch composition.

Overall, there seem to be significant gaps in knowledge about discarding, but these are not addressed either here or in the scoring of the relevant PIs.

We consider that the reviewer has overlooked some of the information provided on evidence for catch composition (and the fact that discarding is highly unlikely for most of the vessels under consideration), and have amended the text as necessary to clarify this.

### 3.5.3 ETP species

The report states that:-

*For most of this fleet, however, limited observer data exist in view of the cost and logistics involved in running these observer programmes and because this fishery is generally perceived as low-risk to ETP species (see Southall et al., 2010; Andrews et al., 2010; Lockwood et al., 2009).*

[Underlining added for emphasis]

This statement is inappropriate for two reasons. Firstly the references cited do not relate to the blue whiting fishery. Secondly, these reference are previous MSC assessments, creating a circular argument. [Understood, and rectified.](#)

## 4.1 Harmonised Fishery Assessment

The team has done a good job of providing a succinct report that draws comparisons between the key harmonisation issues for this and other north east Atlantic small pelagic fisheries.

The only comment of note here is that it would be useful to provide a more robust rationale to explain why the FPO Atlanto-Scandian herring fishery was considered "out of scope" because of the unilateral action taken by the Faroe Islands, but the current assessment remains "in scope" despite the unilateral action taken by Norway (the explanation given is only that Norway would not be able to catch its self-declared TAC allocation, which while true does not seem adequately robust). [We hope that revisions have clarified this.](#)

## 5. Traceability

As with other parts of the report, this section should be re-structured in a way that allows the reader to understand the detail of traceability arrangements for each separate UoC and the information that the assessment team has obtained from each UoC to verify the traceability arrangements and procedures applied by each UoC.

This is particularly important for this aspect of this particular assessment, as each UoC is a distinct and separate commercial entity, and they operate in different countries. It is not, therefore, appropriate to assume that what happens in one UoC (or country) also happens in other UoCs (or countries).

The traceability section has been amended to make this clearer. Reference has been made to the separate UoCs at all stages so it is clear. The specific eligibility section to enter further chains of custody has been amended to show this by the UoCs specifically (for clarity).

### 5.2 Traceability within the fishery

The report indicates that the PFA has a system for packing and storing of its catch in place, citing a previous MSC assessment (not for blue whiting) in support of this. Does this mean that the assessment team has taken no action of its own to determine if the arrangements reported in 2010 for a different fishery are still in place?

No. The assessment team considered traceability for all UoCs specifically during the assessment process and this is provided in the traceability section of this report. The citation has been removed for clarity here.

#### c) Details of the use of trans-shipment

The report notes that trans-shipment is prohibited in EU waters. It should also indicate whether trans-shipment is prohibited in the non-EU parts of the fishery, and in particular in the international waters (the “banana hole” outside EU and Norwegian jurisdiction that is included in the UoC definitions (ICES Sub-areas I-IX, XII & XIV) but omitted subsequently.

A separate paragraph dealing with trans-shipment in the non-EU waters has been added.

#### d) Points of landing

The report lists the designated landing ports within and outside the EU for landing small pelagic species. Only EU legislation is mentioned in this section. In order to provide confirmation that there is an adequate traceability system in place for all points of landing, the relevant domestic legislation and enforcement procedures for each non-EU state (Faroe Island and Norway) should be mentioned in the report.

The EU legislation is mentioned here because the vessels are all EU flagged (although the legislation is actual relevant to herring and mackerel catch only). The requirements relating to the landing of catch are actually more relevant to the Port State Measures (PSM) agreement (although not fully ratified yet). The key is that the vessels can only land to the ports listed in Tables 26 and 27 as these have been identified as being able to manage the PSM process

going forward. For clarity though, further information on the traceability controls that exist in the Faroese and Norway have been added.

I hope that these comments are helpful. Yes, very, thank you.

**Performance Indicator Review**

Please complete the table below for each Performance Indicator which are listed in the Conformity Assessment Body’s Public Certification Draft Report.

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
1.1.1	Yes	Yes	NA	The scoring is justified.  It should be made clear that this score applies to all UoCs.	It is implicit in the MSC assessment process that Principle 1 scores apply to all UoCs, since this concerns a common target species (in this case blue whiting).
1.1.2	Yes	Yes	NA	The scoring is justified.  It should be made clear that this score applies to all UoCs.	As above
1.1.3	NA	NA	NA	NA	No Comment

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
1.2.1	No	No	NA	<p>It is hard to agree that there is a “<i>robust and precautionary</i>” harvest strategy in place (S1a) when it is clear that there are problems with the Coastal States agreement, because the evidence indicates that the harvest strategy is fragile, and beset with similar problems to other North-East Atlantic pelagic fisheries (e.g. the self-allocation of a TAC by the Norwegian Government).</p> <p>Whilst the fishery certainly meets the S1a,b and c requirements (at present), the problems with the CSI mean that it is not clear that S1d is met at present.</p> <p>S1d requires that the harvest strategy is periodically reviewed and improved as necessary. While this was the case until recently, the narrative text in section 3.3.6 and 3.4.4.1 indicates that improvements are needed but have not yet been made.</p>	Agreed, and we have now taken account of the latest stock status and management advice coming from ICES. The text has been revised to address these points, and the score is now 85.

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>The management plan for this fishery is presently in a rather precarious state (reflected in the condition generated under PI3.1.1) and the failure to mention this here and take account of it in the score seems an oversight. Under these circumstances, the SG100 score seems over generous.</p>	
1.2.2	No	No	NA	<p>Following on from the observations above, the scoring of S1a is questionable at the SG80 level; a score of 60 would seem more appropriate.</p> <p>If the situation has been reported correctly, the management plan set out in the old CSA for this fishery is under review, because one party has stepped outside of the HCRs that it established.</p> <p>In the absence of an agreement to, and compliance with, the CSA by all of its</p>	<p>The basis for scoring here has been strengthened, explaining that the tools used (TAC controls) have been shown to be effective in achieving the exploitation levels required under the HCR and that the stock has increased in recent years in response to a decline in fishing mortality achieved through management actions.</p>

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>signagories, it cannot be said that “well defined harvest control rules are in place”. Unless further justification is provided here and in sections 3.3.6 and 3.4.4.1 of the report, then a score of 60 for this SI would seem more appropriate..</p>	<p>Norway's unilateral increase in its national quota in 2015, which is only a potential problem if the Norwegian fleet can take it in Norwegian waters, would lead to a total catch midway between ICES' MSY framework TAC of 1,326,000 t, and ICES Precautionary approach TAC of 1,402,000 t, both of which would leave an SSB in 2016 of over 5 million t, which is well above Bpa /MSYB trigger of 2,250,000 t. Since it seems unlikely that <math>F_{MSY}</math> will be exceeded, this is deemed to be a P3 issue, and is dealt with under 3.1.1.</p> <p>How management deals with the changed perception of the stock status in ICES latest advice (Oct 2015) will be dealt with at the first</p>

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
					SA.
1.2.3	No	No	NA	<p>There is insufficient information presented in report to demonstrate that fishery removals from all parts of all of the UoCs are measured at the level of accuracy and coverage consistent with Slb and Slc.</p> <p>There is an assertion that “discards are thought to be negligible”. There is no information presented anywhere in the report to indicate the quantity of blue whiting that are discarded (either from this or from other fisheries). No information is presented anywhere in the report to demonstrate that the discarding of target species by any of the UoCs has been studied. Because of this, the scoring of Slb at SG100 is hard to understand.</p> <p>With respect to Slc, the SG80 level</p>	This information is now provided.

