

**Marine Stewardship Council (MSC) Reduced Re-
Assessment Public Certification Report**

**Euronor, Scapêche and Compagnie des Pêches St. Malo
saithe trawl fishery**

**On behalf of Euronor, Scapêche and Compagnie des
Pêches St. Malo**

Prepared by ME Certification Ltd

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Contents

EXECUTIVE SUMMARY.....	4
RESUME EXECUTIF	6
GLOSSARY	8
1. AUTHORSHIP AND PEER REVIEWERS	10
2. CHANGES SINCE INITIAL ASSESSMENT	12
2.1 Overview.....	12
2.1.1 Scope	12
2.1.2 Changes to the Unit of Assessment.....	12
2.1.3 Criteria for reduced re-assessment.....	14
2.1.4 Harmonisation	15
2.1.5 TAC and Catch Data	18
2.2 Specific Changes since Initial Assessment	19
2.2.1 Overall.....	19
2.2.2 Principle 1.....	20
2.2.3 Principle 2.....	26
2.2.4 Principle 3.....	40
2.3 Previous assessments	40
2.4 Changes to the Reporting Template that require an update	41
3. EVALUATION PROCEDURE	42
3.1 Assessment Methodologies	42
3.2 Evaluation Processes & Techniques.....	42
3.2.1 Site Visits.....	42
3.2.2 Consultations.....	42
3.2.3 Evaluation Techniques.....	42
4. TRACEABILITY	45
4.1 Eligibility Date	45
4.2 Traceability within the fishery	45
4.2.1 Euronor.....	45
4.2.2 Compagnie des Pêches St. Malo.....	46
4.2.3 Scapêche	47
4.3 Eligibility to Enter Further Chains of Custody	51
4.4 Eligibility of Inseparable or Practicably Inseparable (IPI) stock(s) to Enter Further Chains of Custody	53
5. EVALUATION RESULTS	54
5.1 Principle Level Scores	54
5.2 Summary of Scores	55
5.3 Summary of Conditions.....	57
5.4 Recommendations.....	58
5.5 Determination, Formal Conclusion and Agreement.....	58

6. REFERENCES	59
APPENDICES	66
APPENDIX 1 SCORING AND RATIONALES.....	67
Appendix 1.1 Performance Indicator Scores and Rationale	67
Appendix 1.2 Conditions.....	175
APPENDIX 2. PEER REVIEW REPORT.....	180
APPENDIX 3. STAKEHOLDER SUBMISSIONS	195
APPENDIX 4. SURVEILLANCE FREQUENCY	199
APPENDIX 5. BARENTS SEA HARMONISATION ON PRINCIPLE 2.....	200
APPENDIX 6. STAKEHOLDERS	203
APPENDIX 7. CLIENT ACTION PLAN	204
Appendix 8.1 Client Action Plan – Euronor	204
Appendix 8.2 Client Action Plan – Compagnie des Peches St Malo	209
Appendix 8.3 Client Action Plan – Scapeche	213

Executive Summary

This report is the Final Report (FR) for the reduced re-assessment of the Euronor / Compagnie des Pêches St. Malo / Scapêche saithe fishery. This re-assessment merges two previously certified fisheries: the Euronor saithe fishery, certified in March 2010, and the Scapêche and Compagnie des Pêches St Malo saithe fishery, certified in January 2011. This reassessment was carried out procedurally in line with the MSC Fisheries Certification Requirements v2.0 although Annex CB of the MSC Certification Requirements v1.3 was used as assessment tree.

The site visit for the assessment took place in St. Malo (France) on 19-20 August 2015, with representatives of all three client companies and two of the three team members (Jo Gascoigne and Ulf Lowenberg) in attendance. No other stakeholders have requested a meeting or otherwise responded to any requests for comment. Scoring takes account of harmonisation with 12 overlapping fisheries, as well as a harmonisation meeting on Barents Sea habitats facilitated by MSC in March 2016, for which the team leader was present.

There have been no major changes to the fishery since the previous certification. Operationally, Euronor has moved towards pair trawling in the North Sea, finding it more efficient. Scapêche have retired two of the vessels and brought one new vessel into the fishery. Cie des Pêches was able to fish in the North Sea in 2015 for the first time since certification (being dependent on swaps to obtain quota).

In relation to Principle 1, there have been no changes to the management or assessment framework for the two target stocks (North Sea / W. Scotland saithe and Northeast Arctic saithe). The most recent assessments (2015) put both stocks at or above target levels. For Principle 2, the most recent landings and observer data were used to re-evaluate retained, bycatch and ETP species, but there were no significant changes from the last assessment. The framework for habitat and ecosystem protection in both areas has developed and improved since the last assessment (more protected areas have been designated, ecosystem management plans have been produced or reviewed and revised). In relation to Principle 3 there have been no significant changes.

The overall scores per UoA for each Principle are given below. All the Principle-level scores are >80, and no PI scored <60, so the preliminary determination of the team is that this fishery should be re-certified. Conditions have been identified as follows:

Condition number	Condition	Performance Indicator
1	<p><u>UoA 1</u>: Euronor should show by the end of Year 5 that direct effects of their fishery are highly unlikely to create unacceptable impacts to starry ray in the North Sea.</p> <p><u>UoA 3</u>: Cie des Pêches St. Malo should show by the end of Year 5 that direct effects of their fishery are highly unlikely to create unacceptable impacts to starry ray in the North Sea. The effects of the fishery should be shown to be highly likely to be within limits of</p>	2.3.1

	national and international requirements for protection of starry ray in the North Sea. <u>UoA 5:</u> Scapêche should show by the end of Year 5 that the direct effects of their fishery are highly unlikely to create unacceptable impacts to common skate in Subarea VI.	
2	<u>UoA 1 and 3:</u> In relation to Euronor and Cie des Pêches St Malo, the fishery needs to show by the end of Year 5 that there is an objective basis for confidence that the strategy to protect starry ray in the North Sea will work, based on information directly about the fishery and/or the species involved. <u>UoA 5:</u> For Scapêche, the fishery needs to show by the end of Year 5 that there is an objective basis for confidence that the strategy to protect common skate in Subarea VI will work, based on information directly about the fishery and/or the species involved.	2.3.2
3	By the end of Year 5, Scapêche (UoA 5) should show that information on common skate in Subarea VI is sufficient to determine whether the Scapêche saithe fishery may be a threat to protection and recovery of the species.	2.3.3

The conditions on starry ray are not related to any previous conditions, since starry ray has only recently been defined by EU fishing regulations as an ETP species. The conditions on common skate are similar to conditions on the previous assessment of the Scapêche saithe fishery, which were closed out in the Year 2 audit as a result of an analysis of observer reports. There are two likely explanations for this discrepancy: i) previously, only the individual observer reports have been available, presenting data in a graphical rather than numerical way and providing measurements for sampled individuals only - as such, small catches are likely to be lost (although they may add up over time into a non-negligible impact on an ETP species) – for this assessment, raw observer data were available (which is highly unusual); and/or ii) the catch of common skate is variable from year to year.

Principle level scores:	Euronor		Cie de Pêches		Scapêche
	UoA 1 (North Sea / West of Scotland)	UoA 2 (Northeast Arctic)	UoA 3 (North Sea / West of Scotland)	UoA 4 (Northeast Arctic)	UoA 5 (North Sea / West of Scotland)
Principle 1 – Target Species	89.4	91.9	89.4	91.9	89.4
Principle 2 – Ecosystem	82.0	85.0	81.3	85.0	81.7
Principle 3 – Management System	90.0	93.0	90.0	93.0	90.0

Résumé Exécutif

MEC présente le Rapport Final pour la réévaluation réduite de la pêcherie de lieu noir par Euronor, Compagnie des Pêches St Malo et Scapêche. Ces pêcheries étaient déjà certifiées séparément: la pêcherie Euronor (certifiée en mars 2010) et la pêcherie Scapêche et Cie des Pêches (certifiée en janvier 2011). Cette évaluation suit les Référentiels et Exigences de certification MSC v2.0 en terme de procédure mais applique l'Annexe CB de la version 1.3 pour la méthode d'évaluation.

La visite sur le terrain pour l'évaluation a eu lieu à St Malo (France), le 19-20 août 2015. Les représentants des trois armements, ainsi que deux de l'équipe MEC (Jo Gascoigne et Ulf Lowenberg) étaient présents. Aucune partie prenante n'a demandé rendez-vous ou a répondu aux invitations de MEC. La réévaluation prend en compte les scores de 12 autres pêcheries MSC, ainsi qu'une réunion d'harmonisation pour la notation de la composante Habitats dans la Mer Barents, qui était facilitée par le MSC en mars 2016.

La pêcherie n'a guère changé depuis la dernière certification. Opérationnellement, l'Euronor a préféré le chalutage à paire dans la Mer du Nord, pour des raisons d'efficacité. La Scapêche a échangé deux navires pour un nouveau. La Cie des Pêches a pu pêcher dans la Mer du Nord en 2015 pour la première fois depuis la certification (à cause d'échanges pour obtenir du quota).

Au niveau de Principe 1, il n'y a pas eu des changements dans le cadre de gestion et évaluation pour les deux stocks cibles (lieu noir Mer du Nord / ouest Ecosse et lieu noir Arctique nord-est). Selon les évaluations des stocks les plus récentes, les stocks sont autour ou au-dessus des niveaux cibles. Pour Principe 2, l'équipe a évalué les données les plus récentes (captures, observations en mer) pour redéfinir les espèces retenues, rejetées et ETP (protégées) mais sans remarquant des changements significatifs. Le cadre de gestion pour les habitats et les écosystèmes dans chaque zone a évolué depuis la dernière certification, avec la désignation des aires protégées supplémentaires, ainsi que la production ou revue et révision des plans de gestion pour les écosystèmes. Pour Principe 3, il n'y a pas eu des changements significatifs.

Les scores pour chaque UoA et chaque Principe sont présentés ci-dessous. Tous les scores sont au-delà de 80 et aucun IP n'a été noté en-dessous de 60; la détermination préliminaire de l'équipe d'évaluation est donc que la pêcherie devrait être ré-certifiée MSC. Des conditions ont été provisoirement identifiées comme suite:

Numéro condition	Condition	Indicateur de performance
1	<p><u>UoA 1</u>: Euronor devrait montrer d'ici la fin de l'année 5 que les effets directs de leur pêcherie sont très peu susceptibles de créer des impacts inacceptables pour la raie radiée dans la Mer du Nord.</p> <p><u>UoA 3</u>: Cie des Pêches St. Malo devrait montrer d'ici la fin de l'année 5 que les effets directs de leur pêcherie sont très peu susceptibles de créer des impacts inacceptables pour ray radiée dans la Mer du Nord. Les effets de la pêche devraient être démontrés très susceptibles</p>	2.3.1

	d'être dans les limites des exigences nationales et internationales pour la protection de la raie radiée dans la Mer du Nord. <u>UoA 5</u> : Scapêche devrait montrer d'ici la fin de l'année 5 que les effets directs de leur pêche sont très peu susceptibles de créer des impacts inacceptables pour le pocheteau gris dans la zone CIEM VI.	
2	<u>UoA 1 and 3</u> : En ce qui concerne Euronor et Cie des Pêches St Malo, la pêche devrait montrer à la fin de l'année 5 qu'il existe une base de confiance objective que la stratégie pour la protection de la raie radiée dans la Mer du Nord fonctionnera, sur la base d'informations directement relatives à l'UoA et/ou l'espèce impliquée. <u>UoA 5</u> : En ce qui concerne Scapeche, la pêche devrait montrer à la fin de l'année 5 qu'il existe une base de confiance objective que la stratégie pour la protection du pocheteau gris dans la zone CIEM VI fonctionnera, sur la base d'informations directement relatives à l'UoA et/ou l'espèce impliquée.	2.3.2
3	À la fin de l'année 5, Scapêche (UoA 5) devrait montrer que l'information sur le pocheteau gris dans la zone CIEM VI est suffisante pour déterminer si L'UoA constitue ou non une menace pour la protection et le rétablissement de l'espèce.	2.3.3

Les conditions sur la raie radiée n'ont aucune relation avec les conditions sur la dernière évaluation, parce que la raie radiée a été définie comme espèce protégée plus récemment (dans les réglementations de pêche de l'UE). Les conditions sur le pocheteau gris sont similaires aux conditions sur la dernière certification, qui étaient fermées après l'audit en Année 2, suivant une évaluation des rapports ObsMer. Il y a deux explications pour cette contradiction: i) auparavant, les auditeurs n'avaient accès qu'aux rapports individuels ObsMer – qui présentent des données de façon graphique avec des mesures de longueur pour des individus échantillonnés uniquement, avec donc la possibilité de perdre les petites captures (qui peuvent néanmoins mettre une pression non-négligeable sur une espèce menacée) – mais pour cette évaluation, les données brutes étaient disponibles (ce qui est très rare); et/ou ii) les captures de pocheteau gris sont variables d'année à année.

Scores globaux:	Euronor		Cie de Pêches		Scapêche
Principe	UoA 1 (Mer du Nord / Ouest Ecosse)	UoA 2 (Arctique nord-est)	UoA 3 (Mer du Nord / Ouest Ecosse)	UoA 4 (Arctique nord-est)	UoA 5 (Mer du Nord / Ouest Ecosse)
Principe 1 – Espèce cible	89.4	91.9	89.4	91.9	89.4
Principe 2 – Ecosystème	82.0	85.0	81.3	85.0	81.7
Principe 3 – Système de gestion	90.0	93.0	90.0	93.0	90.0

Glossary

Term / acronym	Definition
AC	Advisory Council
CDR	Client Draft Report
CFP	Common Fisheries Policy
Cie des Pêches	Compagnie des Pêches St Malo
CoC	Chain of Custody
CPUE	Catch Per Unit Effort
EEZ	Exclusive Economic Zone
ETP	Endangered Threatened Protected (species)
EU	European Union
F	Fishing mortality
FAM	Fishery Assessment Methodology (MSC scheme document)
FCR	Fisheries Certification Requirements (MSC scheme document)
HCR	Harvest Control Rule
IUU	Illegal, Unreported, Unregulated
JNCC	Joint Nature Conservation Committee
LRP	Limit Reference Point
LTL	Low Trophic Level (species)
MCS	Monitoring Control and surveillance
MEC	ME Certification Ltd
MEP	MacAlister Elliott and Partners Ltd
MSDF	Marine Strategy Framework Directive
MSY	Maximum Sustainable Yield
NCMPA	Nature Conservation Marine Protected Area
NEA	Northeast Arctic
NEZ	Norwegian Economic Zone
nm	Nautical mile
PCDR	Public Comment Draft Report
PCR	Public Certification Report

PI	Performance indicator (of the MSC Standard)
R	Recruitment
RFMO	Regional Fisheries Management Organisation
SFPZ	Svalbard Fisheries Protection Zone
SG	Scoring Guidepost
SSB	Spawning Stock Biomass
TAC	Total Allowable Catch
TRP	Target Reference Point
UoA	Unit of Assessment
UoC	Unit of Certification
VME	Vulnerable marine ecosystems
VMS	Vessel Monitoring System

1. Authorship and Peer Reviewers

The assessment team for this reduced reassessment were:

Dr Jo Gascoigne (Team Leader): Dr Gascoigne is a former research lecturer in marine biology at Bangor University, Wales. She is a fully qualified MSC Team Leader with expertise in the assessment of all MSC Principles. She has been involved as expert and lead auditor in all of MEC's previous MSC assessments and numerous pre-assessments. For this assessment, Dr. Gascoigne was responsible for Principle 2.

Dr Massimiliano Cardinale: Dr Massimiliano Cardinale has a Biological Science degree from 'La Sapienza' University in Rome and completed his Doctoral thesis at Göteborg University in Sweden in 2001. He has over 20 years' experience working in the fisheries sector, including participation as a scientist on a number of trawl surveys relating to the recruitment and discarding of cod and researcher on stock assessment and modelling of fisheries data. To date, Max has been involved in almost 10 MSC assessments as an assessor and peer reviewer and these include the Astrid Fiske North Sea herring fishery and Polish Eastern Baltic cod fishery. Max now has a permanent position as a researcher at the Swedish University where his work includes stock assessment, statistical analysis and modelling of fisheries data. Since 2000, Max has undertaken a number of job roles involving stock assessment. These have included a researcher for the Institute of Marine Research For the Swedish National Board of Fisheries, the responsibility of stock assessment and resources management in the Java Sea under the Swedish Internal Development Cooperation Agency (SIDA) and the responsibility of a collaboration programme, funded by SIDA, for 'Stock assessment to be implemented into management of artisanal fishery'. In addition to this, he has also attended an ICES Advanced Course in stock assessment at ICES for stock assessment coordinators.

Ulf Lowenberg: Ulf Löwenberg has a Master's degree from the University of Hamburg in Fisheries Science. He is a fisheries biologist with more than 30 years' experience in the fisheries sector. This has included more than 15 years' experience in fisheries and advisory projects, including extensive work in Africa and 8 years' project management. Ulf has been involved in a number of MSC pre-assessments, full assessments and surveillance audits based in Europe. These include Swedish Skagerrak and Kattegat herring fishery, North Sea Saithe Trawl fishery and Western Baltic Spring Spawning Herring fishery. Ulf is now a freelance fisheries consultant and has worked for private and governmental clients on a number of projects in Europe and Africa. A recent project based in Mauritania, which Ulf was responsible for, was titled 'Management advice in the fisheries sector'. This included support to the Fisheries Ministry in relation to development and implementation of fisheries management plans.

The Risk Based Framework (RBF) was not used for this reduced reassessment.

The Peer Reviewer for this assessment was **Dr Andrew Hough**.

Dr Hough is a Marine Environmental Consultant with a PhD in marine ecology from the University of Wales, Bangor (1987-90). He has been involved in marine, coastal and freshwater environmental management since 1991, including management of fishery impacts on ecosystems and marine conservation biology, principally in European inshore waters.

Andy was manager of Moody Marine operations within Moody International Certification from 1999 to 2011 with particular responsibility for the implementation of MSC Certification procedures and development of MSC methodologies. He has acted as lead assessor on a large proportion of MSC pre assessments and main assessments during this time, and subsequently as team member and/or lead auditor for various assessments. This has involved stock assessment analysis, evaluation of ecosystem effects and management effectiveness of groundfish, pelagic and shellfish fisheries in various administrations around the world.

Andy now works as a freelance environmental/fishery management consultant and auditor, consultancy projects include certification-related policy advice to the Association of Sustainable Fisheries.

2. Changes since Initial Assessment

2.1 Overview

2.1.1 Scope

This fishery remains in conformity with the MSC scope requirements (FCR 7.4):

- The fishery does not target amphibians, birds, reptiles or mammals;
- The fishery does not use poisons or explosives;
- The fishery does not operate under a controversial unilateral exemption to an international agreement;
- The client group does not include an entity that has been successfully prosecuted for a forced labour violation in the last 2 years;
- The fishery management framework includes a mechanism for resolving disputes and the fishery is not overwhelmed by disputes.

The fishery is not an enhanced fishery as per the MSC FCR 7.4.3

The fishery is not an Introduced Species Based Fishery as per the MSC FCR 7.4.4.

2.1.2 Changes to the Unit of Assessment

This re-assessment merges two previously certified fisheries: the Euronor saithe fishery, certified in March 2010 (MEP, 2010) and the Scapêche and Compagnie des Pêches St Malo saithe fishery, certified in January 2011 (MEP, 2011). The Units of Assessment for this reassessment are given below:

UoA 1:

Species	Saithe (<i>Pollachius virens</i>)
Geographical range	Northeast Atlantic
Method of capture	Bottom trawl (demersal otter trawl)
Stock	Saithe in Subareas IV and VI and Division IIIa (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)
Management System/s	Common Fisheries Policy; French National management system; EU-Norway agreement; Norwegian Ministry of Fisheries and Coastal Affairs. ICES is scientific authority. Decisions taken by EU Fisheries Council. Stakeholder participation via North Sea RAC.
Client group	Euronor member vessels fishing for saithe from the ICES Subareas IIIa, IV, VI and VII

UoA 2:

Species	Saithe (<i>Pollachius virens</i>)
Geographical range	Northeast Arctic
Method of capture	Bottom trawl (demersal otter trawl)
Stock	Saithe in Subareas I and II (Northeast Arctic)
Management System/s	Common Fisheries Policy; French National management system; EU-Norway agreement; Norwegian Ministry of Fisheries and Coastal Affairs. ICES is scientific authority. Decisions taken by EU Fisheries Council. Stakeholder participation via North Sea RAC.
Client group	Euronor member vessels fishing for saithe from the ICES Subareas I, II.

UoA 3:

Species	Saithe (<i>Pollachius virens</i>)
Geographical range	Northeast Atlantic
Method of capture	Bottom trawl (demersal otter trawl)
Stock	Saithe in Subareas IV and VI and Division IIIa (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)
Management System/s	Common Fisheries Policy; French National management system; EU-Norway agreement; Norwegian Ministry of Fisheries and Coastal Affairs. ICES is scientific authority. Decisions taken by EU Fisheries Council. Stakeholder participation via North Sea RAC.
Client group	Compagnie des Pêches St Malo member vessels fishing for saithe from the ICES Subareas IIIa, IV, VI and VII

UoA 4:

Species	Saithe (<i>Pollachius virens</i>)
Geographical range	Northeast Arctic
Method of capture	Bottom trawl (demersal otter trawl)
Stock	Saithe in Subareas I and II (Northeast Arctic)
Management System/s	Common Fisheries Policy; French National management system; EU-Norway agreement; Norwegian Ministry of Fisheries and Coastal Affairs. ICES is scientific authority. Decisions taken by EU Fisheries Council. Stakeholder participation via North Sea RAC.
Client group	Compagnie des Pêches St Malo member vessels fishing for saithe from the ICES Subareas I, II.