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>requires that “<i>There is good information on all other fishery removals from the stock</i>”. The scoring commentary indicates that this information exists, but it is not presented anywhere in the report; and in particular there does not seem to be good information about the quantity of blue whiting that are discarded either from the UoCs under assessment or from other fisheries.</p> <p>Further information about blue whiting catches in other fisheries and discarding from all fisheries seems to be required to justify the scores awarded.</p>	
1.2.4	Yes	Yes	NA	The scoring is justified.	No comment
2.1.1	No	No	NA	The fundamental problems with the scoring of this PI are that no distinction is	As explained above, we have now included an analysis of the

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>made between the different UoCs, and that the information presented is patchy (no data are presented for the KFO vessels, and only a single trip on one Dutch PFA vessel in 2012 (and not 2011 as stated)). Both of these issues need to be addressed.</p> <p>1. Paucity of data</p> <p>To confidently score this PI at SG80 or higher, information should be presented that shows that the catch and / or landings for all of the UoCs has been considered and that this information is relatively current.</p> <p>The information presented in the scoring commentary and the relevant narrative section of the report do not support the</p>	<p>separate outcomes and scores for each UoC, ensuring that our scoring comments, and scores, do reflect the level of available information. We believe that the information on <b>retained non-target species</b> is adequate for scoring purposes, comprising as it does total annual landings for recent years and proportions of blue whiting and other retained species for three of the 5 UoCs, all of which show blue whiting comprising 99-100% of the catch.</p> <p>We hope that the very low proportion of non-target retained (and discard species) in the</p>

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>score awarded. Either more information should be provided, or the scores should be amended.</p> <p>The paucity of data is particularly frustrating for the UoCs using RSW vessels, since the report repeatedly states that these vessels cannot discard any of their catch, and it is sorted at the factory after landing. There should, therefore, be excellent factory records of the catch composition of every single trip. Where is this information?</p> <p>2. Independent or inter-dependent UoCs?</p> <p>No rationale is presented to justify why the performance of different UoCs is comparable. Why do data gathered for the SPSSG and DPPO fleet have any relevance to the KFO vessels?</p>	<p>catch is now made clear in the report.</p>

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>The assessmetn team either needs to present here (and throughout the report) a clear and logical explanation of the relationship between the UoCs. If the data describing the performance of vessels in one UoC applies in equal measure to the other UoCs, then why are they separate? And if they are separate, why have the data for differerent UoCs been used in this way.</p> <p>However the scoring of this PI is viewed, there is insufficient information presented to demonstrate that the SG80 score is met for <u>ALL</u> UoCs; however it is clearly met for <u>some</u> of them (and might also be met if a rationale is presented to amalgamate them all).</p>	
2.1.2	No	No	NA	The scoring here is not justified for similar reasons to those presented for PI 2.1.1	The data adequacy question is

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>above. In summary:-</p> <p>There is a paucity of data; evidence only seems to be available for some of the UoCs, and not for all of them.</p> <p>It is not clear if (or why) the UoCs are independent or inter-dependent, particularly given that some of the UoCs (such as the PFA, DPPO, and SPSP) have their own internal "sustainability polices" in place, while other (KFO, CDSPM) do not. These difference should be reflected in the scoring.</p> <p>As before, some clear statement needs to be made to explain the independence or inter-dependence of the UoCs for this PI before information and assumptions are</p>	<p>addressed above.</p> <p>We are aware that a small amount of fishing by any of the 5 UoCs may take place in Norwegian waters, though it is mostly directed at pre-spawning and spawning fish to the west of the British Isles and around the Faroe Islands.</p> <p>A reference to the Norwegian management and monitoring systems, which are probably more robust than those within the EU, has been added.</p>

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>shared between the UoCs.</p> <p>As noted previously, it is not clear if the UoCs extend to fishing in Norwegian waters. If they do, then a significant omission from the scoring comments is any mention of Norwegian legislation. To justify the score of 80 in Norwegian waters as well, evidence would be required to demonstrate that a similar standard of management exists in Norway to that described for the EU.</p>	
2.1.3	No	No	NA	<p>In line with comments for PI2.1.1 above, there are significant gaps in the landings data presented in this report.</p> <p>Unless additional information is incorporated in the report, the scoring at SG80 for SIa and SIb cannot be justified for all of the UoCs under assessment</p>	See above.

Performance Indicator	Has all the relevant information available 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	Conformity Assessment Body Response
				(notably the KFO fleet).	
2.2.1	No	No	NA	<p>The scoring is not supported by verifiable and auditable evidence.</p> <p>The only information presented to support the claim that the fishery is very "clean" is the van Overzee et al 2013 report and data from one vessel operating in another UoC.</p> <p>The van Overzee et al 2013 report included data from a single "blue whiting" trip aboard a single Dutch freezer trawler vessel in 2012. Later in this report (scoring comments for PI 2.2.3 at Sla, the team note that this study presents "...data which represent a minor fraction of the effort by this fishery." The team clearly recognise the limitations of the data presented already.</p>	<p>As with retained species, the report has been amended to show how the available information can be used to justify the scores given for the 5 UoCs. Clearly, if there is no discarding (RSW tanks in UoCs 2,3 &amp;4), then SG100 is met, and there is evidence that discard level from UoCs 1 and 5 are either low or accounted for. Because these two UoCs require pure blue whiting for their onboard processing, the onus is on the skippers to minimise bycatch, which is easily done given the nature of the fishery. The scoring now reflects this.</p>

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>Section 3.5.1 of the report lists a series of data-gathering initiatives that the PFA, DPPO, SPSG and CDPSM have in place. The KFO don't gather any data on discarded non-target species. Of these, the only initiative that seems to have yielded any information is that run by the CDPSM.</p> <p>Section 3.5.1 explains that some anecdotal observer records are available for the SPSG fleet, but no observer data for either the DPPO or KFO.</p> <p>Overall, there is a paucity of data; and again, unless some explanation is given about the independence / inter-dependence of the UoCs, it is hard to establish how a set of observer data from a single PFA trip in 2012 coupled with a set of fishery-dependent data for a single vessel in 2014 is adequate to pronounce</p>	

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>that a fishery prosecuted across such a vast range is “clean”.</p> <p>Whilst all of the anecdotal information suggests that this is indeed a “clean” fishery, the requirement of this PI at SG80 requires evidence rather than anecdote. If the various client fisheries do indeed have the procedures in place for self-reporting, it should be very easy to rectify these omissions using the fishery-dependent data that the PFA, DPPO, and SPSG have in place (to augment that already present for SDPSM).</p> <p>If such information cannot be provided, then the score of 80 is not justified.</p>	
2.2.2	No	No	NA	The scoring here is not justified for similar reasons to those presented for PI 2.2.1 above (and likewise for 2.1.1). In	See above. A reference to the Norwegian regulations and management systems has been

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				<p>summary:-</p> <p>There is a paucity of data; evidence only seems to be available for some of the UoCs, and not for all of them.</p> <p>It is not clear if (or why) the UoCs are independent or inter-dependent, particularly given that some of the UoCs (such as the PFA, DPPO, and SPSPG) have their own internal "sustainability polices" in place, while other (KFO, CDSPM) do not. These difference should be reflected in the scoring.</p> <p>As before, some clear statement needs to be made to explain the independence or inter-dependence of the UoCs for this PI before information and assumptions are shared between the UoCs.</p> <p>As noted previously, it is not clear if the</p>	added.

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				UoCs extend to fishing in Norwegian waters. If they do, then a significant omission from the scoring comments is any mention of Norwegian legislation. To justify the score of 80 in Norwegian waters as well, evidence would be required to demonstrate that a similar standard of management exists in Norway to that described for the EU.	
2.2.3	No	No	NA	<p>The information presented does not seem to meet the SG80 requirements for all of the UoCs. The reasons for this are expounded above. Again, there seems to be a paucity of information, and no explanation is offered for the independence or inter-dependence of the UoCs.</p> <p>The team note that the only independent study available is the van Overzee et al</p>	See above

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>2013 report, and that this study presents "...data which represent a minor fraction of the effort by this fishery." The team clearly recognise the limitations of the data already.</p> <p>In particular, a more robust rationale is required to justify the scoring of SIb (which does not use the qualifier "main"). The information that would enable this SI to be met would include, for instance, some evidence from the catch monitoring schemes that the PFA, DPPO and SPSG have in place and which is absent from the report.</p> <p>The scoring of SIc is also hard to reconcile with the information presented in the report. There seems to be no indepent information available to detect a change in risk level to discarded species apart from a single trip by one PFA vessel in 2012 and</p>	

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>a year's data from the single CDPSM vessel.</p> <p>Unless further information and explanation is provided, the score of 80 for all UoCs does not seem appropriate.</p>	
2.3.1	No	No	NA	<p>There are various issues in the scoring of this PI.</p> <p>Firstly, it appears that the team has used the OSPAR Commission's list of Threatened or Declining Species as its source for a list of ETP species, which is incorrect. The correct approach would have been to use national legislation and CITES Appendix I.</p> <p>Secondly, it is clear that the effects of the fishery are only "known" for some of the UoCs, and not for all of them.</p>	<p>First point taken, and the report has been amended accordingly.</p> <p>We acknowledge the low level of observer cover in this fishery, but argue that this is because the fishery is known to have very low levels of ETP (or any non-target species) by catch. The comprehensive coverage of the annual scientific acoustic/fishing surveys has shown this to be the case and has probably been used to argue a low priority for</p>

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>Looking at the evidence presented in section 3.5.3 of the report, it seems that the only vessels with ongoing observer presence capable of detecting ETP interactions are the Dutch and German PFA vessels and the KFO vessels (1-2 trips pa). Evidence from the DPPO and CDPSM fleets is provided by the vessels themselves, as is the case for the SPSG (as SMRU have not had observers aboard since 2012).</p> <p>The evidence presented in section 3.5.3 of the report is anecdotal. Whilst not doubting that ETP interactions are thought to be infrequent, a more robust case seems to be required. Where, for instance, are the SMRU report findings for the period prior to 2012 in the SPSG fleet?</p> <p>The scoring of this PI should be reviewed so that it re-focuses on the correct species</p>	<p>observer coverage in the blue whiting fishery.</p>

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				and makes a more objective appraisal of the information available.	
2.3.2	No	No	NA	<p>The scoring of SIb and SIc does not seem to be justified by the information presented in the report.</p> <p>The scoring comments for SIa state that “<i>observer coverage in this fishery is poor</i>”.</p> <p>It is stated at SIb that “on the basis of the observer and self-reporting data described...it is highly likely that interactions with...ETP species...are minimal in this fishery”. This justification is not consistent with the “poor” observer coverage reported in SIa, nor are self-reporting data presented in the report for all of the UoCs.</p> <p>It is stated at SIc that “<i>The absence of</i></p>	See above: text amended to clarify basis for scores.

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p><i>systematic non-compliance...together with observer data</i>" supports the scoring at the SG80 level. This is a non-sequitur: compliance with fisheries regulations does not evidence an absence of interactions with ETP species. Further to this, the scoring comments for Sla states that "<i>observer coverage in this fishery is poor</i>", creating a contradictory situation.</p> <p>A score of 80 is probably justified for this PI, but not by the evidence presented here which has significant omissions and contradictions. If these are addressed, the score may be appropriate.</p> <p>As noted previously, it is not clear if the UoCs extend to fishing in Norwegian waters. If they do, then a significant omission from the scoring comments is any mention of Norwegian legislation. To justify the score of 80 in Norwegian waters</p>	

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				as well, evidence would be required to demonstrate that a similar standard of management exists in Norway to that described for the EU.	
2.3.3	No	No	NA	<p>At risk of repeating earlier comments, the evidence available is (by the team's own admission) very limited and patchy across the different UoCs.</p> <p>As already noted above, the scoring of PI2.3.2 at Sla refers to "poor" observer coverage in this fishery.</p> <p>However, at Sla for PI 2.3.3, it is stated that the observer data provide sufficient qualitative and quantitative information for the impact on ETP species to be estimatedm citing the scoring of Sla for PI2.3.1 as evidence.</p>	See above: text amended to clarify basis for scores.

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>In actual fact, PI2.3.1 Sla does not contain <u>any</u> quantitative data from observer trips, only self-reported data from the single CDPSM vessel. There is no explanation in PI2.3.1 or here in 2.3.3 how the CDPSM data can be confidently applied to all UoCs: it's the UoC independence / inter-dependence issue all over again.</p> <p>This creates both a contradiction in the report (observer coverage can't be simultaneously "poor" and yet provide quantitative estimates of impacts) and also inaccurate (the quantitative data in 2.3.1 Sla are self-reported and not from observers).</p> <p>For Sla it is further stated that "<i>because of low observer coverage, however, impacts cannot be quantitatively esimtated with a high degree of certainty</i>". While this is no doubt true, SG80 requires a quantitative</p>	

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>estimate of impact on ETP species for the fishery.</p> <p>Where is this estimate? The only information available seems to be catches for part of the fishery, and there is no indication that this information is of sufficient accuracy to have allowed it to be raised to the fleet level as required for each UoC.</p> <p>Whilst accepting the argument, based on anecdote, that ETP impacts from this fishery are likely to be small, the scoring rationale requires substantial revision to justify the SG80 level of performance for all UoCs. Alternatively a lower score may be appropriate here.</p>	
2.4.1	Yes	Yes	NA	The scoring is justified. I agree that SG100	No comment