UoA 5:

Species	Saithe (<i>Pollachius virens</i>)
Geographical range	Northeast Atlantic
Method of capture	Bottom trawl (demersal otter trawl)
Stock	Saithe in Subareas IV and VI and Division IIIa (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)
Management System/s	Common Fisheries Policy; French National management system; EU-Norway agreement; Norwegian Ministry of Fisheries and Coastal Affairs. ICES is scientific authority. Decisions taken by EU Fisheries Council. Stakeholder participation via North Sea RAC.
Client group	Scapêche member vessels fishing for saithe from the ICES Subareas IIIa, IV, VI and VII

2.1.3 Criteria for reduced re-assessment

According to the Certification Requirements (version 2.0, paragraph 7.24.6), a fishery is eligible for reduced re-assessment if:

- the fishery was covered under the previous certification or scope extension;
- the fishery had no conditions remaining after the 3rd surveillance audit, and;
- the CAB confirms that all standard-related stakeholder comments have been addressed by the 3rd surveillance audit.

The fishery was covered under the previous two assessments in its entirety, since there have been no changes to the UoA (see MEP, 2010 and 2011).

The Euronor fishery was certified with no conditions. The Scapêche and Compagnie des Pêches St Malo (henceforth Cie des Pêches) fishery was certified with one condition on the Scapêche UoC and three conditions on the Cie des Pêches UoC, as set out in Table 1. These conditions were closed at the second surveillance audit.

Table 1. Conditions on the first assessment of this fishery, and their outcomes.

Condition	PI	Applies to	Requirement	When closed
1	2.3.1 2.3.3	Scapêche Cie des Pêches	Ensure that the bycatch of common skate (<i>Dipturus batis</i>) can be quantified and does not exceed limits of national or international requirements for protection of the species	Year 2
2	2.3.2	Cie des Pêches	Ensure all regulations for the management of common skate bycatch are implemented	Year 2
3	2.4.2	Cie des Pêches	Develop a partial strategy to avoid fishing in sensitive habitats	Year 2

With the exception of Technical Oversight comments received from the MSC, no written comments were received on the PCDR, for either fishery. There has been a harmonisation process for evaluating habitats among the various Barents Sea trawl fisheries, the outcome of which is presented in Appendix 6.

2.1.4 Harmonisation

Harmonisation applies to Principle 1 for both the North Sea/West of Scotland saithe and Northeast Arctic saithe stocks, Principle 2 for habitats and ecosystem and Principle 3 (international-level management by the EU and coastal states).

It was decided that there is no need to harmonise Principle 2 Performance Indicators (PIs) 2.1.1-2.3.3, because assessment of these PIs is based on data from individual fisheries, and aspects of Principle 3 relating to the fishery-specific management system (3.2.1-3.2.5). This includes 11 relevant UoCs, as set out in Table 2. Harmonisation issues are considered in the scoring for each of the PIs with differing outcomes across different fisheries, i.e.:

- 1.1.1 and 1.2.3 (North Sea): differences in scoring due to the updated ICES advice available at the time of this assessment, presenting a continued increase in SSB and decrease in F (see Appendix 1 for full rationale).
- 2.4.1 and 2.4.2 (all areas) and 2.4.3 (NEA): a harmonisation process was carried out for these PIs; see Appendix 6.

Table 2. Scoring for overlapping UoCs

PI	Faroes NEA saithe (expedited)	Greenland Barents Sea saithe, cod and haddock	Ocean Trawlers Group Barents Sea saithe, cod, haddock	UK Fisheries / DFFU / Doggerbank NEA cod and haddock	Faroes NEA cod	Arkhan-gelsk trawl fleet Barents Sea cod and haddock	UK Fisheries / DFFU / Doggerbank North Sea and NEA saithe	Norway NEA and North Sea saithe - trawl	SFSAG North Sea saithe – IV	SFSAG saithe – VI	DFPO North Sea saithe - trawl	German North Sea saithe	This fishery
Date of scoring	Nov. 2015	Jan. 2013	Dec. 2015	May 2012	Aug. 2012	Jan. 2016	Jan. 2011	Sept. 2012	Oct. 2013	Oct. 2013	Feb. 2011	Sept. 2013	August 2016
Document	PCDR	PCR	PCDR	PCR	PCR	PCR	PCR	PCR	PCR	PCR	PCR	PCR	FR
P1: North Sea													
1.1.1							95	100	70	70	90	100	80
1.1.2							90	80	90	90	80	80	90
1.1.3							-	-	90	90			-
1.2.1							90	100	90	90	95	100	100
1.2.2							90	90	80	80	80	90	90
1.2.3							85	90	80	80	75	90	90
1.2.4							90	90	90	90	85	90	95
P1: NEA													
1.1.1	100	90	90				95	90					100
1.1.2	90	90	90				95	90					80
1.1.3	-	-	-				-	-					-
1.2.1	100	95	85				95	100					100
1.2.2	90	90	80				95	90					90
1.2.3	90	100	90				85	90					90

1.2.4	95	90	95				90	90					95
P2													
2.4.1	80	80	80	70	80	80	90	80	80	75	60	80	80
2.4.2	85	80	85	80	95	60	60	95	85	85	75	90	80
2.4.3	85	75	90	80	95	75	85	85	90	90	80	85	80
2.5.1	95	100	90	90	95	90	85	100	95	95	85	85	90
2.5.2	90	90	80	100	95	85	80	100	90	90	80	90	85 (North Sea) 100 (NE Arctic)
2.5.3	95	95	85	100	95	85	95	95	90	90	90	100	90 (North Sea) 95 (NE Arctic)
P3													
3.1.1	100	95	100	90*	95	100	95	100	100	100	95	100	95
3.1.2	95	85	100	80*	95	100	95	100	100	100	85	85	95
3.1.3	100	90	100	100	100	100	90	100	100	100	100	90	100
3.1.4	100	80	90	80	100	90	80	100	100	100	80	80	90

* Different scores given for SFPZ but conditions subsequently closed

2.1.5 TAC and Catch Data

Table 3. TAC and Catch Data

Quantity	Fishing zone	Year	Euronor	Scapêche	Cie des Pêches
TAC	IIa (south 62), IIIa, IV	2014	77,536 t		
UoA share of TAC – before swaps		2014	18,327 t		0
- after swaps			12,715 t	568 t	0
UoC share of TAC		2014	(same)	(same)	(same)
Total catch (live weight)		2014	9,199 t	61.3 t	0
		2013		*	0
TAC	VI	2014	8,045 t		
UoA share of TAC – before swaps		2014	822		0
- after swaps			811	2,939 t	0
UoC share of TAC		2014	(same)	(same)	(same)
Total catch (live weight)		2014	705.9	1,605 t	0
		2013		1,952 t*	0
TAC	I and II	2014	119,000 t		
UoA share of TAC – before swaps		2014	138 t	0	190 t
- after swaps			268 t	0	190 t
UoC share of TAC		2014	(same)	(same)	(same)
Total live weight catch		2014	28.1 t	0	180 t
		2013		0	159 t

* Scapêche catch for 2013 includes IV and VI (but nearly all in VI)

2.2 Specific Changes since Initial Assessment

2.2.1 Overall

Management operation: At European level, the Common Fisheries Policy (CFP) was reformed with effect from 1st January 2014¹, bringing in new management requirements, considered in detail as they apply to this fishery in Principles 2 and 3.

At international level, the functioning of the coastal states agreements (for dividing the TAC into quotas between the EU, Norway, Iceland, Russia and the Faroes) has continued to deteriorate in the pelagic sector, but continues to function successfully for the management of demersal stocks in the Northeast Arctic.

Species: No change.

Fishing practices: **Scapêche** has made some changes to its fleet: the Pierre Jacques Matigny and the Claude Moinier II have been retired and replaced by the Jean-Pierre Le Roch, for which details are given below (Table 4). The Julien Coléou (twin-rig trawler) is now returning to Lorient on alternative trips (previous it was less frequently). Note that Scapêche has three other vessels in its fleet (the Roseland, the Corail and the Héliotrope) but these vessels do not target saithe and are not part of the fishery under assessment.

Table 4. Details of Scapêche's new vessel.

Name	Gear	Length	Main ports of landing	Main target species	Date for start of work
Jean-Pierre Le Roch	Single trawl with square mesh panel	42 m	Lochinver or Killybegs; Lorient	saithe, hake, monkfish, deep water species	Sept. 2015

Euronor has converted its fleet to operate mainly as pair trawlers (the two freezer trawlers, Klondyke and Cap Nord, working together; for the freshfish trawlers the André Leduc working with the Bressay Bank and the Cap St. Georges with the Halten Bank II). The company has found that this fishing method uses less fuel per quantity of fish caught, presumably because there is no longer a need for trawl doors. Aside from this, the fishing gear has not changed. The vessels continue to land in Boulogne, Peterhead or Hanstholm. The freezer trawlers do not pair trawl in the Barents Sea, however.

Some transitional technical measures were introduced in 2013² ahead of the new CFP technical conservation measures framework, but none that affect this fishery particularly.

¹ 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

² 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

Fishing areas: In 2015 for the first time since the initial certification, the Grande Hermine (Cie des Pêches) was able to obtain some quota for North Sea saithe via swaps, and took some catch. Note that this fishing area was considered in the initial certification so does not constitute a change to the UoC. New protected areas have been put in place in Subarea VI, which are considered under Principle 2.

Legal / administrative status, involvement of other entities: No change. RACs (Regional Advisory Councils) have become ACs (Advisory Councils).

Harmonisation: Considered in Section 2.1.4 above and in scoring as noted. See also Appendix 6 for details of the harmonisation process for NEA habitats.

2.2.2 Principle 1

Overall, there have not been any significant changes to the fishery since its initial certification. The definitions of stocks, their assessments and their respective management units have remained the same during the first certificate cycle.

There have however been updates in the statuses of target stocks and these are discussed below.

2.2.2.1 Saithe in Subarea IV (North Sea), Division IIIa (Skagerrak), and Subarea VI (West of Scotland and Rockall)

Stock status: The most recent ICES assessment for saithe in Subarea IV (North Sea), Division IIIa (Skagerrak), and Subarea VI (West of Scotland and Rockall) (June 2015) is summarised below:

Recruitment has been below the long-term average since 2006. Fishing mortality (F) has fluctuated around F_{MSY} since 1997. Spawning-stock biomass (SSB) has declined and has been fluctuating around $MSY B_{trigger}$ since 2011. SSB is presently (2015) estimated to be at B_{pa} and SSB_{MGT} . F is presently (2015) estimated to be at F_{MSY} and F_{MGT} . On this basis, the stock is at an appropriate level in relation to the management plan, which formed the basis of the advice. Moreover, the probability that the current rate of fishing will cause recruitment overfishing is low.

ICES advises that when the EU–Norway management strategy is applied, catches in 2016 should be no more than 75 049 tonnes. If this stock is not under the EU landing obligation in 2016 and discard rates do not change from the average (2012–2014), this implies landings of no more than 68 601 tonnes. Since SSB is marginally below 200 000 tonnes in 2015, paragraph 3 of the EU–Norway management strategy applies, resulting in an F of 0.298. ICES has evaluated the Norwegian management plan and considered to be in accordance with the precautionary approach.

For 2016, the EU and Norway have agreed a TAC of 65 696 t for IIIa, IV plus EU waters of IIa, IIIb, IIIc and Subdivisions 22-23, and a TAC of 6 448 t for IVa plus EU and international waters of Vb, XII and XIV. The TAC of 6 448 t is before consideration of the landings obligation, but North Sea TAC is composed of 62 153 t (in compliance with ICES advice) plus an increase of

5.7% to allow for the EU landings obligation. Overall, therefore, the TAC has been set in compliance with ICES advice (see Council Regulation EU 2016/72 and Agreed Record of Fisheries Consultations between Norway and the EU, Bergen, 4 December 2015³).



³ Available here: <https://www.regjeringen.no/contentassets/d1ae7bd33edc41faa40bafcc64efa4cf/norge-eu-nordsjoen-4-des-2015.pdf> (strangely it does not seem to be published by DG MARE)

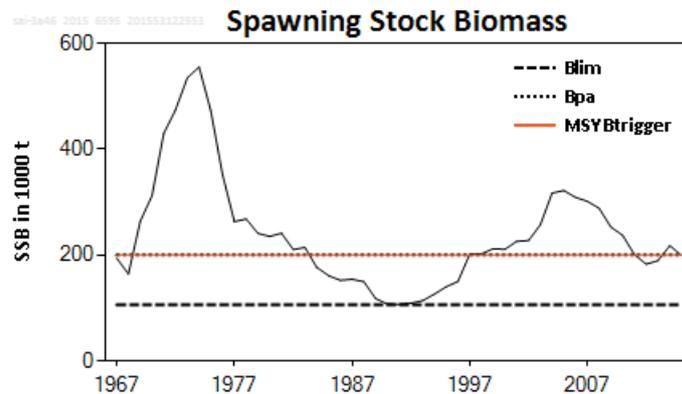


Figure 1. Saithe in Subareas IV and VI and Division IIIa. Summary of stock assessment (weights in thousand tonnes). Top right: SSB and F for the time-series used in the assessment. Source: ICES (2015a).

		Fishing pressure			Stock size		
		2012	2013	2014	2013	2014	2015
Maximum Sustainable Yield	F_{MSY}	✓	✓	✓	MSY	✓	Below trigger
Precautionary approach	F_{pa}, F_{lim}	✓	✓	✓	B_{pa}, B_{lim}	✓	Increased risk
Management plan	F_{MGT}	✗	✓	✗	SSB_{MGT}	✓	Below $SSB_{MS-upper}$
				Appropriate	✗	✗	
				Harvested sustainably	✗	✗	
				Above $F_{MS-upper}$			

Figure 2. Saithe in Subareas IV and VI and Division IIIa. State of the stock and fishery relative to reference points. Source: ICES (2015a).

Management plan and reference points: In 2013, the EU and Norway renewed the existing agreement on “a long-term plan for the saithe stock in the Skagerrak, the North Sea and west of Scotland”. The 2008 management plan was extended without changes. ICES considered the plan to be consistent with a precautionary approach and designed to provide for sustainable fisheries and high yields.

Stock assessment model: The stock assessment uses an age-based analytical assessment model (XSA; ICES, 2015a) that uses landings in the model, and discards are then included to calculate a catch forecast. Extended Survivors Analysis (XSA) is a variant of Virtual Population Analysis, which uses catch-at-age data to back-calculate the size of each age group. The XSA variant is a simple approach to fitting this type of model and has been widely used by ICES for a number of stocks as it is considered robust.

Information: These models require catch, age and size composition samples, abundance indices as data and estimates of maturity-at-age, weight-at-age and natural mortality as input information. These data are obtained from landings reports, scientific surveys, catch sampling and other scientific research. Input information consist of commercial catches (international landings and discards, age and length frequencies from catch sampling); survey index (IBTS Q3); 3 commercial indices (FRATRB_IV, GER_OTB_IV, NORTR_IV2). Maturity-at-age and natural mortality are assumed to be constant. Discards and bycatch were used to provide advice, but are not included in the assessment. Discard information 2012–2014 (covers 90% of the landings).

In 2014, modifications to the design and target identification of the NORACU survey showed that what had been identified as saithe in the acoustic signal in the past was most likely

incorrect. Therefore, it has been removed from the assessment, which only slightly influenced assessment results.

The overall reporting of catch data provided to ICES has improved during 2012–2014 through such aspects as the fully documented fisheries (FDF) programme and increased coverage by the Scottish industry/science observer-sampling scheme. Recruitment is poorly estimated with the IBTS Q3 survey because fish of age 3 are poorly represented. Catches from older age classes in the surveys are not representative and commercial LPUE indices are also used for tuning and are highly influential on assessment results. Therefore, the assessment is dependent on commercial indices, which may not fully reflect changes in stock size for a schooling species like saithe.

2.2.2.2 Northeast Arctic Saithe in Subareas I and II

Status of the stock: According to the most recent ICES assessment for Northeast Arctic Saithe in Subareas I and II (June 2015), the spawning-stock biomass (SSB) has been above B_{pa} and SSB_{MGT} since 1996, declined considerably from 2007 to 2011, then increased again and is presently (2015) estimated to be well above B_{pa} and SSB_{MGT} . The fishing mortality (F) was below the F_{pa} from 1997 to 2008, started to increase in 2005 and was above F_{pa} from 2010 to 2012, but is now most likely to be below F_{pa} and F_{MGT} . Recruitment (R) has since 2005 been about 10 % below the long-term geometric mean level. On this basis, the stock is estimated to be at an appropriate level in relation to the management plan, which formed the basis of the advice. Moreover, the probability that the current rate of fishing will cause recruitment overfishing is low. There have been variations in distribution and migration patterns of the Northeast Arctic Saithe in Subareas I and II over the years, but the link with environmental parameters remains unclear.

ICES advises that when the Norwegian management plan is applied, catches in 2016 should be no more than 140 000 t. All catches are assumed to be landed. Bycatches of coastal cod and *Sebastes norvegicus* in fisheries targeting saithe in Subareas I and II should be kept as low as possible. ICES has evaluated the Norwegian management plan and considered to be in accordance with the precautionary approach.

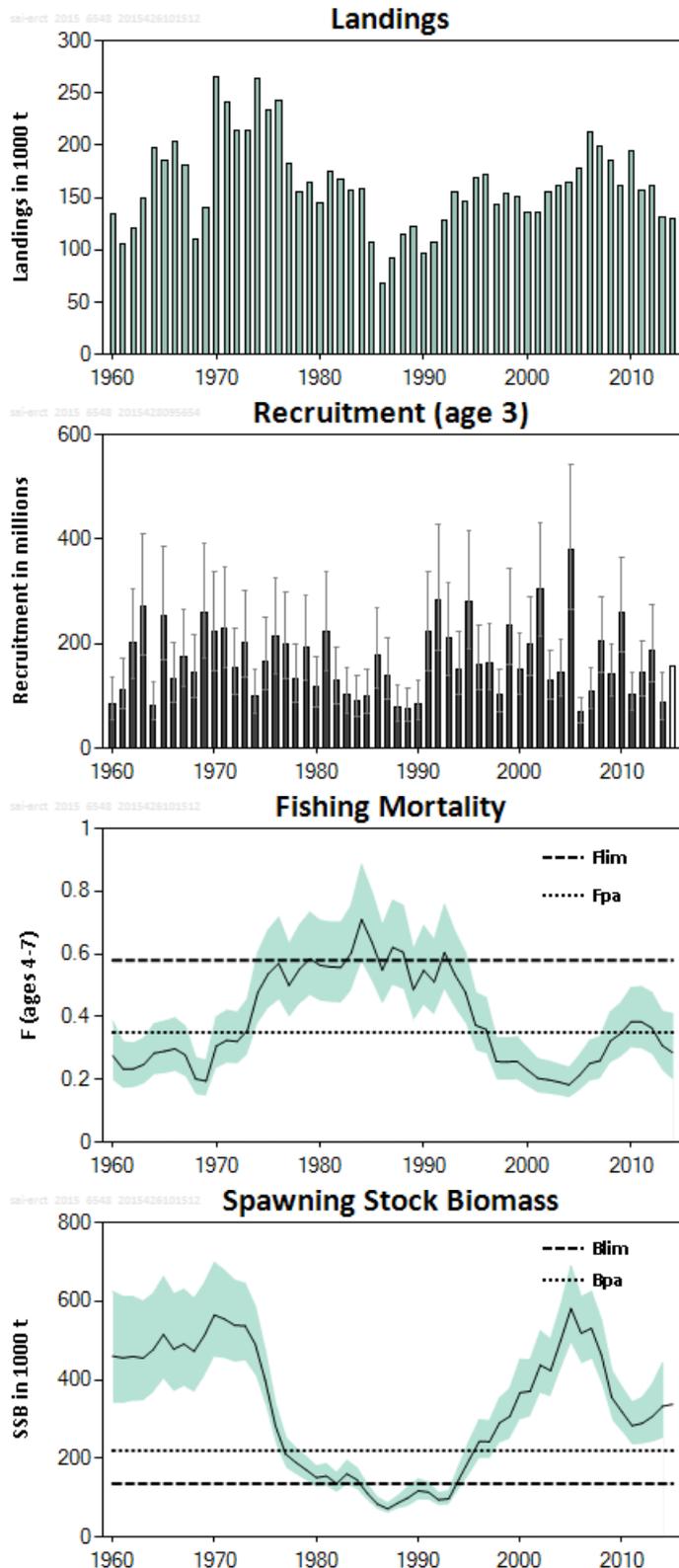


Figure 3. Saithe in Subareas I and II. Historical development of the stock from the summary of stock assessment (weights in thousand tonnes). Recruitment (R), fishing mortality (F), and spawning-stock biomass (SSB) have uncertainty boundaries (95%) in the plots. Predicted recruitment values are not shaded. Source: ICES (2015b).

	Fishing pressure			Stock size						
	2012	2013	2014	2013	2014	2015				
Maximum Sustainable Yield	F_{MSY}	?	?	?	Undefined	MSY	?	?	?	Undefined
Precautionary approach	F_{pa}, F_{lim}	⊙	✓	✓	Harvested sustainably	B_{pa}, B_{lim}	✓	✓	✓	Full reproductive capacity
Management Plan	F_{MGT}	✗	✓	✓	Below target	SSB_{MGT}	✓	✓	✓	Above trigger

Figure 4. Saithe in Subareas I and II. State of the stock and fishery, relative to reference points. Source: ICES (2015b).