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>is only partially met.</p> <p>The EU has recently been looking at systems for monitoring and, in future, managing pelagic habitats (Druon 2014). While there is no reasonable basis for concluding that pelagic habitats (such as oceanic fronts) might be adversely affected by pelagic trawls, it is a shame not to mention this.</p>	
2.4.2	No	Yes	NA	<p>The scoring is justified.</p> <p>As noted previously, it is not clear if the UoCs extend to fishing in Norwegian waters. If they do, then a significant omission from the scoring comments is any mention of Norwegian legislation. To justify the score of 80 in Norwegian waters as well, evidence would be required to demonstrate that a similar standard of</p>	<p>We believe that this only rarely extends into Norwegian waters, but have added a reference to the Norwegian regulations and management system.</p>

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				management exists in Norway to that described for the EU.	
2.4.3	No	No	NA	<p>It is established in PI2.4.1 that the fishery is pelagic. It is therefore not clear why the scoring here only considers benthic habitats; these are clearly irrelevant, and the reasoning is flawed.</p> <p>At SIb it is stated that "...the spatial extent of vulnerable habitat types is known"; if these habitats are not impacted they are not "vulnerable" even if they might be "sensitive" to trawl impacts, should they ever occur.</p> <p>Overall, because benthic habitats are not considered to be impacted by this fishery, they are not relevant to the scoring of this PI. The SG100 requirements of SIa and SIc do not seem to be met by the evidence</p>	Indeed. Text amended accordingly.

Performance Indicator	Has all the relevant information available 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	Conformity Assessment Body Response
				<p>presented, and the score is not justified.</p> <p>This said, it is clear that because the fishery is only likely to affect pelagic habitats, and because these habitats are by their very nature unlikely to vulnerable to the impacts of the fishery, a score of 80 would seem appropriate for this PI.</p>	
2.5.1	Yes	Yes	NA	The scoring is justified.	No comment
2.5.2	No	No	NA	<p>While the EU MSFD has some relevance to the management of ecosystem impacts of fisheries, it must have rather limited relevance for managing the ecosystem impacts of a fishery that is conducted partly in Norwegian waters (i.e. outside the EU).</p> <p>As noted previously, it is not clear if the UoCs extend to fishing in Norwegian</p>	<p>The fishery does not extend to Icelandic waters, but it does take place in Faroese and to a much lesser extent in Norwegian waters (including Svalbard) at this time.</p> <p>Informations on Faroe Islands</p>

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				waters. If they do, then a significant omission from the scoring comments is any mention of Norwegian legislation. To justify the score of 80 in Norwegian waters as well, evidence would be required to demonstrate that a similar standard of management exists in Norway to that described for the EU.	and Norwegian management systems have been added in sections 3.6
2.5.3	Yes	Yes	NA	The scoring is justified.	No comment
3.1.1	Yes  (No if UoCs include Norwegian / Icelandic / Faeroese waters)	Yes  (No if UoCs include Norwegian / Icelandic / Faeroese waters)	Yes	The scoring is well-reasoned and justified for the EU and NEAFC areas.  As already noted, it is not clear if the UoCs extend into Norwegian, Icelandic or Faeroese waters. If they do, then the omission of any reference to the relevant national legislation in the scoring is	The fishery does not extend to Icelandic waters, but it does take place in Faroese and to a much lesser extent in Norwegian waters (including Svalbard) at this time.

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				<p>significant and should be rectified.</p> <p>It is appropriate to generate a condition for this PI.</p> <p>Further to this, the condition states that there has been no consultation on the condition (presumably with "relevant entities", though this is not clear). Since the delivery of his condition will depend on concerted action by not just the client fishery, but also Government agencies and organisations, the lack of consultation on the condition and any action plan is a significant omission.</p>	<p>Informations on Faroe Islands and Norwegian management systems have been added in section 3.6 and the scoring table. The score is unchanged.</p> <p>The point about consultation is taken – though it is not clear how in practice this is possible or what it will achieve. It is obvious that none of the governments from countries whose vessels form part of the UoC are able to commit to 'fixing' the CS agreement- which is an EU responsibility- although individual fisheries ministers will have some say. Likewise, the EU is already committed in principle to sustainable management of</p>

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					<p>the stock, but will not commit to any particular agreement with the other coastal states: this is part of a process of negotiation.</p> <p>Therefore, the consultation about the condition would simply be to request lobbying to the EU on behalf of an agreement - which forms part of the condition rather than being a pre-requisite.</p> <p>Furthermore, in the absence of agreement, the second element of the condition (a fisheries-level arrangement) kicks in, and it is perfectly possible for the client organisations to arrange that between themselves (e.g. by not taking part of their quotas) – particularly given that this is a harmonised condition with the</p>

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					<p>Norwegian and Faroese clients.</p> <p>A harmonised score and condition were agreed with the FPO blue whiting fishery, and through MSC facilitated discussions between CABs involved on the certification of all small pelagic fisheries within the CS Agreement (see Annex xx – augmented with email from Robert 5 NOV).</p> <p>The changed wording of the harmonised condition addresses the concern of the reviewer.</p>
3.1.2	Yes  (No if UoCs include	Yes  (No if UoCs include Norwegian /	NA	The scoring is justified if none of the UoCs operate in Norwegian, Icelandic or Faroese waters.	Information on Faroe Islands and Norwegian management systems has been added in section 3.6 and in the scoring

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
	Norwegian / Icelandic / Faeroese waters)	Icelandic / Faeroese waters)		However, if any of the UoCs operate in Norwegian, Icelandic or Faeroese waters, the omission of any reference to the relevant national management systems should be rectified to justify the score awarded.	table.  The score is unchanged.
3.1.3	Yes  (No if UoCs include Norwegian / Icelandic / Faeroese waters)	Yes  (No if UoCs include Norwegian / Icelandic / Faeroese waters)	NA	The scoring is justified if none of the UoCs operate in Norwegian, Icelandic or Faeroese waters.  However, if any of the UoCs operate in Norwegian, Icelandic or Faeroese waters, the omission of any reference to the relevant national management policies should be rectified to justify the score awarded.	The fishery does not extend to Icelandic waters, but it does take place in Faeroese and to a much lesser extent in Norwegian waters (including Svalbard) at this time.  Information on Faroe Islands and Norwegian management systems has been added in section 3.6 and in the scoring table.

Performance Indicator	Has all the relevant information available 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	Conformity Assessment Body Response
					The score is unchanged.
3.1.4	Yes  (No if UoCs include Norwegian / Icelandic / Faeroese waters)	Yes  (No if UoCs include Norwegian / Icelandic / Faeroese waters)	NA	<p>The scoring is justified if none of the UoCs operate in Norwegian, Icelandic or Faeroese waters.</p> <p>However, if any of the UoCs operate in Norwegian, Icelandic or Faeroese waters, the omission of any reference to the relevant national incentives should be rectified to justify the score awarded.</p>	Information on Faroe Islands and Norwegian management systems has been added in sections 3.6 and in the scoring table. The score is unchanged.
3.2.1	Yes  (No if UoCs include Norwegian / Icelandic / Faeroese waters)	Yes  (No if UoCs include Norwegian / Icelandic / Faeroese waters)	NA	<p>The scoring is justified if none of the UoCs operate in Norwegian, Icelandic or Faeroese waters.</p> <p>However, if any of the UoCs operate in Norwegian, Icelandic or Faeroese waters, the omission of any reference to the relevant national objectives that are</p>	<p>Information on Faroe Islands and Norwegian management systems have been added in section 3.6.</p> <p>In the context of the blue whiting fishery, the long-term objectives guiding management are those</p>

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
				relevant to MSC Principle 2 should be rectified to justify the score awarded.	agreed in the management plan.  Regarding Principle 2, long-term objectives are better defined in both Norwegian and Faroese fisheries policy, but the blue whiting management plan is considered to be the reference document and, therefore, the score is unchanged.
3.2.2	No	No	NA	<p>The scoring of SIa and SIb is questionable, given the current uncertain status of the CSA for this stock (reflected in the condition generated under PI3.1.1).</p> <p>The report states that the parties to the CSA have been unable to reach agreement for 2015, and that a status quo situation prevails (with Norway allocating itself a TAC in excess of that in the</p>	<p>The PI deals with “Decision-making processes” specific to the blue whiting fishery management system.</p> <p>We contend that Norway allocating itself a national quota in excess of its share of the TCA does not really perturb the management system, to the</p>

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				<p>allocation key for the CSA).</p> <p>It is not clear how the SG80 requirements of Sla and Slb are met under these circumstances.</p>	<p>extent that the blue whiting is not currently found in such quantities in Norwegian waters.</p> <p>The Norwegian decision is therefore in defiance of the cooperation framework already scored down under 3.1.1, and not of the fishery's management system, which includes effective decision-making strategies that lead to the determination of the TAC and</p> <p>other key system components and mechanisms.</p> <p>A score compilation mistake in the PRD report was picked up by the other referee, and the score remains unchanged at 80 (instead of the 90 wrongly</p>

Performance Indicator	Has all the relevant information available 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	Conformity Assessment Body Response
					indicated initially).
3.2.3	Yes  (No if UoCs include Norwegian / Icelandic / Faeroese waters)	Yes  (No if UoCs include Norwegian / Icelandic / Faeroese waters)	NA	The scoring is justified if none of the UoCs operate in Norwegian, Icelandic or Faeroese waters.  However, if any of the UoCs operate in Norwegian, Icelandic or Faeroese waters, the omission of any reference to the relevant MCS mechanisms in these areas should be rectified to justify the score awarded.	Information on Faroe Islands and Norwegian management systems has been added in section 3.6 and scoring table.  The score is unchanged.
3.2.4	Yes	Yes	NA	The scoring is justified.	No comment
3.2.5	Yes  (No if UoCs include Norwegian / Icelandic / Faeroese waters)	Yes  (No if UoCs include Norwegian / Icelandic / Faeroese waters)	NA	It is clear that the EU CFP has been subject to a recent review. No evidence has been presented about recent reviews of the Norwegian, Faeroese or Icelandic	Reference to Norwegian and Faeroese system has been added. Review of the CSA is discussed and further

Performance Indicator	Has all the relevant information available 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.	Conformity Assessment Body Response
	Icelandic / Faeroese waters)	Faeroese waters)		<p>management systems.</p> <p>More importantly, to secure a score of 80 or more here there should be evidence of the review of management <u>systems</u> underpinning the coastal states agreement, which is clearly critical to this fishery. (Note that this is not the same thing as an ICES review of the fishery management plan, which is tested elsewhere).</p>	<p>information has been added.</p> <p>ICES review of the management plan is not considered here – rather we are considering the review of the ICES framework, which is conducted periodically by STECF.</p> <p>Reference to the NEAFC Performance Review has been added to the scoring table.</p> <p>The score has not changed.</p>

## Any Other Comments

Comments	Conformity Assessment Body Response
<p>Comments on specific Performance Indicators (PIs) are made in the tables above. Some overall comments that relate to more than one PI are more appropriately made here:-</p> <ul style="list-style-type: none"> <li> <p><i>Units of certification</i> – the definition and use of UoCs in the report is unclear, confusing and muddled. It is not clear why there should be 5 UoCs and not just one: there is only one target species, one stock and one method of capture.</p> <p>If there are reasons for distinguishing between the 5 organisations participating in this assessment that are adequate to justify each being a separate UoC, these reasons need to be clearly set out, and the scoring of each UoC should be based on the information provided for that UoC.</p> <p>As it stands, the report makes the unsubstantiated assertion that there are 5 distinct UoCs and then arrives at an assessment outcome that is based on composite information. This is clearly contradictory.</p> </li> <li> <p><i>Unjustified extrapolations</i> – within P2 in particular there is unjustified reliance on a one observer trip on one PFA vessels, and one set of self-reported catch data from the CDPSM, the findings of which are extrapolated without explanation to cover fleets of vessels for which there is no other independent information.</p> </li> <li> <p><i>Reliance on irrelevant information</i> – this is a particular issue for the scoring of the “habitats” PIs. Having established (correctly) under PI 2.4.1 that pelagic trawls don’t impact benthic habitats under normal circumstances, information about benthic habitats and their management becomes irrelevant to the scoring of PIs 2.4.2 and 2.4.3. Benthic habitats are as relevant the scoring of pelagic fisheries as</p> </li> </ul>	<p>We have now explained more fully the reasoning behind 5 UoCs, and scoring of some elements of P2 is now based chiefly on UoC-specific information.</p> <p>It is obvious that blue whiting make up 99+% of catches, and that there are very low levels of retained species and discards overall. This, and scientific survey results, explains the decision to afford this fishery a low level of observer cover.</p> <p>Point take and text and scoring comments amended accordingly.</p>

tropical reefs are to temperate fisheries.

### Appendix 3. Stakeholder submissions

No written stakeholder submissions were received prior to the publication of the Public Comment Draft Report. Verbal submissions received during the site visit focused on the provision of information and no concerns were raised about the fishery under assessment. Following publication of the PCDR, the only stakeholder comments received were those submitted by the MSC, as detailed below:

Ref	Type	Page	Requirement	Reference	Detail
18430	Guidance	118	CR-27.10.7 v1.3	In Principle 2, the team shall score PIs comprised of differing scoring elements (species or habitats) that comprise part of a component affected by the fishery.	Inconsistency in scoring style for PI 2.2.3c, does not distinguish scoring for each UoC.
<b>MEC Response</b>		<b>This has been rectified. Note that this does not affect the score awarded to each UoC for this PI.</b>			
18431	Guidance	N/A	N/A	N/A	Internal links within the document are not working, with error comments
<b>MEC Response</b>		<b>This has been rectified</b>			
18432	Guidance	76-78	CR-27.12.2 v1.3	If the CAB determines the systems are sufficient, fish and fish products from the fishery may enter into further certified chains of custody and be eligible to carry the MSC ecolabel. The CAB shall determine: 27.12.2.1 The scope of the fishery certificate, including the parties and categories of parties eligible to use the certificate and the point (s) at which chain of custody is needed. a. Chain of custody	The report confirms that change of ownership often happens at landing. However, further definition is needed in the report on what happens between landing and change of ownership, and how traceability/segregation at these steps is handled. For example, the report states that on-land storage requires separate CoC but it is not clear whether the fishery certificate includes or involves other parties, for example physical auctions and agents.