Harvest strategy and management plan: The harvest control rule was revised in 2013 and communicated to ICES by the Norwegian Ministry of Fisheries and Coastal Affairs. It contains the following elements:

- 1) Estimate the average TAC level for the coming 3 years based on $F_{mp} = 0.321$. TAC for the next year will be set to this level as a starting value for the 3-year period.
- 2) The year after, the TAC calculation for the next 3 years is repeated based on the updated information about the stock development. However, the TAC should not be changed by more than $\pm 15\%$ compared with the previous year's TAC.
- 3) If the SSB in the beginning of the year for which the quota is set (first year of prediction), is below B_{pa} , the procedure for establishing TAC should be based on a fishing mortality that is linearly reduced from F_{mp} at $SSB = B_{pa}$ to 0 at SSB equal to zero. At SSB levels below B_{pa} in any of the operational years (current year and 3 years of prediction) there should be no limitations on the year-to-year variations in TAC.

Stock assessment model: The stock assessment uses an age-based analytical assessment (SAM; ICES, 2015b) to estimate fishing mortality and spawning stock size for determination of stock status and application of the harvest control rule. SAM is a state space model and is more sophisticated than XSA and, in particular, models both observation and process error explicitly. This software and model should lead to a better assessment of the uncertainty for projections and for management advice. However, documentation in the public domain remains sparse (see Nielsen and Berg, 2014), although software code can be downloaded from www.stockassessment.org.

Information: These models require catch, age and size composition samples, abundance indices as data and estimates of maturity-at-age, weight-at-age and natural mortality as input information. These data are obtained from landings reports, scientific surveys, catch sampling and other scientific research.

Input information consists of commercial international catches with age and length frequencies from Norwegian, German, and Russian catch sampling, one survey index (NOcoast-Aco-4Q, split in 2002), three-year running average maturity from spawning zones in otoliths from commercial catches and surveys for 1985–2006, constant (2005–2007 average) for later years and natural mortalities. Discards and bycatch were not included as they are considered to be negligible.

2.2.3 Principle 2

2.2.3.1 Retained species

'Main' retained species have been defined as those making up >5% of total catch (total landings in this case) or, which are particularly vulnerable to fishing pressure and/or valuable to the fishery, in which case they can be <5% of the total catch. For those species considered as vulnerable, a cut-off of 2% of the total landings was applied by the team.

Euronor: The retained species for Euronor for 2014 are given in Table 5. Percentages have been calculated separately for the two stock areas. Main retained species have been identified as hake (*Merluccius merluccius*) and Greenland halibut (*Reinhardtius hippoglossoides*) for the North Sea / West of Scotland UoA and cod (*Gadus morhua*) for the NEA UoA.

Table 5. Euronor landings 2014 (tonnes live weight)

North Sea / West of Scotland			NEA		
Species	Landings t	%	Species	Landings t	%
Saithe	9904.40	83.1	Cod	3971	96.7
Hake (<i>Merluccius merluccius</i>)	881.81	7.39	Saithe	28.1	0.68
Greenland halibut (<i>Reinhardtius hippoglossoides</i>)	303.15	2.54	Haddock	83.1	2.02
Ling (<i>Molva molva</i>)	201.50	1.69	Redfish	11	0.27
Haddock (<i>Melanogrammus aeglefinus</i>)	174.90	1.47	Greenland halibut	2.5	0.06
Blue ling (<i>Molva dypterygia</i>)	150.48	1.26	Other	12.1	0.29
Cod (<i>Gadus morhua</i>)	136.38	1.14			
Whiting (<i>Merlangius merlangus</i>)	63.24	0.53			
Monkfish (<i>Lophius</i> spp.)	46.19	0.39			
Black scabbardfish (<i>Aphanopus carbo</i>)	31.20	0.26			
Tusk (<i>Brosme brosme</i>)	23.43	0.20			
Redfish (<i>Sebastes</i> spp.)	6.31	0.05			
Greater forkbeard (<i>Phycis blennoides</i>)	2.12	0.02			

Cie des Pêches St Malo: The retained species from the Grande Hermine for 2014 for the NEA are given in Table 6. The only main retained species identified is NEA cod.

Table 6. Retained species by the Grande Hermine (Cie des Pêches St Malo) in 2014, by fishing area (tonnes live weight).

Species	NEZ North 62	Svalbard (SFPZ)	Total 2014	%
Cod (<i>Gadus morhua</i>)	1570	2601	4171	93.1
Saithe	180.1	0	180.1	4.02
Haddock (<i>Melanogrammus aeglefinus</i>)	63.7	46.7	110	2.45
Redfish (<i>Sebastes norvegicus</i>)	4.47	0	4.47	0.10
Other	2.37	13.6	16.0	0.36

The Grande Hermine fished in the North Sea in 2015 for the first time since the first certification (Table 7). Although other than saithe no other species made up more than 5% of the overall catch, hake (3.71 %) was considered as main on the basis of its commercial value.

Table 7. Landings from the North Sea by the Grande Hermine in 2015 (tonnes live weight)

Species	Landings (t)	%
Saithe	301.8	95.0
Hake (<i>Merluccius merluccius</i>)	11.8	3.71
Haddock (<i>Melanogrammus aeglefinus</i>)	1.93	0.61
Cod (<i>Gadus morhua</i>)	1.3	0.41
Ling (<i>Molva molva</i>)	1.01	0.32

Scapêche: To identify retained and bycatch species associated with saithe for Scapêche, data need to be evaluated on a haul-by-haul rather than day-by-day or trip-by-trip basis. This is because Scapêche vessels target different groups of species within the same trip and often the same day. Generally they will start a ~5-7 day trip by targeting deep-water species, then move up the depth contour to target first monkfish and then saithe and hake as the trip proceeds. The retained and bycatch species associated with, for example, the deep-sea fishery are not the same as those taken alongside saithe.

In order to extract only those hauls containing saithe, data on 'main' retained species are taken from analysis of observer data (ObsMer) rather than logbook data (daily) or landings data (by trip). In this case, the raw observer data were analysed to extract all individual hauls which included saithe. All species making up >0.5% of total catch (whether retained or discarded) are shown in Table 8. Main retained species have been identified as hake, monkfish and ling, which are not discarded to any significant extent (~1%).

Table 8. Species caught by Scapêche vessels alongside saithe in 2014 (tonnes live weight), representing >0.5% of total catches.

Species	Weight caught (t)	%
Saithe	371.18	50%
Hake (<i>Merluccius merluccius</i>)	176.80	24%
Monkfish (<i>Lophius piscatorius</i>)	39.89	5%
Ling (<i>Molva molva</i>)	37.26	5%
Haddock (<i>Melanogrammus aeglefinus</i>)	14.97	2%
Cod (<i>Gadus morhua</i>)	9.79	1%
Chimaera (<i>Chimaera monstrosa</i>)	8.83	1%
Megrim (<i>Lepidorhombus whiffiagonis</i>)	8.30	1%
Monkfish (<i>L. budegassa</i>)	7.48	1%
Blue ling (<i>M. dypterygia</i>)	7.23	1%
Greater forkbeard (<i>Phycis blennoides</i>)	6.46	1%
Small-spotted catshark (<i>Scyliorhinus canicula</i>)	5.72	1%
European squid (<i>Loligo vulgaris</i>)	4.65	1%
Greenland halibut (<i>Reinhardtius hippoglossoides</i>)	4.60	1%

2.2.3.2 Bycatch species (discards) – North Sea / West of Scotland

Euronor: Euronor provided 13 observer reports from three of their vessels (André Leduc, Bressay Bank, Cap St Georges). They all applied to the North Sea fishery. The average rate of discarding across these observer reports was 3.3% (highest 9% lowest 0). We have estimated the contribution of discards to the total catch by species by multiplying the percentage composition of discards given in the observer report by the percentage of the total catch which was discarded, also given in the observer report (Table 9; including species making up >0.05% of the catch). No ‘main’ bycatch species were identified.

Table 9. Euronor: Species composition of discards from the North Sea / W. Scotland (% across 13 observer reports) and average proportion of the total catch (landings + discards) made up of discards by species. Data based on Observer reports

Species	average % of discards	average % catch
Hake	26.75	1.27
Mackerel (<i>Scomber scombrus</i>)	19.17	0.67
Grey gurnard (<i>Eutrigla gurnardus</i>)	7.48	0.25
Horse mackerel (<i>Trachurus trachurus</i>)	4.54	0.21
Whiting (<i>Merlangius merlangus</i>)	6.56	0.17
Rabbitfish (<i>Chimaera monstrosa</i>)	2.55	0.11

Species	average % of discards	average % catch
Saithe	1.85	0.10
Cod	1.58	0.10
Herring (<i>Clupea harengus</i>)	4.28	0.06
Haddock	1.78	0.06
Starry ray (<i>Amblyraja radiata</i>)	1.74	0.06
Argentine (<i>Argentina silus</i>)	1.51	0.06

Cie des Peches St Malo: The Grande Hermine fished a small quantity in the North Sea in 2015, for the first time since the initial certification (the limitation is obtaining quota by exchange with other fishing companies, usually Euronor). Again, no data were available on discards (the North Sea is fished on the way back from the NEA, so as part of the same long trips). For the purposes of this assessment, the team consider that the proportion and composition of discards was likely to be more or less the same as for Euronor. Scoring takes into account, however, the lack of direct data, as well as the low effort of the Cie des Pêches in the North Sea compared to the other companies (e.g. North Sea landings of saithe by Euronor ~30X more than those of the Grande Hermine (~300 t vs. ~9000 t), even in years when she does fish).

Scapêche: Data for Scapêche comes from the raw observer data, as described above. Table 10 gives the total catch weight, discarded weight, landed weight and % contribution to total catch, for species where i) >50% of the catch is discarded and ii) total % contribution to catch is 0.5% or greater. No 'main' bycatch species were identified from this analysis.

Table 10. Scapêche: Landed and discarded weights and estimated % contribution to total catch, from observer data.

Species	Total catch weight (t)	Weight of discards (t)	Weight of landings (t)	% contribution to total catch
Cod	9.79	6.02	3.77	1.31%
Small-spotted catshark (<i>Scyliorhinus canicula</i>)	5.72	5.51	0.20	0.77%
Horse mackerel (<i>Trachurus trachurus</i>)	3.50	3.46	0.04	0.47%
Great silver smelt (<i>Argentina silus</i>)	2.92	2.92	0	0.39%
Mackerel (<i>Scomber scombrus</i>)	1.33	1.33	0	0.18%
Red gurnard (<i>Chelidonichthys cuculus</i>)	1.13	0.88	0.25	0.15%
Boarfish (<i>Capros aper</i>)	1.02	1.02	0	0.14%
Blue whiting (<i>Micromesistius poutassou</i>)	0.81	0.81	0	0.11%
Brown crab (<i>Cancer pagurus</i>)	0.71	0.71	0	0.10%

Species	Total catch weight (t)	Weight of discards (t)	Weight of landings (t)	% contribution to total catch
Blackmouth catshark (<i>Galeus melastomus</i>)	0.70	0.69	0	0.09%
Softhead grenadier (<i>Malacocephalus laevis</i>)	0.69	0.69	0	0.09%
Grey gurnard (<i>Eutrigla gurnardus</i>)	0.64	0.61	0.022	0.09%

2.2.3.3 Bycatch species (discards) – NEA

The French vessels who fish in the NEA (Grande Hermine, Cap Nord and Klondyke) are not able to have ObsMer observers on board, because of the long trips and because the fishery is considered 'low risk' because of the rigorous Norwegian regulatory framework (no discarding allowed) and enforcement.

Although there is a discard ban in place and Norwegian enforcement is excellent, it is acknowledged that there may be small amounts of discarding (e.g. IMR, 2011). From an information and research (rather than an enforcement) point of view, the Norwegians try to address this question via a 'reference fleet', a sub-sample of Norwegian fishing vessels from different métiers which collect data for the Institute of Marine Research (IMR) on various aspects of the fishery, including bycatch and length-frequency sampling. As of 2011, this included 11 offshore demersal vessels, although it was not clear whether all of these vessels were operating in the NEA – some may be working further south. This reference fleet gives, among other things, an idea of the rate of discarding, and a full species list for unwanted bycatch (although without catch location it is hard to know which of these apply to the NEA cod fishery).

Taking the non-commercial species on this list, it is clear that there are two main groups of species which might be discarded: small pelagics and elasmobranchs (Table 11).

Table 11. Species on the list of catch from the Norwegian offshore demersal reference fleet (IMR, 2011): non-commercial and with a non-negligible catch (defined as >1000 individuals out of a total observed number of individuals across all species of ~200,000).

Small pelagics	Elasmobranchs	Other
<ul style="list-style-type: none"> • Argentine (<i>Argentina sphyraena</i>) • Sprat <i>Sprattus sprattus</i> • Norway pout <i>Trisopterus esmarkii</i> 	<ul style="list-style-type: none"> • Blackmouth catshark <i>Galeus melastomus</i> • Chimaera <i>monstrosa</i> • Round skate <i>Rajella fyllae</i> • Spinytail skate <i>Bathyraja spinicauda</i> • Starry ray <i>Amblyraja radiata</i> • Velvet-bellied lanternshark <i>Etmopterus spinax</i> 	<ul style="list-style-type: none"> • Grey gurnard <i>Eutrigla gurnardus</i> • Grenadier <i>Macrourus berglax</i>

In relation to the NEA specifically, the distribution of these species was evaluated using FishBase. Several of the above species are not (or only rarely) present in the NEA (catshark,

argentine, gurnard, chimaera and sprat). This gives a list of possible bycatch species in the NEA as given in Table 12. These species were considered as minor bycatch species in the scoring.

Table 12. Possible (hypothetical) bycatch species in the NEA fishery, based on information for the Norwegian reference fleet (IMR, 2011), cross-referenced with species distributions from FishBase.

Species	Stock status (IUCN / ICES)	Depth distribution (m)	Ref.
Round skate	Least concern; apparently stable in Barents Sea in recent years	170-2000	Kulka et al., 2009b
Spinytail skate	Least concern (NE Atlantic)	150-1500	Kulka et al., 2009c
Starry ray	IUCN vulnerable (but out of date); ICES assessment covers Norwegian and North Sea not NEA – declining according to survey indices in this area	20-1000	Kulka et al., 2009a; ICES, 2015v
Velvet-bellied lanternshark	Near threatened (NE Atlantic); least concern (global)	200-2500	Coelho et al., 2009
Grenadier	Unknown	100-1000	ICES, 2015aa

2.2.3.4 ETP species

ETP species for this fishery are defined as follows:

- species protected by national (France, Norway) or EU protected species legislation
- species protected by EU fisheries legislation in certain areas
- species on CITES Appendix I or the Convention on Migratory Species

This includes all marine mammals and seabirds and some elasmobranchs in some areas (see Table 13). There is no evidence that this fishery interacts in any way with marine mammals or seabirds (see previous PCR and surveillance reports; observer reports have also been reviewed; no stakeholder comments have been received on this issue). Therefore, the analysis of ETP species has focused on elasmobranchs. Elasmobranchs protected under EU fisheries legislation (applying to EU and sometimes international waters) are given in Table 13. In Norwegian waters, it is prohibited to fish and land basking shark (*Cetorhinus maximus*), spiny dogfish (*Squalus acanthias*), porbeagle (*Lamna nasus*) and silky shark (*Carcharhinus falciformis*) (Norwegian Fisheridirektoratet regulation J-250-2013). These species are, however, all distributed further south than the NEA waters used by this fishery (FishBase; ICES, 2015bb). The team therefore could not identify any ETP species that overlapped with this fishery in the NEA.

Table 13. Elasmobranch species protected by EU fisheries legislation (Regulation 2016/72 of 22 January 2016) and the areas concerned

Species		Areas in which protected by EU fisheries legislation (Regulation 2016/72); EU and international waters	Applies to which UoAs
Starry ray	<i>Amblyraja radiata</i>	Ila, IIIa, VIId, IV	North Sea (all, but most relevant for Euronor)
Leafscale gulper shark	<i>Centrophorus squamosus</i>	Ila, IV, EU areas of I and XIV	North Sea
Kitefin shark	<i>Dalatias licha</i>	Ila, IV, EU areas of I and XIV	North Sea
Birdbeak dogfish	<i>Deania calcea</i>	Ila, IV, EU areas of I and XIV	North Sea
Common skate complex	<i>Dipturus batis</i>	Ila, III, IV, VI, VII, VIII, IX, X	North Sea and West of Scotland (all, Scapêche)
Great lanternshark	<i>Etmopterus princeps</i>	Ila, IV, EU areas of I and XIV	North Sea
Etmopterus pusillus	<i>E. pusillus</i>	EU and international waters of Ila, IV, I, V, VI, VII, VIII, XII, XIV	North Sea and West of Scotland
Tope	<i>Galeorhinus galeus</i>	EU and international waters of Ila, IV, I, V, VI, VII, VIII, XII, XIV	North Sea and West of Scotland
Porbeagle	<i>Lamna nasus</i>	all areas	all
Thornback ray	<i>Raja clavata</i>	IIIa	Skaggerak (Euronor only)
Norwegian ray	<i>Raja (Dipturus) nidarosiensis</i>	VIa, VIb, VIIa-c, e-h and k	Subarea VI (Scapêche only)
White ray	<i>Raja alba</i>	VI, VII, VIII, IX, X	Subarea VI
Undulate ray	<i>Raja undulata</i>	VI, X	Subarea VI

Euronor : The observer reports estimate a percentage of the total catch made up by various species of elasmobranchs, from which an average has been calculated as described above for bycatch species. Their total catch by Euronor vessels has been approximated by multiplying this percentage by total North Sea landings (Table 14). From this analysis, the main ETP species Euronor interacts with in the North Sea is the starry ray. The observer reports only estimate percentages for species making up at least 1% of discards, however, so the reports were also reviewed individually in case there were regular interactions with other ETP species in smaller amounts. Of the species listed in Table 13 above, only the common skate was mentioned, with two individuals reported caught in one of the 13 reports. (Common skate is nowadays very rare in the North Sea.) The team concluded that this level of interaction was too low to be relevant.

Table 14. Euronor: Elasmobranch species for which the % of the total catch can be quantitatively estimated from observer reports, and estimated total catch (by multiplying %age by total Euronor landings for 2014). IUCN status also added for reference (VU = vulnerable, LC = least concern).

Species		average % catch	estimated total catch (t)	ETP?	IUCN status	Ref.
Starry ray	<i>Amblyraja radiata</i>	0.06	6.81	yes – N. Sea	VU	Kulka et al. 2009a
Smallspotted catshark	<i>Scyliorhinus canicula</i>	0.02	1.87	no	LC	Ellis et al. 2009
Cuckoo skate	<i>Leucoraja naevus</i>	0.02	1.83	no	LC	Ellis et al. 2015
Round ray	<i>Rajella fyllae</i>	0.01	0.97	no	LC	Kulka et al. 2009b

Cie des Pêches St Malo : The Grande Hermine has been reporting on catches of elasmobranchs since the last certification, as part of an Ifremer self-sampling programme (see review in each surveillance report). In 2015 for the first time, they were able to report the catch of one elasmobranch – a ray. Unfortunately the species remains uncertain – it was reported as a ‘raie brune’, which should correspond to *Raja undulata* (‘raie Brunette’), except that this is a southern species which does not occur around north Norway, where the catch was made. Discussion with the captain suggests that it was most likely a thornback ray (*Raja clavata*, raie bouclée) which is present in the zone, although rarer than further south. In either case it is not an ETP species in Norwegian waters, and in any case it is clear that interactions with elasmobranchs are rare (see detailed analysis in previous Certification Reports; MEP, 2010; MEP, 2011a).

Scapêche : Table 15 shows observed and estimated total catch of elasmobranchs for all hauls which include any saithe in the catch (no lower threshold). A wide range of species of elasmobranchs are taken in the fishery in small quantities. Despite this wide range of species, only one species of elasmobranch can be identified as ETP overlapping with the fishery – the common skate *Dipturus batis*, which had an estimated total catch of ~5 tonnes in 2014. It must be emphasised that this estimate is very approximate, and should be taken as correct to order of magnitude only. Three other species are protected under EU fisheries legislation, but only in the North Sea, where Scapêche fishes only very peripherally.

Scapêche had a condition to reduce the catch of common skate during the last certification round (Table 1), which was closed after detailed analysis of observer reports showed that the overlap of the bycatch of elasmobranchs with the saithe fishery specifically was actually much smaller in practice than it appears from analyses such as that presented in Table 15; they appeared to be a bycatch of a deep-sea fishery, where saithe is sometimes taken in small quantities. On this basis, the team decided to evaluate the overlap of saithe and common skate in more detail. Observer data were extracted using four different thresholds for saithe catch (0, as used in Table 15, 0.1t, 1t and 5 t) and the total saithe catch from these hauls was estimated via the same method as in Table 15, assuming the same proportional observer coverage throughout (and with the same caveats as to the level of approximation). It is fairly clear from this analysis (Table 16) that hauls which are mainly saithe (5 t or more) have a

much lower bycatch of common skate (0.0005%, estimated total bycatch ~18 kg) than hauls with a more mixed catch with smaller quantities of saithe. Even setting a low threshold of 100 kg reduces the bycatch estimate by more than half, while retaining 99% of the saithe catch in the analysis.

Table 15. Scapêche: Total observed catch (retained or discarded) of elasmobranchs from ObsMer data (2014), and estimated total catch (scaled up by 9% coverage by trip and 2/3rds of hauls observed per observed trip); IUCN status also give for reference (see www.redlist.org and search for relevant species).

Species		Weight (t) from observer reports	Estimate of total catch (t)	ETP?	IUCN status
Smallspotted catshark	<i>Scyliorhinus canicula</i>	5.717	95.28	no	LC
Spotted ray	<i>Raja montagui</i>	3.601	60.01	no	LC
Cuckoo skate	<i>Leucoraja naevus</i>	2.651	44.18	no	LC
Thornback ray	<i>Raja clavata</i>	2.610	43.49	no – only in Illa	NT
Longnose skate	<i>Dipturus oxyrinchus</i>	1.303	21.71	no	NT
Blackmouth catshark	<i>Galeus melastomus</i>	0.695	11.58	no	LC
Shagreen ray	<i>Leucoraja fullonica</i>	0.536	8.93	no	VU
Common skate	<i>Dipturus batis</i>	0.301	5.02	yes – North Sea, W. Scotland	CR
Spurdog	<i>Squalus acanthias</i>	0.250	4.17	no	VU
Bluntnose sixgill shark	<i>Hexanchus griseus</i>	0.201	3.35	no	NT
Velvet belly lanternshark	<i>Etmopterus spinax</i>	0.183	3.06	no	LC
Spinytail skate	<i>Bathyraja spinicauda</i>	0.171	2.86	no	NT
Greenland shark	<i>Somniosus microcephalus</i>	0.15	2.50	no	NT
Leafscale gulper shark	<i>Centrophorus squamosus</i>	0.065	1.08	North Sea only	VU
Round ray	<i>Rajella fyllae</i>	0.060	1.01	no	LC
Arctic skate	<i>Amblyraja hyperborea</i>	0.050	0.83	no	LC
Starry ray	<i>Amblyraja radiata</i>	0.050	0.83	North Sea only	VU
Starry smoothhound	<i>Mustelus asterias</i>	0.038	0.63	no	LC
Mid-Atlantic skate	<i>Rajella kukujevi</i>	0.028	0.46	no	LC

Species		Weight (t) from observer reports	Estimate of total catch (t)	ETP?	IUCN status
Sandy skate	<i>Leucoraja circularis</i>	0.020	0.34	no	EN
Sailfin roughshark	<i>Oxynotus paradoxus</i>	0.020	0.33	no	DD
Kitefin shark	<i>Dalatias licha</i>	0.018	0.29	North Sea only	NT
Nursehound	<i>Scyliorhinus stellaris</i>	0.010	0.16	no	NT
Common smoothhound	<i>Mustelus mustelus</i>	0.009	0.15	no	VU
Arrowhead dogfish	<i>Deania profundorum</i>	0.005	0.08	no	LC
Longnose velvet dogfish	<i>Centroscymnus crepidater</i>	0.004	0.07	no	LC
Smalleyed ray	<i>Raja microocellata</i>	0.002	0.03	no	NT
Blonde ray	<i>Raja brachyura</i>	0.001	0.02	no	NT

Table 16. Estimated common skate catch from observer data using different thresholds for saithe catch per haul

Threshold (t)	% saithe catch covered	% of total catch which is <i>D. batis</i>	Estimated total catch of <i>D. batis</i> from these hauls (t)
0	100	0.052	5.02
0.1	99	0.023	2.40
1	86	0.02	1.38
5	53	0.0005	0.018

2.2.3.5 Habitats – North Sea and West of Scotland

The situation in relation to the protection of important or vulnerable habitats in UK waters (the main fishing area in both Subareas IV and VI) has progressed significantly since this fishery was first certified in 2010. The programme of designating sites under the EU Natura 2000 framework (SACs, SPAs; designated under the Habitats or Birds Directive) has continued, with three new candidate sites added. (One minor change is that candidate SACs/SPAs are now initially designated as ‘Sites of Community Importance’ – SCIs, before being finally designated as SACs/SPAs.) A new UK programme of designating marine protected areas has also been put in place, aimed at protecting threatened habitats and species listed under OSPAR. In Scottish waters these are called Nature Conservation Marine Protected Areas (NCMPAs), and in English waters they are called Marine Conservation Zones (MCZs). The management measures to be put in place in these MPAs are still under discussion with stakeholders. The NCMPAs in Scottish waters are shown in Figure 5; all relevant protected areas (NCMPAs, MCZs, SCIs) are listed in Table 17. Potential overlap has been evaluated by depth range (50-500m are outer limits within which saithe is targeted).

No final decisions on management of the offshore MPAs have been taken as yet. JNCC, in consultation with Marine Scotland, have prepared a ‘management options paper’ for each site, which is intended to serve as a basis for stakeholder consultation, which is ongoing. The conclusions of this paper for each site, in relation to demersal fishing, are summarised in Table 18.

There are various protected areas in Norwegian waters to protect cold-water coral reefs, but none which are in the area relevant to this fishery according to Figure 1 and http://www.imr.no/english/_data/page/6335/Marine_protected_areas_in_Norway.pdf.

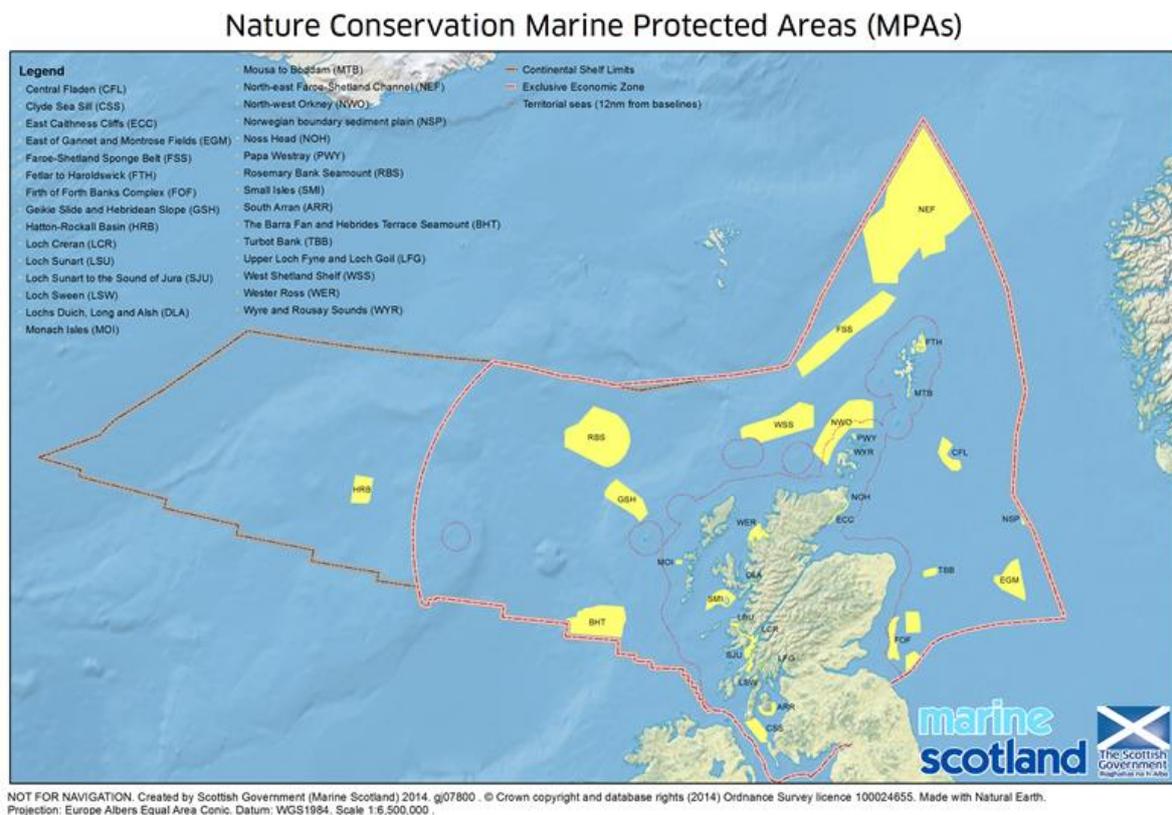


Figure 5. NCMPAs in Scottish waters. See <http://jncc.defra.gov.uk/page-5269>

Table 17. All protected areas relevant to this fishery and their features and status. Information on NCMPAs available at <http://jncc.defra.gov.uk/page-5269> (follow links for each site to find site description, designation order, management options paper and other information).

Protected area	Type	Features	Status
Central Fladen (CFL)	NCMPA	burrowed mud	Designated by Central Fladen MPA Order 2014(b); in force from 7 Aug. 2014
East of Gannet and Montrose Fields (EGM)	NCMPA	ocean quahog (<i>Arctica islandica</i>) aggregations	Designated by East of Gannet and Montrose Fields Marine Protected Area Order 2014(b); in force from 7 Aug. 2014

Protected area	Type	Features	Status
		offshore subtidal sand and gravel, offshore deep-sea muds	
Faroe-Shetland Sponge Belt (FSS)	NCMPA	deep-sea sponges, offshore subtidal sand and gravel, ocean quahog (<i>Arctica islandica</i>) aggregations	Designated by Faroe-Shetland Sponge Belt Marine Protected Area Order 2014; in force from 7 Aug. 2014
Geikie Slide and Hebridean Slope (GSH)	NCMPA	burrowed mud, offshore subtidal sand and gravel, offshore deep-sea mud	Designated by Geikie Slide and Hebridean Slope Marine Protected Area Order 2014; in force from 7 Aug. 2014
NE Faroe-Shetland Channel (NEF)	NCMPA	deep-sea sponge aggregations (4-600m), deep-sea mud, deep-sea gravel	Designated by NE Faroe-Shetlands Channel Marine Protected Area Order 2014; in force from 7 Aug. 2014
Norwegian Boundary Sediment Plains (NSP)	NCMPA	ocean quahog (<i>Arctica islandica</i>) aggregations, offshore subtidal sand and gravel	Designated by Norwegian Boundary Sediment Plains Marine Protected Area Order 2014(b); in force from 7th August 2014
West Shetland Shelf (WSS)	NCMPA	offshore subtidal sand and gravel	Designated by West Shetland Shelf Protected Area Order 2014; in force from 7th August 2014
Braemar Pockmarks	cSAC/SCI	submarine structures made by leaking gas (methane seeps / carbonate deposits)	SCI since December 2009; not yet designated SAC
Scanner Pockmark	cSAC/SCI	submarine structures made by leaking gas (methane seeps / carbonate deposits)	SCI since December 2009; not yet designated SAC
Pobie Bank Reef	cSCI	reef (bedrock / stony outcrops); also harbour porpoise; grey and common seal	Proposed as SCI in Oct. 2012

Table 18. Summary of JNCC / Marine Scotland management options for fisheries for each NCMPA – intended as a basis for discussion with stakeholders. Available at <http://jncc.defra.gov.uk/page-5269> (follow links for each site).

Protected area	Option for demersal towed gears		
	Do nothing	Reduce or limit	Eliminate
Central Fladen (CFL)	significant risk of not meeting conservation objectives for burrowed mud	suggest closure and/or reduction in effort for parts of the site	high probability of meeting conservation objectives

Protected area	Option for demersal towed gears		
	Do nothing	Reduce or limit	Eliminate
East of Gannet and Montrose Fields (EGM)	risk of not meeting conservation objectives for ocean quahog and burrowed mud	for quahog suggest reducing/eliminating hydraulic and scallop dredging, for mud suggest closing parts of the site on a temporary or permanent basis	high probability of meeting conservation objectives
Faroe-Shetland Sponge Belt (FSS)	conservation objectives for sponge aggregations would not be met; risk for ocean quahog	for quahog suggest reducing/eliminating hydraulic and scallop dredging; for sponge aggregations there would still be a risk that conservation objectives would not be met	only option that would meet conservation objectives in areas where sponge aggregations occur
Geikie Slide and Hebridean Slope (GSH)	significant risk of not meeting conservation objectives for burrowed mud	suggest closure and/or reduction in effort for parts of the site	high probability of meeting conservation objectives
NE Faroe-Shetland Channel (NEF)	conservation objectives for sponge aggregations would not be met; risk for burrowed mud	suggest zoned approach for burrowed mud; for sponge aggregations there would still be a risk that conservation objectives would not be met	only option that would meet conservation objectives in areas where sponge aggregations occur
Norwegian Boundary Sediment Plains (NSP)	risk of not meeting conservation objectives for ocean quahog	restrict dredging as above	high probability of meeting conservation objectives if trawling and dredging are restricted
West Shetland Shelf (WSS)	Mobile fishing gear is not permitted in this area anyway because it overlaps with the 'Windsock' area closed under the Cod Recovery Plan.		

2.2.3.6 Habitats – Northeast Arctic

Harmonisation: The scoring of habitat impacts in Barents Sea trawl fisheries has been problematic, with different CABs taking different approaches, as is clear from Table 2 above. (Out of 7, presumably similar, trawl fisheries currently certified (excluding this fishery), one has a condition on 2.4.1, two on 2.4.2 and two on 2.4.3, with four out of the seven having some condition on habitats and the other three none; out of three fisheries certified since November 2015 two have no habitat conditions and one has two – suggesting this discrepancy is not only a function of improvements over time.) A harmonisation process was facilitated by MSC in February 2016 (Appendix 6), and this is considered in the scoring of the habitat PIs.

Information update: The main source of information on benthic habitats and vulnerable benthic species (corals, sponges etc.) in the Barents Sea has always been the Norwegian MAREANO programme, which identifies many areas of vulnerable habitats in the Norwegian EEZ, although it does not extend as far as Svalbard (see description and maps in the MEP, 2010 and MEP, 2011a). It appears, however, as if more information on benthic habitats around

Svalbard is now available from Norwegian and Russian sources than at the time of the previous certification, and this information is excellently reviewed and summarised in Acoura (2016).

Figure 6 (from Lyubin et al., 2010; Anisimova et al., 2010 as cited in Acoura, 2016) shows the dominant macro-benthic taxa in the Barents Sea (the area not covered by MAREANO). (Note: only the Norwegian zone – approximately the left-hand third of the map – applies to this fishery.) From the perspective of taxa and habitat types which are vulnerable to trawling, of concern are sponge aggregations (habitats 2 and 3, red spots), crinoids (habitat 14, also red spots) and basket star aggregations (habitat 1, blue hatching). Other common macrobenthic species in the area include starfish and sea cucumbers and soft-sediment bivalves and worms, which are probably less vulnerable to trawling.

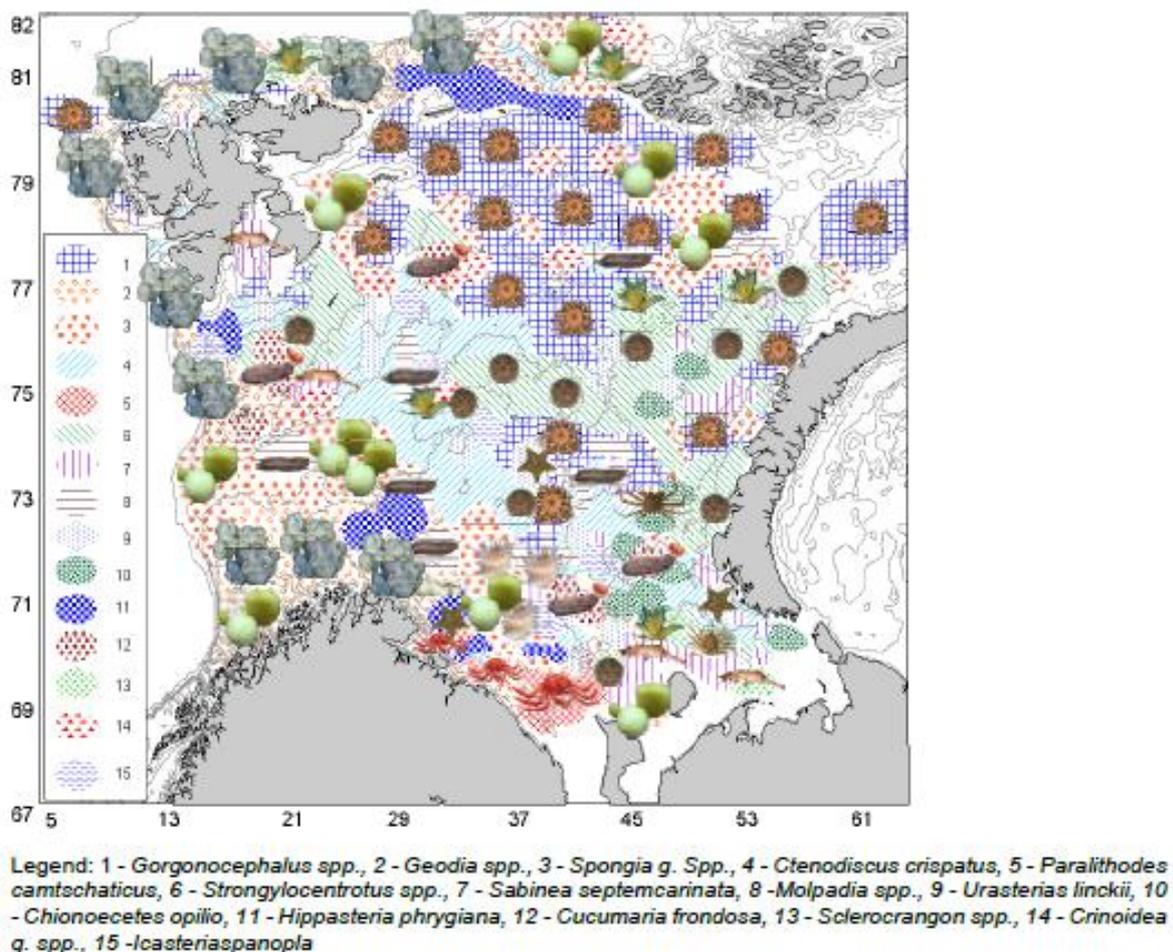


Figure 6. Dominant benthic habitats, as defined by the main macrozoobenthic taxa, in the Barents Sea area (Figure 3.4.7 in Acoura, 2016; from Lyubin et al., 2010; Anisimova et al., 2010, as cited in Acoura, 2016).

Protected areas have existed in Norwegian waters for a while, mainly to protect coral reefs (*Lophelia pertusa*). The Norwegian government has set a target in the Barents Sea-Lofoten integrated plan (as updated in 2011) of protecting 10% of coastal and marine areas by 2020, although it is not clear whether this will include the SFPZ. Four areas have recently been

designated in the Lofoten area, and it is reported that more will be designated in the coming years.

Ecosystem

No change. In Norway, some ecosystem management plans have been developed or revised – these are reviewed in detail under the relevant PIs.

2.2.4 Principle 3

There have been no general changes in the management system since certification, but two important measures should be mentioned.

The Long-Term Management Plan for saithe in the North Sea, that has been agreed between the EC and Norway and has been in force since 1999, was evaluated by ICES (ICES, 2012) and is considered to be consistent with the precautionary approach in the short term (< 4 years). It was reconsidered in February 2013, but no modification to the former plan (2008) was implemented.

From 1 January 2014 the new Common Fisheries Policy took effect (EC, 2013) 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. In order to reach these objectives the CFP has introduced a discard ban which should be implemented for all species by 2016.

2.3 Previous assessments

The UoAs were previously certified in two different assessments: Euronor saithe (MEP, 2010; <https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-east-atlantic/euronor-saithe/fishery-name>) and Scapêche and Cie. des Pêches St. Malo saithe (MEP, 2011a; <https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-east-atlantic/Scapeche-and-CoPSM-saithe/Scapeche-and-CoPSM-saithe>). The Euronor fishery was certified with no conditions; the conditions of the previous Scapêche and Cie des Pêches St Malo assessment are summarised in Table 19.

Table 19. Summary of Previous Assessment Conditions

Condition	PI	UoA	Year closed	Justification
Ensure that the bycatch of common skate (<i>Dipturus batis</i>) can be quantified and does not exceed limits of national or international requirements for protection of the species	2.3.1 2.3.3	Scapêche Cie des Pêches	Year 2	Scapêche: Presented observer data showing low overlap between common skate catch and saithe fishery Cie des Pêches: Presented self-sampling data (Ifremer programme) showing negligible elasmobranch bycatch
Ensure all regulations for the management of	2.3.2	Cie des Pêches	Year 2	Added information on relevant regulations to instructions to the captain

Condition	PI	UoA	Year closed	Justification
common skate bycatch are implemented				
Develop a partial strategy to avoid fishing in sensitive habitats	2.4.2	Cie des Pêches	Year 2	Developed partial strategy, using MAREANO to keep informed about location of sensitive habitats

2.4 Changes to the Reporting Template that require an update

Version 1.3 of the CR

Principle One: Target Species Background (Full Assessment Reporting Template (FA Template) v.1.3, Section 3.1)

Saithe is not a key LTL species.

Principle Three: Management System Background (FA Template v.1.3, Section 3.5)

UoA1, UoA3, UoA 5: The stock and management system are shared stocks – EU and Norway.

UoA2 and UoA4: The stock and management system are shared stocks - Norway and Russia

3. Evaluation Procedure

3.1 Assessment Methodologies

The fishery was reassessed under the Default Assessment Tree of the MSC Certification Requirements (CR) version 1.3 (Annex CB). Procedurally, however the Fisheries Certification Requirements (FCR) v2.0 was followed.

This report is produced using the MSC reduced re-assessment reporting template version 1.0.

No changes have been made to the default assessment tree.