				<p>certification shall always be required following a change of ownership of the product to any party not covered by the fishery certificate. b. Chain of custody certification may be required at an earlier stage than change of ownership if the team determines that the systems within the fishery are not sufficient to make sure all fish and fish products identified as such by the fishery originate from the certified fishery. c. If the point where chain of custody certification is required is covered by the fishery certificate, the team shall determine the parties or category of parties covered by the fishery certificate that require chain of custody certification.</p>	
<p><b>MEC Response</b></p>		<p>The wording has been amended slightly to provide clearer instructions on when separate CoC certification is required. For this fishery, CoC certification will be required at the point of landing whether ownership has changed or not and within the requirements of the CoC Standard (for example, transportation does not require separate CoC certification so would not require a CoC certificate for products transported after landing).</p>			

## Appendix 4. Surveillance Frequency

(REQUIRED FOR THE PCR ONLY)

1. The report shall include a rationale for determining the surveillance score.
2. The report shall include a completed fishery surveillance plan table using the results from assessments described in CR 27.22.1

Table A4: Fishery Surveillance Plan

Score from CR Table C3	Surveillance Category	Year 1	Year 2	Year 3	Year 4
[e.g. 2 or more]	[e.g. Normal Surveillance]	[e.g. On-site surveillance audit]	[e.g. On-site surveillance audit]	[e.g. On-site surveillance audit]	[e.g. On-site surveillance audit & re-certification site visit]

## Appendix 5. Client Action Plan

### **CLIENT ACTION PLAN for re-establishing effective international cooperation for the Compagnie des Pêches St Malo, DPPO, KFO, PFA & SPSG Northeast Atlantic Blue Whiting Pelagic Trawl Fishery.**

A condition of acceptance for achieving MSC certification for the blue whiting pelagic trawl fishery is that the fishery should work with the EU, the Pelagic Advisory Council and/or other parties as appropriate to support the resolution of the dispute between the coastal states and to re-establish an effective international cooperation mechanism for the fishery.

The Client group has agreed to formulate an action plan describing new initiatives and ongoing activities in support of seeking resolution of the dispute on a new quota sharing arrangement and to re-establish an effective international cooperation mechanism for the fishery.

Although no formal agreement has been reached between Coastal States on the management of the blue whiting fishery, it must be said that parties have made a real effort at the end of 2014 and also during the first half of 2015 to come to an agreement. No agreement however has been reached until now and the continuation of the Coastal States talks are scheduled from 12-14 October, directly after the 2015 ICES advice for this stock has been published.

The parties within the client group strongly believe in the principle of well-managed and sustainable fisheries and have demonstrated their commitment to that by engaging themselves in the (re)certification process for a number of their pelagic fisheries against MSC principles and criteria. All members of the client group have worked diligently to address conditions and recommendations placed on their respective fisheries and to date have made excellent progress. It's therefore very disappointing and disheartening, although no fault of their own, to be in a position where a condition of acceptance has been placed on their fisheries for blue whiting. The parties believe that working jointly on the following plan is a real commitment to resolving the current blue whiting management challenge and to return to a framework of a Coastal States Agreement.

This action plan is based on three elements; lobbying, industry liaison and science & management, as described in detail below. The client group views the plan as an adaptive process aiming at facilitating sustainable and science based management of the blue whiting stock.

The plan will be reviewed and revised following the end of the Coastal States quota and sharing negotiations for the following year. As said, the 2016 negotiations are scheduled to begin in October 2015. Should Coastal States not have resolved management issues by the end of the negotiations, the client group will review and revise the action plan.

### **Lobbying**

Members of the client group undertake to continue lobbying relevant bodies to promote a message based on the necessity of sustainable and well-managed fisheries. Members will remind parties, especially governments, of the consequences of unsustainable fisheries. The group will lobby for a fair and equitable blue whiting sharing arrangement (mainly) based on stock sustainability, science and zonal attachment of the stock in the different life stages. The client group will request all Coastal States to continue negotiating until a solution to the blue whiting dispute has been found. The client group members will provide evidence of engagement with the following actors:

- Member States;
- National administrations;
- National Governments;
- EU Commissioner and Commission Services;
- Environmental NGO's.

### Industry liaison

Members regularly meet representatives from other Coastal States during negotiation consultations. Members undertake to continue engagement with the fisheries organisations in all Coastal States, and in particular Norway and Faroe Islands, and continue seeking common ground on issues relating to the management of the blue whiting stock and solutions to current disputes between Coastal States. The client group will provide evidence of engagement with the following actors:

- Members will meet representatives from the Norwegian and Faroese Industry in order to seek joint positions and generate pressure on national administrations and intergovernmental organisations.

### Science & Management

Members undertake to continue engagement with the scientific community to ensure that the best possible scientific data is produced to help fully understand the status of the blue whiting stock. In addition, members will respect the blue whiting advice emanating from ICES and take this as the starting point for sound management of this fishery.

In recent years the client group has made a substantial effort – in the framework of the Pelagic Advisory Council – to develop and propose a draft management plan in collaboration with scientists and industries from other Coastal States (Norway, Faroe Islands, Iceland). This draft management has regrettably not (yet) taken into consideration by the Coastal States. Still, the client group will continue to call for the development of an agreed management plan for the blue whiting fishery.

The client group will provide evidence of engagement with the following activities:

- Engage in the ICES process;
- Engage in the long term management plan revision;
- Members will fully cooperate with the blue whiting commercial stock surveys, when needed;
- Undertake to provide any additional catch data, when identified by the scientific community.

### MILESTONES<sup>15</sup>:

**Milestone year 1:** Make contact with other interested parties and lobby the European Commission to initiate negotiations for a mechanism for cooperation between the Coastal

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<sup>15</sup> No other fleets in this blue whiting fishery are certified under MSC principles and criteria and only one other fleet than the client group is currently undergoing MSC's certification process (Faroe Islands). Therefore it is to be foreseen that the client group may encounter resistance with the other Coastal States fleets when engaging in the process as described below.

States which is effective in agreeing an appropriate management mechanism consistent with the management plan.

**Action year 1:** During negotiations for 2016 TACs and sharing arrangements, arrange meetings with other fleets in the fishery, European Commission and Member States' national administrations to encourage a management solution for 2016.

**Outcome year 1:** By March 2016, all Coastal States should have formally agreed on management and sharing arrangements for 2016 and beyond.

**Milestone year 2:** If the dispute is not resolved, continue to lobby. Demonstrate that discussions have taken place and progress has been made towards agreeing an appropriate dispute resolution system within the Coastal States Agreement. If it appears that the coastal states cannot agree, evaluate options for development of an agreement at the level of the various fleets involved in the fishery to ensure that the TAC is not overshoot to an unsustainable level in the future, directly or via the Pelagic AC or other bodies as appropriate

**Action year 2:** During negotiations for 2017 TACs and sharing arrangements, arrange meetings with other fleets in the fishery, the European Commission and other Coastal States administrations, when possible, to encourage a management solution for 2017. If no agreement has been reached, the client group will arrange meetings with other fleets in the fishery in order to seek options for a solution at industry level. The Pelagic AC will be included in this work if found appropriate.