3.2 Evaluation Processes & Techniques

3.2.1 Site Visits

The site visit for the fishery was held on August 19-20, 2015, in St. Malo, France, with Jo Gascoigne and Ulf Löwenberg. The Grande Hermine was visited, and the following people were met:

- Maëla Gidouin. Romain Fageot (Scapêche)
- Martine Edouard-Leborgne (Cie. des Pêches St. Malo)
- Bruno Leduc (Euronor)
- Pascal Verdière (Captain, Grande Hermine)

3.2.2 Consultations

As well as the individuals met during the site visit, the individuals listed in Appendix 7 were contacted by email.

The information received has been summarised in the above review of changes to the fishery.

3.2.3 Evaluation Techniques

a) Media announcements

The fishery's re-assessment was announced on the MSC website on the 7th July 2015. The MSC press release targeted a wide range of stakeholders within the sustainable seafood industry. As it is not a process requirement under version 2.0, the fishery was not announced in another media post.

b) Methodology for information gathering

Information for the assessment was gathered during the site visit and through separate consultation and correspondence with individual stakeholders. Sources for information and data are explained in the main text of the report. Scientific information was mostly available on the ICES website.

c) Scoring

Scoring was completed on a Skype call with all members of the team on the 11th February 2016. Each PI was reviewed collectively and a group consensus determined.

The scores were decided as follows:

How many scoring issues met?	SG60	SG80	SG100
All	60	80	100
Half	FAIL	70	90
Less than half, most not met	FAIL	65	85
More than half, many or most	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.

In Principle 2, scoring was completed by scoring element (see Table 21); for minor retained and bycatch species an all or nothing approach was adopted. I.e. the SG100 level was only considered to be met if all minor retained or bycatch species met SG100 for the given UoA.

d) Decision rules for final outcome

A UoA cannot be certified if:

- the weighted average score for all PIs under each Principle is less than 80 for any of the three Principles
- any individual scoring issue is not met at the SG60 level, contributing to a score of less than 60 on any PI.

The aggregate score for each Principle is calculated by taking the average score for each Component (e.g. 1.1 – Principle 1 Outcome), followed by the average of all the Component scores (see Section 5.2).

The following scoring elements were considered in the assessment:

Table 20. Scoring elements Principle 1

UoA		Scoring elements	Main/not main	Data-deficient or not
UoA 1	Euronor North Sea / West of Scotland	North Sea and West of Scotland saithe	n/a	no
UoA 3	Cie des Pêches North Sea / West of Scotland			
UoA 5	Scapêche North Sea / West of Scotland			

UoA 2	Euronor Northeast Arctic	Northeast Arctic saithe	n/a	no
UoA 4	Cie des Pêches Northeast Arctic			

Table 21. Scoring elements Principle 2

Component	UoA	Scoring elements	Main/not main	Data-deficient or not
Retained species P2	Euronor (UoA 1 and 2)	Hake, Greenland halibut, Northeast Arctic cod	Main	No
		Minor species – see Table 5	Not main	No
	Cie des Pêches (UoA 3 and 4)	Hake, Northeast Arctic cod	main	no
		Minor species – see Table 6	Not main	No
	Scapêche (UoA 5)	Hake, ling, monkfish	main	no
		Minor species – see Table 8	not main	no
Bycatch species P2	Euronor (UoA 1 and 2)	Minor species – see Table 9	not main	no
	Cie des Pêches (UoA 3 and 4)	None	N/a	n/a
	Scapêche (UoA 5)	Minor species – see Table 10	not main	no
ETP species P2	Euronor (UoA 1 and 2)	Starry ray, common skate	n/a	no
	Cie des Pêches (UoA 3 and 4)	None	n/a	N/a
	Scapêche (UoA 5)	Common skate	n/a	no
Habitats	North Sea / West of Scotland (UoA 1, 3 and 5)	Cold-water corals, carbonate mounds, burrowed mud, <i>Arctica</i> aggregations	n/a	no
	Northeast Arctic (UoA 2 and 4)	Cold water corals, sponge beds and sea pens / coral gardens	n/a	no

The Risk-Based Framework (RBF) was not used.

4. Traceability

4.1 Eligibility Date

The actual eligibility date for this fishery has been set as the date of certification (in line with the proposed target eligibility date).

4.2 Traceability within the fishery

All fishing vessels involved in this fishery are required to complete an electronic logbook of all catches made during fishing activities. The vessels are also directly tracked through the use of a Vessel Monitoring System (VMS). The fishery is also enforced through the relevant jurisdictions' fishery Monitoring Control and Surveillance systems and authorities. The risk of Illegal, Unregulated and Unreported (IUU) fishing within this fishery is considered relatively low. The European Commissions 'Buyers and Sellers' Act requires that all transactions at the first point of sale are fully recorded, allowing immediate traceability between the fishery and the first point of the chain of custody whilst the logbook provides a record of the time, location and nature (species and volumes) of the catch. This system and the management relating to the fishery are considered to be robust and well maintained.

4.2.1 Euronor

Euronor lands both fresh and frozen saithe and traceability is discussed separately for each scenario:

Fresh saithe: as soon as the saithe come on board, the fish are gutted and put into boxes with ice. The boxes are sealed and only contain one species. Each Euronor vessel is equipped with a labelling machine which is used to label the fish boxes as they are filled and stored in the hold of the vessel. The machine produces a label which indicates species, date of capture, vessel, FAO area, ICES subarea, division and statistical rectangle, weight, size and quality. The labels are designed so that each box of fish landed can be connected back to a specific entry in the vessel's logbook – this is a requirement so that logbook data can be cross-checked against landings and sales data.

Landing takes place in Peterhead, Hanstholm and to a lesser extent Boulogne-sur-Mer:

- In Peterhead, the fish are most often loaded onto a truck and transported to Boulogne-sur-Mer where they are sold at auction. Subject to the *Arrêté du 18 mars 2015 relatif aux obligations déclaratives en matière de pêche maritime*, strict traceability requirements are in place during transport and the product is accompanied by a copy of the logbook, landing declaration and transport document. On rare occasions the fish are sold to customers directly in Peterhead (not through auction). On those occasions, Euronor produces the sales invoice which clearly marks the product as MSC.
- In Hanstholm, the fish are sold through auction. Note that the sale is usually pre-agreed and the product goes straight to the customer after landing. The auction

therefore doesn't physically intervene although it does facilitate the sale. The Hansthalm auction is responsible for the issuing of invoices which also mark the product as MSC.

- In Boulogne-sur-Mer, all fresh saithe is sold through the auction. As in Hansthalm, however, the sale is usually pre-agreed and facilitated by the auction. Product therefore goes straight from the truck or vessel to the customer. In Boulogne-sur-Mer, the company SOFETRA is responsible for issuing invoices when product is sold through the auction, also marking the product as MSC.

Euronor frozen saithe: All frozen saithe is packed into master cartons (vessel's name included on carton) and sealed before freezing. Each master carton requires the completion of a number of tick boxes on its outside by the crew on packing. These tick boxes include the date of capture, the species, the area of catch, the processing completed and the size of the fillets. The daily processing is recorded centrally by Euronor and upon disembarkation of the product at Boulogne-sur-mer the quantity of product is cross-checked against the record taken at sea to confirm accuracy is being maintained. Once landed, all frozen saithe is sold through the company Euronor Distribution, based in Boulogne-sur-Mer, which has separate Chain of Custody certification.

4.2.2 Compagnie des Pêches St. Malo

The 'Grande Hermine' is the only vessel operated by the Cie des Pêches that is covered under this unit of Certification. After hauling, the fish are placed in containers by species after which processing takes place. For saithe, processing consists of filleting the fish which are then frozen and either put into small 1kg tamper-proof consumer-facing boxes which bear the MSC eco-label (see Figure 7), or in larger sealed cartons. The larger cartons are not marked as 'MSC'; however they do bear a label displaying the species, date of capture, batch number (numero de lot) and client (as clients are identified before the fish are actually caught). No auctions are involved in the sale of the fish. The 1st point of sale is Compagnie Des Pêches Distribution which is separately CoC certified (MSC-C-54514) and which sells the fish on to the respective clients. The saithe is landed at Hammerfest, and to a lesser extent Cuxhaven or Bremerhaven, after which it is transported directly to St Malo by trucks. Upon arrival in St Malo the boxes are temporarily stored by Compagnie Des Pêches Distribution until they can be picked up by the buyers.



Figure 7. Image of 1kg tamper proof packaging for frozen saithe aboard the Grande Harmine. Image provided by client.

4.2.3 Scapêche

Scapêche operate eight vessels which are covered by the unit of certification for this assessment. After hauling, the fish are gutted and kept on ice without further processing. On the Jean-Claude Coulon II, Mariette Le Roch II and Julien Coléou the saithe is put into sealed boxes (*caisses de bord*) which only contain one species at a time and are clearly identified by labels including the following information: species, vessel name and batch number (*numero de lot*). The batch number is the unique identifier that enables the box to be traced back to a given haul. For the other vessels, all fish are put into containers after processing – so one container (*bin*) can contain multiple species. However, as the processing only involves gutting, the fish remain clearly identifiable. Saithe are also morphologically very distinct from the other species landed and substitution would therefore be highly unlikely. Although the bins have no labels themselves, after landing in Lochinver, Killybegs or Castletownbere, they are transported to Lorient and are accompanied by a summary information sheet (*fiche de synthèse*) which includes details such as the number of containers, number and species of fish, date and port of landing and vessel name, as well a transport document which repeats the logbook information (Subject to the *Arrêté du 18 mars 2015 relatif aux obligations déclaratives en matière de pêche maritime*, strict traceability requirements are in place during transport). The bins can therefore always be traced back to a given trip with its associated logbook and VMS data (note that for Scapêche a trip is either fully MSC, i.e. within the UoA area, or not MSC – this is discussed further on). Upon arrival in Lorient, the fish are sorted,

graded and put into boxes (caisses) at the auction for sale. At the auction, the boxes do have labels which include the vessel name, date of catch, ICES fishing area and species. The sale of the MSC saithe at 1st point of sale is facilitated by the Lorient auction who also produces the invoices which clearly indicate the product is MSC.

The Scapeche vessels also fish for two saithe stocks which are excluded from this assessment: stocks in ICES Subareas Vb and VII. This means that the Scapêche vessels may have both MSC and non-MSC saithe on-board the vessels at the same time. This was already the case in the first certification cycle and in response to this concern the client has put in place a system by which whenever a boat fishes within uncertified waters, at any point in the trip, the total landings of saithe from that trip will not be MSC. This is confirmable through the declaration of landings (logbook), the VMS and the note of sale filled out by the buyer or processor and will be verified during surveillance audits. It is therefore concluded that Scapêche vessels carrying only MSC certified product will be eligible to enter into further chains of custody as long as the system highlighted above remains in place.

Table 22. Traceability Factors within the Fishery

Traceability Factor	Description of risk factor if present. Where applicable, a description of relevant mitigation measures or traceability systems (this can include the role of existing regulatory or fishery management controls)
Potential for non-certified gear/s to be used within the fishery	The Units of Assessment (UoAs) for this fishery included all gears used by the vessels under assessment. The risk of a non-certified gear being used is therefore extremely low.
Potential for vessels from the UoC to fish outside the UoC or in different geographical areas (on the same trips or different trips)	<p>Euronor and Cie des Peches vessels currently only fish for saithe in the UoC. Should they decide to fish for saithe outside the UoC, MEC will be notified and the onboard traceability and segregation systems will be reviewed.</p> <p>The Scapeche vessels also fish for two saithe stocks which are excluded from this assessment: stocks in ICES Subareas Vb and VII. This means that the Scapêche vessels may have both MSC and non-MSC saithe on-board the vessels at the same time. This was already the case in the first certification cycle and in response to this concern the client has put in place a system by which whenever a boat fishes within uncertified waters, at any point in the trip, the total landings of saithe from that trip will not be MSC. This is confirmable through the declaration of landings (logbook), the VMS and the note of sale filled out by the buyer or processor and will be verified during surveillance audits. It is therefore concluded that Scapêche vessels carrying only MSC certified product will be eligible to enter into further chains of custody as long as the system highlighted above remains in place.</p>
Potential for vessels outside of the UoC or client group fishing the same stock	Vessels from outside the UoC are likely to fish for the same stock but will not be covered by this assessment. To avoid the risk of vessels landing saithe from outside the UoC as MSC (i.e. vessels not associated with this assessment) an up to date list of vessels is provided in this report and will be made available online at re-certification (pending the successful outcome of this evaluation). This list can then be used by companies with MSC CoC to ensure product is originating from a vessel covered by this assessment.
Risks of mixing between certified and non-certified catch during storage, transport, or handling activities (including transport at sea	All vessels maintain catch separately by species in sealed containers or boxes. The risk of mixing on-board the vessels during storage or handling is seen as low. After landing the boxes either go straight onto trucks for transportation to Boulogne-sur-Mer, Lorient or St Malo or are passed directly on to

Traceability Factor	Description of risk factor if present. Where applicable, a description of relevant mitigation measures or traceability systems (this can include the role of existing regulatory or fishery management controls)
and on land, points of landing, and sales at auction)	customers (after pre-agreed sale facilitated or not by the auctions of Hanstholm or Boulogne-sur-Mer). The risk of substitution during landing, transport or sale is considered as very low.
Risks of mixing between certified and non-certified catch during processing activities (at-sea and/or before subsequent Chain of Custody)	Either only basic processing (gutting) is completed on board the vessel and all fish is landed 'whole', in which case the risk of mixing between certified and non-certified product during processing is seen to be low, or the processing is more complex (e.g. aboard the Grande Hermine) but fish are placed into containers by species after hauling and before processing which minimises the risk of substitution.
Risks of mixing between certified and non-certified catch during transshipment	No transshipment occurs within this fishery and so the risk is seen as minimal.
Any other risks of substitution between fish from the UoC (certified catch) and fish from outside this unit (non-certified catch) before subsequent Chain of Custody is required	No other risks have been identified. Product is landed directly and chain of custody will be required from the first point of sale. When product is sold in the auction it is sold by vessel and by species (and is backed up by logbook data) and often product is actually sold before it is landed. Risk of mixing of certified and non-certified product here is therefore minimal.

4.3 Eligibility to Enter Further Chains of Custody

Based on the above information, the assessment team considered the traceability management systems operated by the vessels, the client group, and the organisations involved in the MCS in this fishery to be sufficiently robust to meet the MSC fisheries traceability requirements up to the first point of sale.

Product landed by vessels shown in

Table 23 to Table 25 and originating from the UoAs as described in Section 2.1.2 shall be eligible to enter into further chains of custody. Further chain of custody will be required for certified product at the first point of sale. The company SOFETRA, involved in the invoicing of MSC saithe at first sale in Boulogne-sur-Mer, as well as the auctions at Hanstholm and Boulogne-sur-Mer, are all eligible to sell MSC saithe caught by this fishery as MSC certified. The specifics of those eligible parties of the auctions responsible for the invoicing of products are listed below:

BOULOGNE Auction:

Organisation : Société d'Exploitation des Ports du Déroit – Halle à marée - quai Jean Voisin 62200 Boulogne sur Mer

Facturation : SOFETRA - 16 rue du Commandant Charcot – 62200 Boulogne sur Mer

HANSTHOLM Auction

Organisation and invoicing: Hanstholm Fiskeauktion - Auktionsgade 11, 7730 Hanstholm, Denmark.

LORIENT Auction

Organisation and invoicing: La Criée – Lorient, avenue de la Perrière, 56100 Lorient

Product is eligible for landing at the following ports:

- Peterhead
- Hanstholm
- Boulogne-sur-Mer
- Hammerfest
- Lochinver
- Killybegs
- Castletownbere

Table 23. Euronor vessels participating in the saithe fishery.

Vessel	Type
Cap Nord	Freezer
Klondyke	Freezer
Nordic II	Freezer
Bressay Bank	Fresh
Halten Bank	Fresh
Andre Leduc	Fresh
Cap Saint Georges	Fresh

Table 24. Cie des Peches St Malo vessel participating in the saithe fishery.

Vessel	Type
Grande Hermine	Freezer

Table 25. Scapeche vessels participating in the saithe fishery.

Vessel	Type
Mariette Le Roch II	Fresh
Jean-Claude Coulon II	Fresh
Jean-Pierre Le Roch	Fresh
Roselend	Fresh
Corail	Fresh
Julien Coléou	Fresh
Rossoren	Fresh
Fastnet	Fresh

4.4 Eligibility of Inseparable or Practicably Inseparable (IPI) stock(s) to Enter Further Chains of Custody

Not applicable for this fishery.

5. Evaluation Results

5.1 Principle Level Scores

Table 26. Final Principle Scores

Principle	Euronor		Cie de Pêches		Scapêche
	UoA 1 (North Sea / West of Scotland)	UoA 2 (Northeast Arctic)	UoA 3 (North Sea / West of Scotland)	UoA 4 (Northeast Arctic)	UoA 5 (North Sea / West of Scotland)
Principle 1 – Target Species	89.4	91.9	89.4	91.9	89.4
Principle 2 – Ecosystem	82.0	85.0	81.3	85.0	81.7
Principle 3 – Management System	90.0	93.0	90.0	93.0	90.0

5.2 Summary of Scores

Principle	Component	Weighting	PI number	Performance Indicator	Score				
					UoA 1 (Euronor North Sea / West of Scotland)	UoA 2 (Euronor Northeast Arctic)	UoA 3 (Cie des Pêches North Sea / West of Scotland)	UoA 4 (Cie des Pêches Northeast Arctic)	UoA 5 (Scapêche North Sea / West of Scotland)
1	Outcome	0.5	1.1.1	Stock status	80	100	80	100	80
			1.1.2	Reference points	90	80	90	80	90
			1.1.3	Stock rebuilding	-	-	-	-	-
	Management	0.5	1.2.1	Harvest Strategy	100	100	100	100	100
			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	85	85	85	85	85
			2.1.2	Management	85	85	85	85	85
			2.1.3	Information	85	85	85	85	85
	Bycatch species	0.2	2.2.1	Outcome	80	80	80	80	80
			2.2.2	Management	80	85	80	85	80
			2.2.3	Information	80	80	80	80	80
	ETP species	0.2	2.3.1	Outcome	75	85	65	85	75
			2.3.2	Management	75	85	75	85	75
			2.3.3	Information	80	80	80	80	75

Principle	Component	Weighting	PI number	Performance Indicator	Score				
					UoA 1 (Euronor North Sea / West of Scotland)	UoA 2 (Euronor Northeast Arctic)	UoA 3 (Cie des Pêches North Sea / West of Scotland)	UoA 4 (Cie des Pêches Northeast Arctic)	UoA 5 (Scapêche North Sea / West of Scotland)
	Habitats	0.2	2.4.1	Outcome	80	80	80	80	80
			2.4.2	Management	80	80	80	80	80
			2.4.3	Information	80	80	80	80	80
	Ecosystem	0.2	2.5.1	Outcome	90	90	90	90	90
			2.5.2	Management	85	100	85	100	85
			2.5.3	Information	90	95	90	95	90
3	Governance and Policy	0.5	3.1.1	Legal and customary framework	95	95	95	95	95
			3.1.2	Consultation, roles and responsibilities	95	95	95	95	95
			3.1.3	Long term objectives	100	100	100	100	100
			3.1.4	Incentives for sustainability	90	90	90	90	90
	Fishery- specific management system	0.5	3.2.1	Fishery specific objectives	90	90	90	90	90
			3.2.2	Decision making processes	85	85	85	85	85
			3.2.3	Compliance and enforcement	80	100	80	100	80
			3.2.4	Research plan	80	80	80	80	80
			3.2.5	Management performance evaluation	90	100	90	100	90

5.3 Summary of Conditions

Table 27. Summary of Conditions

Condition number	Condition	Performance Indicator	Related to previously raised condition? (Y/N/ NA)
1	<p><u>UoA 1</u>: Euronor should show by the end of Year 5 that direct effects of their fishery are highly unlikely to create unacceptable impacts to starry ray in the North Sea.</p> <p><u>UoA 3</u>: Cie des Pêches St. Malo should show by the end of Year 5 that direct effects of their fishery are highly unlikely to create unacceptable impacts to starry ray in the North Sea. The effects of the fishery should be shown to be highly likely to be within limits of national and international requirements for protection of starry ray in the North Sea.</p> <p><u>UoA 5</u>: Scapêche should show by the end of Year 5 that the direct effects of their fishery are highly unlikely to create unacceptable impacts to common skate in Subarea VI.</p>	2.3.1	UoA 1 – N UoA 3 – N UoA 5 – Y*
2	<p><u>UoA 1 and 3</u>: In relation to Euronor and Cie des Pêches St Malo, the fishery needs to show by the end of Year 5 that there is an objective basis for confidence that the strategy to protect starry ray in the North Sea will work, based on information directly about the fishery and/or the species involved.</p> <p><u>UoA 5</u>: For Scapêche, the fishery needs to show by the end of Year 5 that there is an objective basis for confidence that the strategy to protect common skate in Subarea VI will work, based on information directly about the fishery and/or the species involved.</p>	2.3.2	UoA 1 – N UoA 3 – N UoA 5 – Y*
3	By the end of Year 5, Scapêche (UoA 5) should show that information on common skate in Subarea VI is sufficient to determine whether the Scapêche saithe fishery may be a threat to protection and recovery of the species.	2.3.3	UoA 5 – Y*

In the previous certification cycle, Scapêche had a condition on this issue which was closed after close inspection of observer reports. Nevertheless, the team felt that it is not possible on the basis of the data provided for this re-assessment to say that direct impacts of Scapêche's saithe fishery are 'highly unlikely' to create unacceptable impacts on common skate as is required for SG80. The team noted that this scoring is harmonised with a similar approach for other MSC fisheries: SFSAG haddock and saithe fishery, Germany North Sea saithe trawl and SFPO North Sea saithe.