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

**Milestone year 3:** Demonstrate that an appropriate system for coastal states cooperation and dispute resolution is agreed. Alternatively, develop a fleet - level management plan to ensure sustainable management in the absence of international agreement, in agreement with other fleets in the fishery.

**Action year 3:** If no agreement has been reached, the client group will continue to further develop an industry level management arrangement. The work will be done in agreement with other fleets in the fishery.

**Outcome year 3:** By March 2018, all Coastal States should have formally agreed on management and sharing arrangements for 2018 and beyond. Alternatively the framework for an 'industry' level management arrangement has been developed.

**Milestone year 4:** Demonstrate that the effective coastal states cooperation/dispute resolution system is in place and operational. Alternatively, validate and implement the fleet - level plan, in agreement with other fleets in the fishery.

**Action year 4:** If no agreement has been reached, the client group together with other fleets in the fishery will implement the industry level management arrangement.

**Outcome year 4:** By March 2019, all Coastal States should have formally agreed on management and sharing arrangements for 2019 and beyond. Alternatively an 'industry' level management arrangement has agreed among the fleets on the fishery and implemented.



**Gerard van Balsfoort**

**On behalf of:**

**Denmark - DPPO**

**Scotland - SPSG**

**The Netherlands, Germany, France, England, Lithuania - PFA**

**Ireland - KFO**

**France - Compagnie des Pêches, St Malo**

## Appendix 6. Client Agreement

(REQUIRED FOR PCR)

The report shall include confirmation from the CAB that the Client has accepted the PCR. This may be a statement from the CAB, or a signature or statement from the client.

*(Reference: CR: 27.19.2)*

## Appendix 6.1 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: CR 27.19.1)*

## Appendix 7. Key outcome of Coastal States pelagic fisheries harmonisation meeting

### NEA Pelagic stocks, Coastal state disputes Harmonization meeting

#### Participants:

Andy Hough, John Nichols, Geir Honneland, Anna Kiseleva, Jo Gascoigne, Rod Cappel, Crick Carleton, Sophie des Clers, Gudrun Gaudian, Carol Leiper, Dan Hoggarth, Robert Lefebure

Invited but could not attend: Mike Pawson, Jim Andrews, Chrissie Sieben, Asgeir Danielsson, Sonia Sanches- Marono

#### Key Outcomes:

Overview on harmonization was provided by DH, clarifying the intent of v1.3, as now expressed in v2.0. A further clarification on harmonisation expectations has been requested and will be provided in due course.

Discussion on how to deal with CS disputes was discussed in general but also in light of mackerel and AS herring.

It was agreed that PI 3.1.1 could be scored consistently across all stocks, as even though the P1 considerations are different, the key issues are very similar and the higher-level policy framework (as scored in P3.1.\*) is 'overlapping' across all stocks. In all cases, the requirement that an organized and effective cooperation with other parties is in place (as required to meet SG 80 for scoring issue a) and the existence of a transparent dispute resolution mechanism, which is effective in dealing with most issues (as required by scoring issue b at SG80), can both not considered to be met in cases where CS disputes result in an overshoot of the TAC and no provisions for the management systems effectiveness in the future can be given.

Participants noted the difficulties in scoring this, since CS quota allocation frameworks are ad-hoc agreements, not legally binding and very rarely have transparent dispute resolute mechanisms in place.

It was agreed that this should not be viewed as an exceptional circumstance, and even though it will be very hard for most coastal states to achieve the milestones of such a condition, it should be evaluated as a normal condition and e.g. failure to meet the milestones would result in another suspension.

It was noted that transparent dispute resolute mechanisms do not have to be legally binding (noting the word OR in scoring issue b for 3.1.1), but they do have to be incorporated in the management system.

The question was also raised on whether all stocks with CS agreements should score <80, for 3.1.1 si B, based on the fact that they are likely not effective should a CS dispute arise. It was concluded that they are effective until proven otherwise, as proven by the outcomes to each specific case.

For P1, it was concluded that outcomes between stocks does not have to be harmonized, since the P1 scoring will be different, but MSC is still looking for a consistency of scoring approaches when the issues are largely the same, as it relates to CS disputes and TAC not being in line with scientific advice.

On this point, it was noted that setting a globally applicable % threshold of allowed TAC overshoot, thus determining when a condition or fail should be triggered for 1.2.1, was not feasible as the situation would be stock dependent (where it is in terms of F and B and what provisions management had built in to deal with TAC overshoot, including levels of uncertainty). Considerations should instead be given to the stock status, recognising that the risk is higher when the stock is going down.

Counter to this, arguments were presented that the Outcome status of the stock was irrelevant in scoring 1.2.1 and it should simply be based on the effectiveness of the current management regime.

It was noted that the SG 60 level for 1.2.1 sets quite a low bar, but nevertheless, the MINSA team pointed to scoring issue b and raised whether it was likely that the strategy would work and even meet SG 60. Given that prior experience in this case dictates that it would likely not work. This precedent might only be true for MINSA and there was some disagreement on whether the same logic should be applied to AS herring (to achieve consistency but not harmonization).

No conclusion was reached on scoring 1.2.1 and if it should relate to the Outcome status, similar to 1.2.2 and HCRs, but it was determined that in light of uncertainty, scoring should at least be precautionary.

Fishery specific conclusions

#### *Blue Whiting*

No points raised on this issue other than what was already discussed in relation to the other fisheries. A condition on 3.1.1 seems likely, given the CS dispute in place here (Unilateral quota taken by Norway) and conclusions for this fishery should be consistent with the other fisheries facing similar situations.

#### *AS herring*

Anna Kiseleva, DNV, presented case why the Faroese fishery, FPO, should no longer be suspended due to a unilateral exemption to a unilateral agreement. The case presented revolved around a significant reduction by FPO of their quota, most of the quota is now taken within the EEZ of the Faroe Islands and finally, there is no longer a CS agreement in place for this stock as of 2015. Therefore, FPO can no longer be unilaterally exempt to an agreement that no longer exists.

All agreed that:

- Current dispute on herring quota allocations is a system failure and all Coastal States should work together to bring total catches in line with ICES advice.

- The suspension of Faroe Islands herring fishery should be lifted as the fishery is meeting the scope requirements and could no longer be considered to be conducted under a controversial unilateral exemption to an international agreement.
- The Faroe Islands herring fishery should be harmonized with all other AS herring fisheries in the MSC program and join in “the Norwegian condition” at their recertification.

### *MINSA*

MINSA are currently suspended and therefore the first step for the MINSA team will have to be to argue the case that enough has changed in the management of this fishery, to warrant a lifting of the current suspension. The deadline for this is April 30<sup>th</sup>. If the terms of the suspension cannot be met by this date, the current intent is that all fisheries will have to withdraw just as per the terms of the original suspension. (*This inserted from the CAB acceptance letter of the revised corrective action plan, July 10<sup>th</sup>, 2014*).