5.4 Recommendations

No recommendations are proposed.

5.5 Determination, Formal Conclusion and Agreement

Following consideration of all stakeholders' inputs and comments to the Public Comment Draft Report (PCDR), the fishery assessment team concluded that the fishery should be recertified against the MSC standard. No objections were received during the Final Report (FR) formal objection period.

The MEC Certification Decision Making entity was informed of the intention to certify the fishery on the 21st September 2016. The final certification decision was also made on the 21st September 2016 with the Certification Decision Maker approving the decision to certify the 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 – North Sea and West of Scotland saithe – UoA 1 (Euronor), UoA 3 (Cie des Pêches), UoA 5 (Scapêche)

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	It is likely that the stock is above the point where recruitment would be impaired.	It is highly likely that the stock is above the point where recruitment would be impaired.	There is a high degree of certainty that the stock is above the point where recruitment would be impaired.
	Met?	Y	Y	N
	Justification	For the North Sea saithe stock, the estimated stock spawning biomass (SSB) in 2014, with 2014 landings of 68 318 t (in agreement with the management plan and the ICES advice), is 217 654 t. Since 1997, the estimated SSB has been always above B_{lim} (106000 t) and above B_{pa} (200 000 t), except in 2012 and 2013, when it was slightly below the precautionary biomass reference point. SSB is currently above (and fluctuating around over recent years) MSY Btrigger. Whilst MSY Btrigger represents the lower limit of the likely range of B_{msy} , it is noted in the latest MSC (v2.0) guidance that “in ICES assessments, fisheries with $B > B_{trigger}$ may be regarded as fluctuating around B_{msy} (thereby achieving an 80 score)”. While SSB has fallen slightly below MSY Btrigger in some recent years, fishing is in accordance with the Management Plan and F is below F_{msy}/F_{pa} . Thus, it is highly likely that the stock is above the point where recruitment would be impaired and SG80 is met. However, as uncertainty is not estimated in the assessment, it is not possible to evaluate with a high degree of certainty whether the stock is above the point where recruitment would be impaired and thus the full SG 100 is not met.		
b	Guidepost		The stock is at or fluctuating around its target reference point.	There is a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years.
	Met?		Y	N

	Justification	In the latest years, the estimated SSB has been above or fluctuating around MSY $B_{trigger}$ and F_{MSY} as well as SSB_{MGT} and F_{MGT} . F has been below F_{pa} since 1995 and under F_{MSY} since 2010 and SG80 is met. However, as uncertainty is not estimated in the assessment, it is not possible to evaluate with a high degree of certainty whether the stock has been fluctuating around its target reference point, or it has been above its target reference point, over recent years and thus the SG 100 is not met.		
References	ICES 2015a. Saithe in Subarea IV (North Sea), Division IIIa (Skagerrak), and Subarea VI (West of Scotland and Rockall). Book 6. ICES Advice, 2015. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2015/2015/sai-3a46.pdf ICES. 2015c. Report of the Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSK), 28 April–7 May 2015. ICES CM 2015/ACOM:13. http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2015/WGNSK/01%20WGNSK%20report%20015.pdf			
Stock Status relative to Reference Points				
	Type of reference point	Value of reference point	Current stock status relative to reference point	
Target reference point	MSY $B_{trigger}$ F_{MGT} F_{MSY}	200 000 tonnes spawning stock biomass 0.30 0.32	1.088 1.026 0.962	
Limit reference point	B_{lim}	106 000 tonnes spawning stock biomass	2.053	
OVERALL PERFORMANCE INDICATOR SCORE:			80	
CONDITION NUMBER (if relevant):			N/A	

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	Guided post	Generic limit and target reference points are based on justifiable and reasonable practice appropriate for the species category.	Reference points are appropriate for the stock and can be estimated.	
	Met?	Y	Y	
	Justification	<p>F_{MSY} (0.32) was estimated by stochastic simulations carried out with Eqsim software using a hockey-stick stock–recruitment relationship and taking into account several sources of uncertainty. F_{MGT} is set at (0.30), thus slightly lower than F_{MSY}. B_{lim} was set as $B_{loss} = 106,000$ t (estimated in 1998), which is likely to be an overestimation of the true level of SSB at which there is an appreciable risk of impairing reproductive capacity given the current shape of the stock-recruitment relationship. B_{pa} was estimated as the stock spawning biomass that affords a high probability of maintaining SSB above B_{lim} ($B_{pa} = MSY B_{trigger} = SSB_{MGT}$), with more than 95% probability. B_{pa} is around two times B_{lim}, which is also rather conservative as B_{pa} are generally set by ICES standards at an SSB, which is around 40-60% larger than B_{lim}. ICES considers that the estimated reference points are in accordance with both the precautionary approach and the MSY framework. The team considered that the reference points are appropriate and are estimated with the most up to date simulation framework and thus the SG 80 is met.</p>		
b	Guided post		The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.	The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity following consideration of precautionary issues.
	Met?		Y	Y
	Justification	<p>B_{lim} was set as $B_{loss} = 106,000$ t (estimated in 1998), and B_{pa} ($B_{pa} = MSY B_{trigger} = SSB_{MGT}$) was estimated as the stock spawning biomass that affords a high probability of maintaining SSB above B_{lim}, with more than 95% probability. B_{lim} is likely to be an overestimation of the true level of SSB at which there is an appreciable risk of impairing reproductive capacity given the current shape of the stock-recruitment relationship. B_{pa} is around two times B_{lim}, which is also rather conservative as B_{pa} are generally set by ICES standards at an SSB, which is around 40-60% larger than B_{lim}. Thus, the limit reference point is consistent with maintaining high stock productivity as well as reducing risk of impairing reproductive capacity and thus the SG 100 is met.</p>		

c	Guided post		The target reference point is such that the stock is maintained at a level consistent with B_{MSY} or some measure or surrogate with similar intent or outcome.	The target reference point is such that the stock is maintained at a level consistent with B_{MSY} or some measure or surrogate with similar intent or outcome, or a higher level, and takes into account relevant precautionary issues such as the ecological role of the stock with a high degree of certainty.
	Met?		Y	N
	Justification	<p>According to ICES simulations using $B_{trigger} = SSB_{MGT}$, F values up to 0.48 meet the criterion of a >95% probability to stay above B_{lim} even under a pessimistic assumption for future recruitment, hence $MSY_{trigger}$ meets the requirements of a precautionary reference point. It is also within the range of the B_{MSY} values estimated by ICES (lower range of the B_{MSY} estimates is around 200 000 t). F_{MSY} is directly estimated by simulations and used a target reference point together with F_{MGT}, which is slightly lower than F_{MSY} and thus the SG 80 is met. In relation to SG100, the team noted that the estimated median SSB at F_{MSY} (a proxy for B_{MSY}) is around 250 000 t, which is larger $MSY_{trigger}$. In addition, the ecological role of the stock is not taken into account in the ICES simulations and thus the SG 100 is not met.</p>		
d	Guided post		For key low trophic level stocks, the target reference point takes into account the ecological role of the stock.	
	Met?		Not relevant	
	Justification	Saithe is not a low trophic level species and therefore this scoring issue is not relevant.		
References		<p>ICES 2015a. Saithe in Subarea IV (North Sea), Division IIIa (Skagerrak), and Subarea VI (West of Scotland and Rockall). Book 6. ICES Advice, 2015. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2015/2015/sai-3a46.pdf</p> <p>ICES. 2015c. Report of the Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK), 28 April–7 May 2015. ICES CM 2015/ACOM:13. http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2015/WGNSSK/01%20WGNSSK%20report%202015.pdf</p> <p>ICES. 2014a. Report of the Joint ICES–MYFISH Workshop to consider the basis for FMSY ranges for all stocks (WKMSYREF3), 17–21 November 2014, Charlottenlund, Denmark. ICES CM 2014/ACOM:64. 147 pp.</p>		

OVERALL PERFORMANCE INDICATOR SCORE:	90
CONDITION NUMBER (if relevant):	N/A

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	Guidepost	The harvest strategy is expected to achieve stock management objectives reflected in the target and limit reference points.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points.	The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points.
	Met?	Y	Y	Y
	Justification	<p>MSC defines a harvest strategy as ‘the combination of monitoring, stock assessment, harvest control rules and management actions, which may include an MP or an MP (implicit) and be tested by MSE’ (MSC CR v1.3).</p> <p>The elements for a good responsive harvest strategy (objectives associated with reference points, monitoring through stock assessment based on data from the fishery, management decisions based upon a HCR and implementation of measures to control fishing mortality) are present. Since 2008, TACs have been set based on the scientific advice from ICES and that landings are controlled so that TACs are not over-run.</p> <p>In 2013, EU and Norway renewed the existing agreement on ‘a long-term plan for the saithe stock in the Skagerrak, the North Sea and west of Scotland’. ICES considered the plan to be consistent with a precautionary approach and the MSY framework. The harvest strategy of the current management plan contains well-defined harvest control rules with the aim to maintain a minimum level of Spawning Stock Biomass (SSB) greater than B_{lim} and to reduce the fishing mortality when the SSB is below B_{pa}. Where the SSB is estimated by ICES to be below B_{lim}, the TAC should be set at a level corresponding to a fishing mortality rate of no more than 0.1. The TAC is set to be no more than 15 % greater or 15 % less than the TAC of the preceding year.</p> <p>The team considers that the harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points and thus the SG 100 is met.</p>		
b	Guidepost	The harvest strategy is likely to work based on prior experience or plausible argument.	The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives.	The performance of the harvest strategy has been fully evaluated and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.
	Met?	Y	Y	Y

	Justification	ICES has evaluated the current management plan and considered it in accordance with the precautionary approach and the MSY framework and thus evidence exists to show that the harvest strategy is achieving its objectives including being clearly able to maintain stocks at target levels. However, because the long-term performance was not clear, ICES advised that the harvest strategy should be re-evaluated within four years (i.e. no later than 2016) and revised if necessary. Moreover, the effects of inter-annual quota flexibility in the management strategy for saithe were evaluated (ICES, 2013). ICES concluded that the management strategy is robust to the inclusion of an inter-annual quota flexibility in terms of the probability of the stock biomass falling below B_{lim} . This conclusion is however conditional on the inter-annual quota flexibility being suspended when the stock is estimated to be outside safe biological limits. The team considers that the harvest strategy has been fully evaluated and is able to maintain stocks at target levels and thus the SG 100 is met.		
c	Guidepost	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	Y		
	Justification	Data necessary for stock assessment, including effort by fleet, catches, biological data and fisheries-independent stock information, are yearly collected according to EU DCF and the Norwegian sampling scheme. ICES carries out yearly an assessment of the saithe stock in the Skagerrak, the North Sea and west of Scotland. Thus, the team considers that the monitoring currently in place is expected to determine whether the harvest strategy is working and thus the SG 60 is met.		
d	Guidepost			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			Y
	Justification	The current harvest strategy has been reviewed by ICES in 2013. ICES advised that the harvest strategy should be re-evaluated within four years (i.e. no later than 2016) and revised if necessary and thus, the SG 100 is met		
e	Guidepost	It is likely that shark finning is not taking place.	It is highly likely that shark finning is not taking place.	There is a high degree of certainty that shark finning is not taking place.
	Met?	Not relevant	Not relevant	Not relevant
	Justification	Sharks are not a target species of this fishery and regardless shark finning is prohibited by EU law under Regulation (EU) No 605/2013.		

<p>References</p>	<p>ICES 2015a. Saithe in Subarea IV (North Sea), Division IIIa (Skagerrak), and Subarea VI (West of Scotland and Rockall). Book 6. ICES Advice, 2015. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2015/2015/sai-3a46.pdf</p> <p>ICES. 2015c. Report of the Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNS SK), 28 April–7 May 2015. ICES CM 2015/ACOM:13. http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2015/WGNS SK/01%20WGNS SK%20report%202015.pdf</p> <p>ICES. 2014a. Report of the Joint ICES–MYFISH Workshop to consider the basis for FMSY ranges for all stocks (WKMSYREF3), 17–21 November 2014, Charlottenlund, Denmark. ICES CM 2014/ACOM:64. 147 pp.</p> <p>EC, 2008. Commission Regulation (EC) No. 665/2008 of the 14 July 2008 establishes the Data Collection Framework (DCF), a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy (CFP). https://datacollection.jrc.ec.europa.eu/dcf-legislation</p> <p>EC, 2013a. Regulation (EU) No 605/2013 of the European Parliament and of the Council of 12 June 2013 amending Council Regulation (EC) No 1185/2003 on the removal of fins of sharks on board vessels</p> <p>ICES, 2014b. Report of the third Workshop on Practical Implementation of Statistical Sound Catch Sampling Programmes, 19-22 November 2013, ICES HQ, Copenhagen, Denmark. ICES CM2013/ACOM:54. 109 pp.</p>
<p>OVERALL PERFORMANCE INDICATOR SCORE:</p>	<p>100</p>
<p>CONDITION NUMBER (if relevant):</p>	<p>N/A</p>

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	Guide post	Generally understood harvest rules are in place that are consistent with the harvest strategy and which act to reduce the exploitation rate as limit reference points are approached.	Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.	
	Met?	Y	Y	
	Justification	The harvest strategy of the current management plan contains well-defined harvest control rules with the aim to maintain a minimum level of spawning stock biomass greater than B_{lim} and to reduce the fishing mortality from the target F_{MGT} level when the SSB is below B_{pa} . Where the SSB is estimated by the ICES to be below B_{lim} , the TAC should be set at a level corresponding to a fishing mortality rate of no more than 0.1. Thus, the team considers that well-defined harvest control rules are in place, which are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached. Thus, the SG 80 is met.		
b	Guide post		The selection of the harvest control rules takes into account the main uncertainties.	The design of the harvest control rules takes into account a wide range of uncertainties.
	Met?		Y	N
	Justification	ICES concluded that the management strategy is robust to inclusion of inter-annual quota flexibility in terms of the probability of the stock biomass falling below B_{lim} . and SG80 is met. This conclusion is however conditional on the inter-annual quota flexibility being suspended when the stock is estimated to be outside safe biological limits. Thus, a concern remains with the 15% TAC constraint. Also, it is important to note that even if uncertainties are built in the definition of the precautionary reference points (F_{pa} , B_{pa}) and the target reference points (F_{MSY} , F_{MGT}), it is not possible to conclude that the design of the harvest control rules take into account a wide range of uncertainties such as changes in environment or stock productivity. Some of those uncertainties are raised in the assessment but they are not formally incorporated in the design of the control harvest rules. Thus, SG 100 is not met.		
c	Guide post	There is some evidence that tools used to implement harvest control rules are appropriate and effective in controlling exploitation.	Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.	Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the harvest control rules.
	Met?	Y	Y	Y

	Justification	Since 2006, the TAC has been set in accordance with the ICES advice and the realized total catches have been always smaller than the advised total catches by ICES and the agreed TAC. SG80 is met. The team considers that evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the harvest control rules and thus the SG 100 is also met.
References	<p>ICES, 2015a. Saithe in Subarea IV (North Sea), Division IIIa (Skagerrak), and Subarea VI (West of Scotland and Rockall). Book 6. ICES Advice, 2015. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2015/2015/sai-3a46.pdf</p> <p>ICES, 2013a. EU request on interannual quota flexibility for saithe in the North Sea. In Report of the ICES Advisory Committee, 2013. ICES Advice 2013, Book 6, Section 6.3.5.4.</p> <p>EU-Norway management strategy for managing North Sea saithe. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2012/Special%20Requests/EUNorway%20North%20Sea%20Saithe%20MP.pdf</p>	
OVERALL PERFORMANCE INDICATOR SCORE:		90
CONDITION NUMBER (if relevant):		N/A

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	Guide post	Some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.	Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.	A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly related to the current harvest strategy, is available.
	Met?	Y	Y	Y
	Justification	Data necessary for stock assessment and to support the harvest strategy, which includes fleet composition, effort data by fleet, catches (landings and discards) by fleet, biological data and fisheries-independent stock information, are yearly collected according to EU DCF and by the Norwegian sampling scheme. SG80 is met on this basis. Other data such as environmental information are also available on the ICES website or through other fora, although these data are independent from the stock assessment, and the effect of the environment on stock productivity is not formally considered in the assessment. Nevertheless, the team considers that a comprehensive range of information is available and thus the SG 100 is met.		
b	Guide post	Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.	Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.	All information required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.
	Met?	Y	Y	N
	Justification	ICES collate stock assessment data and carries out yearly an assessment of the saithe stock in the Skagerrak, the North Sea and west of Scotland. Retrospective analysis show a rather robust assessment for both SSB and F, which implies that the stock spawning biomass and the harvest rate are monitored with sufficient frequency to support the harvest control rule. SG80 is met. However, recruitment is poorly estimated by the IBTS Q3 survey because fish of age 3 are poorly represented in the survey. Also, catches from older age classes in the surveys are not representative and commercial CPUE indices are used for tuning and are highly influential on assessment results. Therefore, the assessment is dependent on commercial CPUE indices, which may not fully reflect changes in stock size for a schooling species like saithe. Maturity-at-age and natural mortality are assumed to be constant, which might add uncertainty to the stock estimates		

		especially for maturity, as it is often time variant. Discard information 2012–2014 (which covers 90% of the landings) and are used to provide advice, but not included in the assessment. This implies that all information required by the harvest control rule is neither monitored with high frequency nor with a high degree of certainty and thus the SG 100 is not met.	
c	Guide post		There is good information on all other fishery removals from the stock.
	Met?		Y
	Justification	Catches (landings and discards) by fleet are yearly collected according to EU DCF and by the Norwegian sampling scheme and are considered by ICES to be of good quality to carry out an assessment of the stock. Discard information 2012–2014 (which covers 90% of the landings) and are used to provide advice, but not included in the assessment. The team considers that good information on all other fishery removals from the stock is available and thus the SG 100 is met.	
References	<p>ICES 2015a. Saithe in Subarea IV (North Sea), Division IIIa (Skagerrak), and Subarea VI (West of Scotland and Rockall). Book 6. ICES Advice, 2015. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2015/2015/sai-3a46.pdf</p> <p>ICES. 2015c. Report of the Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK), 28 April–7 May 2015. ICES CM 2015/ACOM:13. http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2015/WGNSSK/01%20WGNSSK%20report%202015.pdf</p> <p>EC, 2008. Commission Regulation (EC) No. 665/2008 of the 14 July 2008 establishes the Data Collection Framework (DCF), a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy (CFP). https://datacollection.jrc.ec.europa.eu/dcf-legislation</p> <p>ICES, 2014b. Report of the third Workshop on Practical Implementation of Statistical Sound Catch Sampling Programmes, 19-22 November 2013, ICES HQ, Copenhagen, Denmark. ICES CM2013/ACOM:54. 109 pp</p>		
OVERALL PERFORMANCE INDICATOR SCORE:		90	
CONDITION NUMBER (if relevant):		N/A	

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	Guide post		The assessment is appropriate for the stock and for the harvest control rule.	The assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery.
	Met?		Y	Y
	Justification	The model used for the assessment of North Sea saithe (i.e. XSA model) is considered appropriate and widely used by ICES for several stocks of gadoids. The most relevant data are included in the stock assessment (i.e. landings at age, weight at age, maturity at age, mortality at age, survey indices). SG80 is met. Discard information 2012–2014 (which covers 90% of the landings) is also used to provide advice, but not included in the assessment. Thus, the team considered that SG 100 is met.		
b	Guide post	The assessment estimates stock status relative to reference points.		
	Met?	Y		
	Justification	The assessments provide a comprehensive vision of the stock status in terms of spawning stock biomass, recruitment and fishing mortality. Moreover, stock status is related to the accepted reference points in an analytical way and the analyses appear robust and thus SG 60 is met.		
c	Guide post	The assessment identifies major sources of uncertainty.	The assessment takes uncertainty into account.	The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way.
	Met?	Y	Y	N

	Justification	ICES identify in the estimate of the most recent recruitment and in the lack of fishery-independent indices for older fish as the major sources of uncertainty in the assessment. Although the assessment does not take explicitly uncertainty into account (i.e. within the model) or uncertainty of the main stock parameters (SSB, F and recruitment) is not estimated, retrospective analysis has shown a rather robust assessment for both SSB and F. Moreover, during the benchmark meeting several sources of uncertainty in the data, in the model type and model configuration are evaluated. However, no probabilistic approaches, such as risk analyses, are used in the assessment. Thus, the team considered that all the criteria in SG 80 were met but not SG 100.	
d	Guide post		The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.
	Met?		Y
	Justification	The assessment of North Sea saithe is regularly benchmarked according to the ICES benchmark system, which implies that input data are rigorously reviewed and different assessment models are tested and explored. The North Sea saithe assessment was benchmarked last time in 2011 (ICES, 2011) and it has been considered by ICES as robust to provide advice. Thus, the team considered that the SG 100 criterion is met.	
e	Guide post	The assessment of stock status is subject to peer review.	The assessment has been internally and externally peer reviewed.
	Met?	Y	Y
	Justification	During the benchmark meeting held in 2011, the stock assessment of North Sea saithe was peer reviewed both internally (by ICES) and externally (by independent non-European reviewer). The reviewers concluded that the assessment model and the input data were adequate to provide an assessment of the North Sea saithe stock. The next benchmark is scheduled in February 2016. Thus, the team considered that the SG 100 criteria are met.	
References		<p>ICES, 2011a. Report of the Benchmark Workshop on Roundfish and Pelagic Stocks (WKBENCH 2011), 24–31 January 2011, Lisbon, Portugal. ICES CM 2011/ACOM:38.</p> <p>ICES 2015a. Saithe in Subarea IV (North Sea), Division IIIa (Skagerrak), and Subarea VI (West of Scotland and Rockall). Book 6. ICES Advice, 2015. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2015/2015/sai-3a46.pdf</p> <p>ICES. 2015c. Report of the Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK), 28 April–7 May 2015. ICES CM 2015/ACOM:13.</p>	

	http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2015/WGNSSK/01%20WGNSSK%20report%202015.pdf
OVERALL PERFORMANCE INDICATOR SCORE:	95
CONDITION NUMBER (if relevant):	N/A