Should the suspension be lifted, the scoring of 3.1.1 was agreed to follow the discussions outlined above and the current P3 expert opinion is that it should meet the SG 60 levels, but not SG 80.

For P1, the team noted that they were still in disagreement on how 1.2.1 should score. Further discussions will have to be had, and MSC are happy to facilitate another call on this should it be needed and provide support in terms of CR interpretations as usual.

## Appendix 8. Stakeholders

Organisation	Contact	Email
<b>SPSG</b>		
Client	Ian Gatt	<a href="mailto:ian.gatt@scottishpelagic.co.uk">ian.gatt@scottishpelagic.co.uk</a>
DEFRA	Andy Carroll	<a href="mailto:andy.p.carroll@defra.gsi.gov.uk">andy.p.carroll@defra.gsi.gov.uk</a>
<b>DPPO</b>		
Danish Ministry of Food, Agriculture & Fisheries	TBC	<a href="mailto:mail@naturerhverv.dk">mail@naturerhverv.dk</a>
Danish Institute for Fisheries Research, Technical University of Denmark, Dept. of Marine Ecology and Aquaculture		<a href="mailto:dtu@dtu.dk">dtu@dtu.dk</a>
DCE - Danish Centre For Environment And Energy		<a href="mailto:dmu@dmu.dk">dmu@dmu.dk</a>
WWF Denmark		<a href="mailto:wwf@wwf.dk">wwf@wwf.dk</a>
Danish Agrifish Agency	TBC	<a href="mailto:mail@naturerhverv.dk">mail@naturerhverv.dk</a>
Association of Danish Fish Processing Industries and Exporters		<a href="mailto:dfe@dfedk.dk">dfe@dfedk.dk</a>
Norges Sildesalgslag	Norwegian Fishermen's Organisation	<a href="mailto:sildelaget@sildelaget.no">sildelaget@sildelaget.no</a>
3F- United Federation of Danish Workers		<a href="mailto:3f@3f.dk">3f@3f.dk</a>
Danish Fish Tech Group (DFITG)		<a href="mailto:halldor.halldorsson@dk-export.dk">halldor.halldorsson@dk-export.dk</a>
Danish Fishermen's Association		<a href="mailto:mail@dkfisk.dk">mail@dkfisk.dk</a>
The Danish Society of Living Sea (Levende Hav)		<a href="mailto:levendehav@gmail.com">levendehav@gmail.com</a>
The Danish Society for Nature Conservation		<a href="mailto:dn@dn.dk">dn@dn.dk</a>
Oceana	Marta Madina	<a href="mailto:mmadina@oceana.org">mmadina@oceana.org</a>
<b>PFA</b>		
IMARES	Nathalie Steins	<a href="mailto:Nathalie.steins@wur.nl">Nathalie.steins@wur.nl</a>
Ministry Economic Affairs	Henk Offringa	<a href="mailto:h.r.offringa@minez.nl">h.r.offringa@minez.nl</a>
Nederlandse Voedsel en Warenautoriteit (NVWA)	Leon Bouts	<a href="mailto:l.a.bouts@nvwa.nl">l.a.bouts@nvwa.nl</a>

Bundenstalt für Landwirtschaft und Ernährung	BLE	ALLGEMEINE.RECHTSANGELEGENHEITEN@ble.de
Johan von Thunen Institute	Christoph Stransky, Alexander Kempf	christoph.stransky@vti.bund.de; alexander.kempf@vti.bund.de
National Federation of Fishermen's Organisations NFFO	Barrie Deas	nffo@nffo.org.uk
DEFRA	Andy Carroll	andy.p.carroll@defra.gsi.gov.uk
Wereld Natuurfonds (WNF)	Reinier Hille Ris Lambers	rhillerislammers@wwf.nl
North Sea Foundation / Seas at Risk	Christien Absil	c.absil@noordzee.nl
Marine Management Organisation (MMO)	TBC	
<b>KFO</b>		
Marine Institute Ireland	Maurice Clarke	<a href="mailto:Maurice.Clarke@Marine.ie">Maurice.Clarke@Marine.ie</a>
Marine Institute Ireland	Ciaran Kelly	<a href="mailto:Ciaran.kelly@marine.ie">Ciaran.kelly@marine.ie</a>
Department of Agriculture, Food and the Marine	Josephine Kelly	<a href="mailto:josephine.kelly@agriculture.gov.ie">josephine.kelly@agriculture.gov.ie</a>
Irish Sea Fisheries Protection Agency (SFPA)	Seamus Gallagher	<a href="mailto:seamus.gallagher@sfpa.ie">seamus.gallagher@sfpa.ie</a>
Irish Whale and Dolphin Group	Simon Berrow	<a href="mailto:simon.berrow@iwdg.ie">simon.berrow@iwdg.ie</a>
BIM (Irish Sea Fisheries Board)	Ronan Cosgrove; Daragh Browne	<a href="mailto:cosgrove@bim.ie">cosgrove@bim.ie</a> ; <a href="mailto:browne@bim.ie">browne@bim.ie</a>
<b>CDPSM</b>		
Client	Jerome Nouis	<a href="mailto:Jerome.nouis@cdpstmallo.com">Jerome.nouis@cdpstmallo.com</a>
<b>General</b>		
Pelagic AC	Dr. Verena Ohms	<a href="mailto:v.ohms@pelagic-rac.org">v.ohms@pelagic-rac.org</a>
High Seas Conservation & Fisheries Certification WWF Germany	Christian Neumann	christian.neumann@wwf.de
Greenpeace Germany		<a href="mailto:mail@greenpeace.de">mail@greenpeace.de</a>
Whale and Dolphin Conservation Society		<a href="mailto:info@wdcs.org">info@wdcs.org</a>
Fisheries DG-MARE	Ms V. RAINERI	Secretary - Fisheries conservation and control Atlantic and outermost regions
European Fisheries Control Agency (EFCA)	Patricia Sánchez Abeal	<a href="mailto:patricia.sanchezabeal@efca.europa.eu">patricia.sanchezabeal@efca.europa.eu</a>
STECF - Scientific, Technical and Economic Committee for Fisheries	STECF secretariat	<a href="mailto:stecf-secretariat@jrc.ec.europa.eu">stecf-secretariat@jrc.ec.europa.eu</a>

WGWIDE	Katja Enberg	<a href="mailto:katja.enberg@imr.no">katja.enberg@imr.no</a>
CEFAS	Chris Darby	<a href="mailto:chris.darby@cefas.co.uk">chris.darby@cefas.co.uk</a>
North East Atlantic Fisheries Commission (NEAFC)	Stefán Ásmundsson Secretary	<a href="mailto:stefan@neafc.org">stefan@neafc.org</a>
Seas at Risk	Bjorn Stockhausen	<a href="mailto:bstockhausen@seas-at-risk.org">bstockhausen@seas-at-risk.org</a>

(Reference: CR 27.14.6 – 27.14)