Evaluation table 7 - PI 1.1.1 – Northeast Arctic saithe – UoA 2 (Euronor), UoA 4 (Cie des Pêches)

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	It is likely that the stock is above the point where recruitment would be impaired.	It is highly likely that the stock is above the point where recruitment would be impaired.	There is a high degree of certainty that the stock is above the point where recruitment would be impaired.
	Met?	Y	Y	Y
	Justification	For the Arctic saithe stock, the estimated stock spawning biomass (SSB) in 2014, with 2014 landings of 130, 408 t (in agreement with the management plan and the ICES advice), is 332 701 t. The estimated SSB has been well above B_{lim} (136 000 t) since 1994 and above B_{pa} and SSB_{MGT} (220 000 t) since 1996. SSB is currently above (and fluctuating around over recent years) MSY Btrigger. Whilst MSY Btrigger represents the lower limit of the likely range of B_{msy} , it is noted in the latest MSC (v2.0) guidance that “in ICES assessments, fisheries with $B > B_{trigger}$ may be regarded as fluctuating around B_{msy} (thereby achieving an 80 score)”. While SSB has fallen slightly below MSY Btrigger in some recent years, fishing is in accordance with the Management Plan and F is below F_{msy}/F_{pa} . F has been around or below F_{pa} and F_{MGT} since 1995. Thus, it is highly likely that the stock is above the point where recruitment would be impaired. SG80 is therefore met. Moreover, as uncertainty is explicitly estimated in the assessment, it is possible to evaluate with high degree of certainty that the stock is above the point where recruitment would be impaired and thus the SG 100 is met.		
b	Guide post		The stock is at or fluctuating around its target reference point.	There is a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years.
	Met?		Y	Y
	Justification	In recent years, the estimated SSB has been well above B_{pa} and SSB_{MGT} and F has been at or below F_{MGT} . SG80 is met on this basis. Moreover, as uncertainty is estimated in the assessment, it is possible to evaluate with 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 and thus the SG 100 is met.		
References		ICES, 2015b. Saithe in Subareas I and II (Northeast Arctic). Book 3. ICES Advice, 2015. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2015/2015/sai-arct.pdf		

	ICES, 2015d. Report of the Arctic Fisheries Working Group (AFWG), 23–29 April 2015, Hamburg, Germany. ICES CM 2015/ACOM:05. http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2015/AFWG/01%20AFWG%20Report%202015.pdf		
Stock Status relative to Reference Points			
	Type of reference point	Value of reference point	Current stock status relative to reference point
Target reference point	B _{pa} =SSB _{MGT} F _{MGT}	220 000 tonnes spawning stock biomass 0.32	1.512 0.893
Limit reference point	B _{lim}	136 000 tonnes spawning stock biomass	2.480
OVERALL PERFORMANCE INDICATOR SCORE:			100
CONDITION NUMBER (if relevant):			N/A

Evaluation table 8 - PI 1.1.2

PI 1.1.2		Limit and target reference points are appropriate for the stock		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	Generic limit and target reference points are based on justifiable and reasonable practice appropriate for the species category.	Reference points are appropriate for the stock and can be estimated.	
	Met?	Y	Y	
	Justification	F _{MSY} is not estimated for Arctic saithe. F _{MGT} is set at (0.32) as the value that is considered to have a 95% probability of avoiding F _{lim} . B _{lim} was set as the change point in the stock-recruitment relationship (136 000 t) and B _{pa} was estimated as the stock spawning biomass that maintains SSB above B _{lim} (B _{pa} = SSB _{MGT}) with more than 95% probability. ICES considers that the estimated reference points, including F _{MGT} , are in accordance with both the precautionary approach and the MSY framework. Thus, implicitly ICES consider F _{MGT} as an appropriate proxy for F _{MSY} for this stock. Thus, the team considered that the reference points are appropriate and the SG 80 is met.		
b	Guide post		The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.	The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity following consideration of precautionary issues.
	Met?		Y	N
	Justification	B _{lim} was set as the change point in the stock-recruitment relationship (136 000 t) and B _{pa} was estimated as the stock spawning biomass that affords a high probability of maintaining SSB above B _{lim} (B _{pa} = SSB _{MGT}) with more than 95% probability. Although the team considered that the limit reference point is consistent with maintaining high stock productivity as well as reducing risk of impairing reproductive capacity, it is not clear that precautionary issues such as species interactions have been considered. SG80 is met but SG100 is not fully met.		
c	Guide post		The target reference point is such that the stock is maintained at a level consistent with B _{MSY} or some measure or surrogate with similar intent or outcome.	The target reference point is such that the stock is maintained at a level consistent with B _{MSY} or some measure or surrogate with similar intent or outcome, or a higher level, and takes into account relevant precautionary issues such as the ecological role of the stock with a high degree of certainty.

	Met?		Y	N
	Justification	Although an estimate of B_{MSY} is not available, B_{pa} can be considered as a surrogate for B_{MSY} as it is 60% larger than B_{lim} and B_{lim} is likely to be an overestimation of the true level of SSB at which there is an appreciable risk of impairing reproductive capacity given the current shape of the stock-recruitment relationship. Simulations carried out by ICES showed as the target reference point (F_{MGT}) is able to maintain the stock above B_{pa} with a probability larger than 95% under different recruitment scenarios. SG80 is met. However, the ecological role of the stock is not taken into account with a high degree of certainty and thus the SG 100 is not met.		
d	Guide post		For key low trophic level stocks, the target reference point takes into account the ecological role of the stock.	
	Met?		Not relevant	
	Justification	Saithe is not a low trophic level stock and thus this scoring issue is not relevant.		
	References	<p>ICES, 2014c. Report of the Inter-Benchmark Protocol on Northeast Arctic Saithe in Subareas I and II (IBP NEAsaithe), March/April 2014, by correspondence. ICES CM 2014/ACOM:53. 94 pp.</p> <p>ICES, 2015b. Saithe in Subareas I and II (Northeast Arctic). Book 3. ICES Advice, 2015. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2015/2015/sai-arct.pdf</p> <p>ICES, 2015d. Report of the Arctic Fisheries Working Group (AFWG), 23–29 April 2015, Hamburg, Germany. ICES CM 2015/ACOM:05. http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2015/AFWG/01%20AFWG%20Report%202015.pdf</p>		
OVERALL PERFORMANCE INDICATOR SCORE:				80
CONDITION NUMBER (if relevant):				NA

Evaluation table 9 - PI 1.2.1

PI 1.2.1		There is a robust and precautionary harvest strategy in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The harvest strategy is expected to achieve stock management objectives reflected in the target and limit reference points.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points.	The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points.
	Met?	Y	Y	Y
	Justification	<p>MSC defines a harvest strategy as ‘the combination of monitoring, stock assessment, harvest control rules and management actions, which may include an MP or an MP (implicit) and be tested by MSE’ (MSC CR v1.3).</p> <p>The elements for a good responsive harvest strategy (objectives associated with reference points, monitoring through stock assessment based on data from the fishery, management decisions based upon a HCR and implementation of measures to control fishing mortality) are present. Since 2003, TACs have been set based on the scientific advice from ICES and that landings are controlled so that TACs are not over-run.</p> <p>The stock of Arctic saithe is managed according to the Norwegian management plan. ICES evaluated the plan to be consistent with the precautionary approach and the MSY framework. The harvest control rules were revised in 2013 and communicated to ICES by the Norwegian Ministry of Fisheries and Coastal Affairs. The harvest strategy of the current management plan contains well-defined harvest control rules with the aim of maintaining a minimum level of Spawning Stock Biomass (SSB) greater than Bpa and to reduce the fishing mortality when the SSB is below Bpa. Where the SSB is estimated by ICES to be below Bpa, the TAC should be based on a fishing mortality that is linearly reduced from FMGT at SSB = Bpa to F=0 at SSB equal to zero. The TAC is set to be no more than 15 % greater or 15 % less than the TAC of the preceding year. At SSB levels below Bpa in any of the operational years (current year and 3 years of prediction) there should be no limitations on the year-to-year variations in TAC. Thus, the team considers that the harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points and therefore the SG 100 is met.</p>		
b	Guidepost	The harvest strategy is likely to work based on prior experience or plausible argument.	The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives.	The performance of the harvest strategy has been fully evaluated and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.

	Met?	Y	Y	Y
	Justification	ICES has evaluated the current management plan through simulations and considered it in accordance with the precautionary approach and the MSY framework. Thus, the team considers that evidence exists to show that the harvest strategy is achieving its objectives including being clearly able to maintain stocks at target levels and therefore the SG 100 is met.		
c	Guidepost	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	Y		
	Justification	Data necessary for stock assessment, including effort by fleet, catches, biological data and fisheries-independent stock information, are yearly collected according to the Norwegian and Russian monitoring scheme and the EU DCF. ICES carries out yearly an assessment of the saithe stock in the Skagerrak, the North Sea and west of Scotland. The team considers that the monitoring currently in place is of appropriate quality to determine whether the harvest strategy is working and thus the SG 60 is met.		
d	Guidepost			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			Y
	Justification	The current harvest strategy has been reviewed by ICES in 2013 and is considered in accordance with the precautionary approach. Therefore, the SG 100 is met		
e	Guidepost	It is likely that shark finning is not taking place.	It is highly likely that shark finning is not taking place.	There is a high degree of certainty that shark finning is not taking place.
	Met?	Not relevant	Not relevant	Not relevant
	Justification	Scoring issue need not be scored if sharks are not a target species.		
References		ICES, 2014c. Report of the Inter-Benchmark Protocol on Northeast Arctic Saithe in Subareas I and II (IBP NEAsaithe), March/April 2014, by correspondence. ICES CM 2014/ACOM:53. 94 pp.		

	<p>ICES, 2015b. Saithe in Subareas I and II (Northeast Arctic). Book 3. ICES Advice, 2015. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2015/2015/sai-arct.pdf</p> <p>ICES, 2015d. Report of the Arctic Fisheries Working Group (AFWG), 23–29 April 2015, Hamburg, Germany. ICES CM 2015/ACOM:05. http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2015/AFWG/01%20AFWG%20Report%202015.pdf</p> <p>EC, 2008. Commission Regulation (EC) No. 665/2008 of the 14 July 2008 establishes the Data Collection Framework (DCF), a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy (CFP). https://datacollection.jrc.ec.europa.eu/dcf-legislation</p> <p>ICES, 2014b. Report of the third Workshop on Practical Implementation of Statistical Sound Catch Sampling Programmes, 19-22 November 2013, ICES HQ, Copenhagen, Denmark. ICES CM2013/ACOM:54. 109 pp</p>
OVERALL PERFORMANCE INDICATOR SCORE:	100
CONDITION NUMBER (if relevant):	N/A

Evaluation table 10 - PI 1.2.2

PI 1.2.2		There are well defined and effective harvest control rules in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	Generally understood harvest rules are in place that are consistent with the harvest strategy and which act to reduce the exploitation rate as limit reference points are approached.	Well-defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.	
	Met?	Y	Y	
	Justification	The harvest strategy of the current management plan contains well-defined harvest control rules with the aim to maintain a minimum level of SSB greater than B_{pa} and to reduce the fishing mortality when the SSB is below B_{pa} . Where the SSB is estimated by the ICES to be below B_{pa} , should be based on a fishing mortality that is linearly reduced from F_{MGT} at $SSB = B_{pa}$ to $F=0$ at SSB equal to zero. Thus the team considers that well-defined harvest control rules are in place, which are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached. Thus, the SG 80 is met.		
b	Guide post		The selection of the harvest control rules takes into account the main uncertainties.	The design of the harvest control rules takes into account a wide range of uncertainties.
	Met?		Y	N
	Justification	ICES conducted simulations on the harvest control rules, which included several sources on uncertainty (e.g. recruitment, implementation errors) and considered them to be in accordance with the precautionary approach and the MSY framework. SG80 is met. Also, it is important to note that even if uncertainties are built in the definition of the precautionary reference points (F_{pa} , B_{pa}), it is not possible to say that the design of the harvest control rules take into account a wide range of uncertainties such as environment effect on recruitment or other biological parameters. Thus, only part of the uncertainty is considered in the assessment and in the definition of the reference points but it is not formally incorporated in the design of control harvest rules. Thus, SG 100 is not met.		
c	Guide post	There is some evidence that tools used to implement harvest control rules are appropriate and effective in controlling exploitation.	Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.	Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the harvest control rules.
	Met?	Y	Y	Y

	Justification	Since 2003, the TAC has been set in accordance with the ICES advice and the realised total catches have been always smaller than the advised total catches by ICES and the agreed TAC. The team considers that evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the harvest control rules and thus SG 100 is met.
References	<p>ICES, 2014c. Report of the Inter-Benchmark Protocol on Northeast Arctic Saithe in Subareas I and II (IBP NEAsaithe), March/April 2014, by correspondence. ICES CM 2014/ACOM:53. 94 pp.</p> <p>ICES 2015b. Saithe in Subareas I and II (Northeast Arctic). Book 3. ICES Advice, 2015. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2015/2015/sai-arct.pdf</p> <p>ICES. 2015d. Report of the Arctic Fisheries Working Group (AFWG), 23–29 April 2015, Hamburg, Germany. ICES CM 2015/ACOM:05. http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2015/AFWG/01%20AFWG%20Report%202015.pdf</p> <p>ICES, 2011b. Report of the Arctic Fisheries Working Group (AFWG), 28 April - 4 May 2011, Hamburg, Germany. ICES CM 2011/ACOM:05. 659 pp. http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2011/AFWG/AFWG%20Report%202011.pdf</p>	
OVERALL PERFORMANCE INDICATOR SCORE:		90
CONDITION NUMBER (if relevant):		N/A

Evaluation table 11 - PI 1.2.3

PI 1.2.3		Relevant information is collected to support the harvest strategy		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	Some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.	Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.	A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly related to the current harvest strategy, is available.
	Met?	Y	Y	Y
	Justification	Data necessary for stock assessment and to support the harvest strategy, which includes fleet composition, effort data by fleet, catches (landings and discards) by fleet, biological data and fisheries-independent stock information, are yearly collected according the Norwegian and Russian monitoring scheme and the EU DCF. SG80 is awarded. Other data such as environmental information are also available under the ICES website or through other fora, although these data are independent from the stock assessment and the effect of the environment on stock productivity is not formally considered in the assessment. Nevertheless, the team considers that a comprehensive range of information is available and thus the SG 100 is met.		
b	Guide post	Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.	Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.	All information required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.
	Met?	Y	Y	N
	Justification	ICES collate stock assessment data and carries out a yearly assessment of the saithe stock in the Arctic. Retrospective analysis shows a rather robust assessment for both SSB and F, which implies that the stock spawning biomass and the harvest rate are monitored with sufficient frequency to support the harvest control rule. SG80 is met. However, the low level of biological sampling following the termination of the original Norwegian port-sampling programme in 2009 continued to be an issue in 2014 and will affect the precision of the catch-, weight-, and maturity-at-age data. Predicted catches are dependent upon assumptions of average recruitment due to the lack of reliable recruitment estimates. In recent assessments, maturity-at-age and natural mortality are assumed to be constant, which might add uncertainty to the stock estimates especially for maturity, as it is often time variant. Discard information is considered to be negligible		

		and thus not included in the assessment. This implies that all information required by the harvest control rule is neither monitored with high frequency nor with a high degree of certainty and thus the SG 100 is not met.	
c	Guide post	There is good information on all other fishery removals from the stock.	
	Met?	Y	
	Justification	Catches (landings and discards) by fleet are yearly collected according to the Norwegian and Russian monitoring scheme and the EU DCF and are considered by ICES to be of good quality to carry out an assessment of the stock. Discards are considered to be negligible and thus not included in the assessment. This implies that there is good information on all other fishery removals from the stock and thus the SG 80 is met.	
References	<p>ICES 2014c. Report of the Inter-Benchmark Protocol on Northeast Arctic Saithe in Subareas I and II (IBP NEAsaithe), March/April 2014, by correspondence. ICES CM 2014/ACOM:53. 94 pp.</p> <p>ICES 2015b. Saithe in Subareas I and II (Northeast Arctic). Book 3. ICES Advice, 2015. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2015/2015/sai-arct.pdf</p> <p>ICES. 2015d. Report of the Arctic Fisheries Working Group (AFWG), 23–29 April 2015, Hamburg, Germany. ICES CM 2015/ACOM:05. http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2015/AFWG/01%20AFWG%20Report%202015.p df</p> <p>EC, 2008. Commission Regulation (EC) No. 665/2008 of the 14 July 2008 establishes the Data Collection Framework (DCF), a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy (CFP). https://datacollection.jrc.ec.europa.eu/dcf-legislation</p> <p>ICES, 2014b. Report of the third Workshop on Practical Implementation of Statistical Sound Catch Sampling Programmes, 19-22 November 2013, ICES HQ, Copenhagen, Denmark. ICES CM2013/ACOM:54. 109 pp.</p>		
OVERALL PERFORMANCE INDICATOR SCORE:			90
CONDITION NUMBER (if relevant):			N/A

Evaluation table 12 - PI 1.2.4

PI 1.2.4		There is an adequate assessment of the stock status		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post		The assessment is appropriate for the stock and for the harvest control rule.	The assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery.
	Met?		Y	Y
	Justification	The model used for the assessment of Arctic saithe (i.e. SAM model) is considered appropriate and widely used by ICES for several stocks of gadoids. The most relevant data are included in the stock assessment (i.e. landings at age, weight at age, survey indices). Maturity-at-age and natural mortality are assumed to be constant, which might add uncertainty to the stock estimates especially for maturity as it is often time variant. Discards are considered to be negligible and thus not included in the assessment. Predicted catches are dependent upon assumptions of average recruitment due to the lack of reliable recruitment estimates. Thus, the team considered that the SG 100 is met.		
b	Guide post	The assessment estimates stock status relative to reference points.		
	Met?	Y		
	Justification	The assessments provide a comprehensive and robust vision of the stock status in terms of spawning stock biomass, recruitment and fishing mortality. Moreover, stock status is related to the accepted reference points in an analytical way and the analyses appear robust, and thus SG 60 is met.		
c	Guide post	The assessment identifies major sources of uncertainty.	The assessment takes uncertainty into account.	The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way.

	Met?	Y	Y	N
	Justification	ICES identify the low level of biological sampling, following the termination of the original Norwegian port-sampling programme in 2009, as the major source of uncertainty, which will affect the precision of the catch-, weight-, and maturity-at-age data. ICES also consider that predicted catches are dependent upon assumptions of average recruitment due to the lack of reliable recruitment estimates, which add uncertainty to the catch forecast. The assessment estimates uncertainty (i.e. within the model) and retrospective analysis shown a rather robust assessment for both SSB and F and therefore SG80 is met. However, no probabilistic approaches, such as risk analyses, are used in the assessment. Thus, the team considered that SG 100 is not met.		
d	Guide post			The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.
	Met?			Y
	Justification	The assessment of Arctic saithe is regularly benchmarked according to the ICES benchmark system, which implies that input data are rigorously reviewed and different assessment models are tested and explored. The Arctic saithe assessment was benchmarked through an inter-benchmark process in 2014 and it has been considered by ICES as robust to provide advice. Thus, the team considered that the SG 100 is met.		
e	Guide post		The assessment of stock status is subject to peer review.	The assessment has been internally and externally peer reviewed.
	Met?		Y	Y
	Justification	During the inter-benchmark meeting held in 2014, the stock assessment of North Sea saithe was peer reviewed both internally (by ICES) and externally (by independent non-European reviewer). The reviewers concluded that the assessment model and the input data were adequate to provide an assessment of the Arctic saithe stock. Thus, the team considered that the SG 100 criteria are met.		
References	ICES 2014c. Report of the Inter-Benchmark Protocol on Northeast Arctic Saithe in Subareas I and II (IBP NEAsaithe), March/April 2014, by correspondence. ICES CM 2014/ACOM:53. 94 pp. ICES 2015b. Saithe in Subareas I and II (Northeast Arctic). Book 3. ICES Advice, 2015. http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2015/2015/sai-arct.pdf			

	<p>ICES. 2015d. Report of the Arctic Fisheries Working Group (AFWG), 23–29 April 2015, Hamburg, Germany. ICES CM 2015/ACOM:05. http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2015/AFWG/01%20AFWG%20Report%202015.pdf</p> <p>EC, 2008. Commission Regulation (EC) No. 665/2008 of the 14 July 2008 establishes the Data Collection Framework (DCF), a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy (CFP). https://datacollection.jrc.ec.europa.eu/dcf-legislation</p> <p>ICES, 2014b. Report of the third Workshop on Practical Implementation of Statistical Sound Catch Sampling Programmes, 19-22 November 2013, ICES HQ, Copenhagen, Denmark. ICES CM2013/ACOM:54. 109 pp.</p>
OVERALL PERFORMANCE INDICATOR SCORE:	95
CONDITION NUMBER (if relevant):	N/A

Evaluation table 13 - PI 2.1.1

PI 2.1.1		The fishery does not pose a risk of serious or irreversible harm to the retained species and does not hinder recovery of depleted retained species		
Scoring Issue		SG 60	SG 80	SG 100
a	Guided post	Main retained species are likely to be within biologically based limits (if not, go to scoring issue c below).	Main retained species are highly likely to be within biologically based limits (if not, go to scoring issue c below).	There is a high degree of certainty that retained species are within biologically based limits and fluctuating around their target reference points.
	Met?	All - Y	Hake, Greenland halibut, ling, Northeast Arctic cod - Y Monkfish - See scoring issue c Minor species – Met by default	Hake, Northeast Arctic cod - Y Greenland halibut, ling - N Minor species UoA 1: N UoA 2: N UoA 3: N UoA 4: N UoA 5: N
	Justification	<p>Main retained species have been identified as follows (see Section 2.2.3): UoA 1 (Euronor North Sea / West of Scotland): hake, Greenland halibut UoA 2 (Euronor Northeast Arctic): Northeast Arctic cod UoA 3 (Cie des Pêches North Sea / West of Scotland): hake UoA 4 (Cie des Pêches Northeast Arctic): Northeast Arctic cod UoA 5 (Scapêche North Sea / West of Scotland): hake, monkfish, ling</p> <p><u>Hake</u>: Hake biomass (northern stock) is estimated to be well above $MSY_{trigger}$, which is set to give a ~95% probability that the stock is above B_{lim} (ICES, 2015cc). SG80 and SG100 are met for hake.</p> <p><u>Greenland halibut</u>: The stock hit a record low biomass of ~50% of B_{MSY} in 2002-5 and has since recovered to an estimated 68% of B_{MSY}. Fishing mortality is approximately F_{MSY}. The biomass is above B_{pa} and B_{lim} and ICES considers that it is at full reproductive capacity (ICES 2015dd). SG80 is met. Although F is at the target level, biomass has not yet recovered to B_{MSY}, so SG100 is not met.</p>		

Monkfish: No reference points have been defined for the North Sea / West of Scotland 'stock' (stock structure is unclear). Since the survey stock size indicator has been increasing since 2011 (ICES, 2015e), it is reasonable to suppose that the stocks are above the point of impaired recruitment, so SG60 is met. It is not clear if SG80 is met so monkfish is evaluated further under scoring issue c below.

Ling: No reference points have been defined for the North Sea/ West of Scotland 'stock' (stock structure is unclear). Since the stock size indicator (standardised Norwegian longline CPUE) has been increasing year on year for the last 12 years, the team concluded that it was 'highly likely' (in a qualitative sense) that the stock is within biologically based limits (ICES 2015f). SG80 is met for ling. In the absence of reference points, however, this could not be stated with a high degree of certainty – SG100 is not met.

Northeast Arctic cod: SSB is at ~2X MSY_{trigger}, which is set to give a ~90% probability that the stock is above B_{lim}. F was above F_{MSY} in 2014 but not by much; prior to this it had been below F_{MSY} since ~2006 (ICES 2015g). SG100 is met.

Minor retained species:

UoA 1 (Euronor North Sea / West of Scotland):

Species	Status	Fluctuating around target with high degree of certainty?	Ref.
Ling	no ref points	N	ICES 2015f
Haddock	below management plan target, above limit	N	ICES 2015h
Blue ling	no ref points	N	ICES 2015i
Cod	below target, above limit	N	ICES 2015j
Whiting	biomass still considered by ICES to be low	N	ICES 2015k
Monkfish	no ref points	N	ICES 2015e
Black scabbardfish	data-deficient stock	N	ICES 2015l
Tusk	data-deficient stock	N	ICES 2015m
Redfish	B>>MSY _{trigger}	probably although probability not explicitly estimated	ICES 2015n
Phycis blennoides	no ref points	N	ICES 2015o
Saithe (Faroese stock Vb)	B>MSY _{trigger} , F~F _{MSY}	N (taking target to be F _{MSY})	ICES 2015ee

UoA 2 (Euronor Northeast Arctic)

Species	Status	Fluctuating around target with high degree of certainty?	Ref.
Haddock	B>>MSY _{trigger}	Y	ICES 2015p

Redfish	no ref points	N	ICES 2015q
Greenland halibut	no ref points	N	ICES 2015 r
Other	-	N	

UoA 3 (Cie des Pêches North Sea / West of Scotland):

Species	Status	Fluctuating around target with high degree of certainty?	Ref.
Hake	B>>MSYB _{trigger}	Y	ICES 2015cc
Haddock	below management plan target, above limit	N	ICES 2015h
Cod	below target, above limit	N	ICES 2015j
Ling	no ref points	N	ICES 2015f
Saithe (Vb stock)	B>MSYB _{trigger} , F~=F _{MSY}	N (taking target to be F _{MSY})	ICES 2015ee

UoA 4 (Cie des Pêches Northeast Arctic):

Species	Status	Fluctuating around target with high degree of certainty?	Ref.
Haddock	B>>MSYB _{trigger}	Y	ICES 2015p
Redfish	no ref points	N	ICES 2015q
Other	-	N	

UoA 5 (Scapêche North Sea / West of Scotland) (Note: this only includes species making up >0.5% of the total catch) (UoA 5)

Species	Status	Fluctuating around target with high degree of certainty?	Ref.
Haddock	below management plan target, above limit	N	ICES 2015h
Cod	B<B _{lim}	N	ICES 2015s
Chimaera monstrosa	no assessment	N	
Megrim	B>>MSYB _{trigger}	Y	ICES 2015t
Monkfish (L. budegassa)	no ref points	N	ICES 2015e

		Blue ling	no ref points	N	ICES 2015i																								
		Phycis blennoides	no ref points	N	ICES 2015o																								
		Small-spotted catshark* (<i>Scyliorhinus canicula</i>)	no ref points	N	ICES 2015u																								
		Loligo vulgaris	no assessment	N																									
		Greenland halibut	$B > MSYB_{trigger}$ but $< B_{MSY}$	N	ICES 2015dd																								
		Saithe (Vb stock)	$B > MSYB_{trigger}$, $F \sim F_{MSY}$	N (taking target to be F_{MSY})	ICES 2015ee																								
		*lesser-spotted dogfish according to ICES																											
b	Guided post				Target reference points are defined for retained species.																								
	Met?				Hake, Greenland halibut, NEA cod - Y Monkfish, ling - N Minor spp. UoA 1: N UoA 2: N UoA 3: N UoA 4: N UoA 5: N																								
	Justification	This PI considers all retained species; the UoAs are considered separately (references as given above): UoA 1 (Euronor North Sea / West of Scotland):																											
		<table border="1"> <thead> <tr> <th>Species</th> <th>Main?</th> <th>reference points?</th> </tr> </thead> <tbody> <tr> <td>Hake</td> <td>Y</td> <td>Y</td> </tr> <tr> <td>Greenland halibut</td> <td>Y</td> <td>Y</td> </tr> <tr> <td>Ling</td> <td>N</td> <td>N</td> </tr> <tr> <td>Haddock</td> <td>N</td> <td>Y</td> </tr> <tr> <td>Blue ling</td> <td>N</td> <td>N</td> </tr> <tr> <td>Cod</td> <td>N</td> <td>Y</td> </tr> <tr> <td>Whiting</td> <td>N</td> <td>Y</td> </tr> </tbody> </table>				Species	Main?	reference points?	Hake	Y	Y	Greenland halibut	Y	Y	Ling	N	N	Haddock	N	Y	Blue ling	N	N	Cod	N	Y	Whiting	N	Y
Species	Main?	reference points?																											
Hake	Y	Y																											
Greenland halibut	Y	Y																											
Ling	N	N																											
Haddock	N	Y																											
Blue ling	N	N																											
Cod	N	Y																											
Whiting	N	Y																											

	Monkfish	N	N
	Black scabbardfish	N	Y
	Tusk	N	N
	Redfish	N	Y
	Phycis blennoides	N	N
	Saithe (Vb)	N	Y
	UoA 2 (Euronor Northeast Arctic)		
	Species	Main?	reference points?
	Cod	Y	Y
	Haddock	N	Y
	Redfish	N	N
	Greenland halibut	N	N
	Other	N	?
	UoA 3 (Cie des Pêches North Sea / West of Scotland):		
	Species	Main?	reference points?
	Hake	Y	Y
	Haddock	N	Y
	Cod	N	Y
	Ling	N	N
	Saithe (Vb)	N	Y
	UoA 4 (Cie des Pêches Northeast Arctic):		
	Species	Main?	reference points?
	Cod	Y	Y
	Haddock	N	Y
	Redfish	N	N

		Other	N	?
		UoA 5 (Scapêche North Sea / West of Scotland) (Note: this only includes species making up >0.5% of the total catch)		
		Species	Main?	reference points?
		Hake	Y	Y
		Monkfish (<i>Lophius piscatorius</i>)	Y	N
		Ling	Y	N
		Haddock	N	Y
		Cod	N	Y
		Chimaera monstrosa	N	N
		Megrim	N	Y
		Monkfish (<i>L. budegassa</i>)	N	N
		Blue ling	N	N
		<i>Phycis blennoides</i>	N	N
		Small-spotted catshark (<i>Scyliorhinus canicula</i>)	N	N
		Loligo vulgaris	N	N
		Greenland halibut	N	Y
		Saithe (Vb)	N	Y
c	Guided post	If main retained species are outside the limits there are measures in place that are expected to ensure that the fishery does not hinder recovery and rebuilding of the depleted species.	If main retained species are outside the limits there is a partial strategy of demonstrably effective management measures in place such that the fishery does not hinder recovery and rebuilding.	
	Met?	Y – monkfish	Y – monkfish	
	Justification	This only applies to UoA 5 (Scapêche North Sea / West of Scotland), monkfish ICES provide advice for this stock using the management framework for data-deficient stocks (ICES, 2012), which the team considered to be a 'strategy'. The stock is 'category 3', which means that a stock biomass indicator is available (in this case from the Scottish trawl survey) but reference points cannot be set (because of problems with species identification and aging). The advice is based on a comparison of the two latest index values with the three preceding values, multiplied by the recent advised catch – i.e. if the indicator		

		increases over a sustained period, as currently, the TAC can increase. ICES also apply precautionary limits to the amount of increase, depending on the situation – in this case, the index has increased by >50% over the defined period, but the TAC increase is limited to 20%. Although there is no target reference point, the strategy appears to be demonstrably effective in this particular case, in that catches are stable at around the TAC level and the biomass is apparently increasing. On this basis, the team were satisfied that SG80 is met.		
d	Guidepost	If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the retained species to be outside biologically based limits or hindering recovery.		
	Met?	Y		
	Justification	This does not apply to any of the main stocks, so is met by default.		
References	<p>ICES, 2015e. ICES Advice on fishing opportunities, catch, and effort Celtic Seas and Greater North Sea Ecoregions. 5.3.1 Anglerfish (<i>Lophius piscatorius</i> and <i>L. budegassa</i>) in Subareas IV and VI and Division IIIa (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 5.</p> <p>ICES, 2015f. ICES Advice on fishing opportunities, catch, and effort Northeast Atlantic. 9.3.24 Ling (<i>Molva molva</i>) in Subareas VI-IX, XII, and XIV, and in Divisions IIIa and IVa (other areas). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 9.</p> <p>ICES, 2015g. 3.3.4. Cod (<i>Gadus morhua</i>) in Subareas I and II (Northeast Arctic)</p> <p>ICES 2015h. 6.3.10. Haddock (<i>Melanogrammus aeglefinus</i>) in Subarea IV and Divisions VIa and IIIa West (North Sea, West of Scotland, Skagerrak)</p> <p>ICES 2015i. 9.3.6. Blue ling (<i>Molva dypterygia</i>) in Subareas I, II, VIII, IX, and XII, and Divisions IIIa and IVa (other areas)</p> <p>ICES 2015j. 6.3.10. Cod (<i>Gadus morhua</i>) in Subarea IV and Divisions VIId and IIIa West (North Sea, Eastern English Channel, Skagerrak)</p> <p>ICES 2015k. 6.3.56. Whiting (<i>Merlangius merlangus</i>) in Subarea IV and Division VIId (North Sea and Eastern English Channel)</p> <p>ICES 2015l. 9.3.4. Widely distributed and migratory stocks: Black scabbardfish (<i>Aphanopus carbo</i>) in the Northeast Atlantic: Subareas I, II, IV, VI, VII, VIII, X, and XIV, and Divisions IIIa, Va, Vb, IXa, and XIIb advice black scabbardfish VI</p> <p>ICES 2015m. 9.3.49. Tusk (<i>Brosme brosme</i>) in Subareas IV, VII-IX, and in Divisions IIIa, Vb, VIa, and XIIb (Northeast Atlantic)</p> <p>ICES 2015n. 2.3.10. Golden redfish (<i>Sebastes norvegicus</i>) in Subareas V, VI, XII, and XIV (Iceland and Faroes grounds, West of Scotland, North of Azores, East of Greenland)</p> <p>ICES 2015o. 9.3.8. Widely distributed and migratory stocks: Greater forkbeard (<i>Phycis blennoides</i>) in the Northeast Atlantic</p> <p>ICES 2015p. 3.3.8. Haddock (<i>Melanogrammus aeglefinus</i>) in Subareas I and II (Northeast Arctic)</p> <p>ICES 2015q. 3.3.6. Barents Sea and Norwegian Sea STOCK Beaked redfish (<i>Sebastes mentella</i>) in Subareas I and II</p> <p>ICESs 2015r. 3.3.7. Greenland halibut (<i>Reinhardtius hippoglossoides</i>) in Subareas I and II (Northeast Arctic)</p>			

<p>ICES 2015s. 5.3.7. Cod (<i>Gadus morhua</i>) in Division VIa (West of Scotland) ICES 2015t. 5.3.22. Megrin (<i>Lepidorhombus</i> spp.) in Divisions IVa and VIa (Northern North Sea, West of Scotland) ICES 2015u. 5.3.20. Lesser-spotted dogfish (<i>Scyliorhinus canicula</i>) in Subarea VI and Divisions VIIa–c, e–j (west of Scotland, Irish Sea, and southern Celtic Seas) ICES, 2015cc. ICES Advice on fishing opportunities, catch, and effort Greater North Sea, Celtic Seas, Bay of Biscay and Iberian coast Ecoregions. 9.3.14 Hake (<i>Merluccius merluccius</i>) in Subareas IV, VI, and VII and Divisions IIIa, VIIIa,b,d (Northern stock) (Greater North Sea, Celtic Seas, Northern Bay of Biscay). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 9. ICES, 2015dd. 2.3.11. Greenland halibut (<i>Reinhardtius hippoglossoides</i>) in Subareas V, VI, XII, and XIV (Iceland and Faroes grounds, West of Scotland, North of Azores, East of Greenland) ICES, 2015ee. 4.3.4. Saithe (<i>Pollachius virens</i>) in Division Vb (Faroes grounds) ICES, 2012. ICES Implementation of Advice for Data-limited Stocks in. ICES CM 2012/ACOM 68. 42 pp.</p>						
	UoA 1 (Euronor North Sea / West of Scotland)	UoA 2 (Euronor Northeast Arctic)	UoA 3 (Cie des Pêches North Sea / West of Scotland)	UoA 4 (Cie des Pêches Northeast Arctic)	UoA 5 (Scapêche North Sea / West of Scotland)	Score scoring element
Score hake	x		x		x	100
Score Greenland halibut	x					90
Score ling					x	80
Score Northeast Arctic cod		x		x		100
Score monkfish					x	80
Score minor species	x	x	x	x	x	80
OVERALL SCORE UOA	85	85	85	85	85	
CONDITION NUMBER (if relevant):						N/A

Evaluation table 14 - 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	Guide post	There are measures in place, if necessary, that are expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a partial strategy in place, if necessary, that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a strategy in place for managing retained species.							
	Met?	All main species – Y Minor species – met by default	All main species - Y Minor species – Met by default	All main species - Y Minor species. : UoA 1: N UoA 2: Y UoA 3: N UoA 4: Y UoA 5: N							
	Justification	<p>Main retained species have been identified as follows (see Section 2.2.3) - references as for PI 2.1.1:</p> <p>UoA 1 (Euronor North Sea / West of Scotland): hake, Greenland halibut</p> <p>UoA 2 (Euronor Northeast Arctic): Northeast Arctic cod</p> <p>UoA 3 (Cie des Pêches North Sea / West of Scotland): hake</p> <p>UoA 4 (Cie des Pêches Northeast Arctic): Northeast Arctic cod</p> <p>UoA 5 (Scapêche North Sea / West of Scotland): hake, monkfish, ling</p> <p>For each of the main retained species the situation is as follows:</p> <table border="1"> <thead> <tr> <th>Species / stock</th> <th>Within biologically-based limits?</th> <th>Management strategy</th> <th>Conclusion</th> </tr> </thead> <tbody> <tr> <td>hake / northern stock</td> <td>$B \gg MSY_{trigger}$, F slightly above F_{MSY}</td> <td>TAC (but catch exceeds TAC)</td> <td>Although $catch > TAC$ and $F > F_{MSY}$, the biomass is currently so high that it is clear that this</td> </tr> </tbody> </table>			Species / stock	Within biologically-based limits?	Management strategy	Conclusion	hake / northern stock	$B \gg MSY_{trigger}$, F slightly above F_{MSY}	TAC (but catch exceeds TAC)
Species / stock	Within biologically-based limits?	Management strategy	Conclusion								
hake / northern stock	$B \gg MSY_{trigger}$, F slightly above F_{MSY}	TAC (but catch exceeds TAC)	Although $catch > TAC$ and $F > F_{MSY}$, the biomass is currently so high that it is clear that this								

			strategy will maintain the stock within biologically-based limits. SG80 and 100 is met.									
Greenland halibut / V, VI, XII, XIV	$F \sim F_{MSY}$; $B > MSY B_{trigger}$ and recovering $\rightarrow B_{MSY}$ (currently 68%)	EU, Greenland and Iceland set TACs following ICES advice and (for Iceland and Greenland) management plan	With landings and F at present level, stock biomass has been gradually increasing since 2005, and is above limit and trigger levels – i.e.within biologically-based limits. SG80 and 100 met.									
monkfish / IV and VI	No ref. points defined but survey biomass has increased strongly in last 2 years	EU sets TACs for IV and VI following ICES advice (based on the framework for data-deficient stocks)	Landings exceeded the TAC a little in 2014 but generally it has been respected; i.e. scientific advice is followed and the biomass appears to be increasing – SG80 and 100 is met.									
ling / IIIa, IVa, VI-IX, XII, XIV	No ref points; but biomass increasing since 2003	EU sets TACs for all areas based on ICES advice (framework for data-deficient stocks)	Ling biomass has been increasing for more than a decade; the data-deficient framework sets limits on the rate at which TACs can be increased; overall, therefore, the stock is highly likely to remain within biologically-based limits – SG80 and 100 is met.									
NEA cod	$B \sim 2XMSY B_{trigger}$; $F \sim F_{MSY}$	Analytical TAC	B has been above trigger level since ~2000, landings have respected TAC since 2009. SG80 and 100 is met.									
<p>Minor species: For SG100 to be met in full also requires a 'strategy' for all non-main retained species. This is considered below based on the EU fisheries regulations for 2016: Euronor and Cie des Pêches North Sea / West of Scotland (UoA 1, UoA 3)</p> <table border="1"> <thead> <tr> <th>Species</th> <th>Main?</th> <th>strategy?</th> </tr> </thead> <tbody> <tr> <td>Hake</td> <td>Y Euronor (UoA1) N Cie des P (UoA3)</td> <td>TAC</td> </tr> <tr> <td>Greenland halibut</td> <td>Y Euronor (UoA1)</td> <td>TAC</td> </tr> </tbody> </table>				Species	Main?	strategy?	Hake	Y Euronor (UoA1) N Cie des P (UoA3)	TAC	Greenland halibut	Y Euronor (UoA1)	TAC
Species	Main?	strategy?										
Hake	Y Euronor (UoA1) N Cie des P (UoA3)	TAC										
Greenland halibut	Y Euronor (UoA1)	TAC										

		N Cie des P (UoCA)	
		Ling	TAC
		Haddock	TAC
		Blue ling	TAC
		Cod	TAC, cod recovery plan
		Whiting	TAC
		Monkfish	TAC
		Black scabbardfish	TAC
		Tusk	TAC
		Redfish	TAC for some areas
		Phycis blennoides	none
		Saithe (Vb)	TAC
Euronor NEA (UoA2)			
		Species	Main?
			strategy?
		Cod	Y
		Haddock	N
		Redfish	N
		Greenland halibut	N
		Other	N
			TAC
			TAC or bycatch limit depending on fleet
			TAC or bycatch limit
			Bycatch quota
			Quota for 'other'
Cie des Pêches St Malo NEA (UoA4)			
		Species	Main?
			strategy?
		Cod	Y
		Haddock	N
		Redfish	N
		Other	N
			TAC
			TAC or bycatch limit depending on fleet
			TAC or bycatch limit
			Quota for other

		Scapêche West of Scotland / North Sea (UoA5) (Note: this only includes species making up >0.5% of the total catch)																																												
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b	Guide post	The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).	There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or species involved.	Testing supports high confidence that the strategy will work, based on information directly about the fishery and/or species involved.																																										
	Met?	All main species – Y Minor species – met by default	All main species - Y Minor species – Met by default	Hake, NEA cod, ling – Y Greenland halibut, monkfish - N Minor species. : UoA 1: N UoA 2: N UoA 3: N UoA 4: N UoA 5: N																																										

	Justification	<p>For all the 'main' retained species, either the stock status is good relative to reference points, or if unclear it is increasing (monkfish, ling). The strategies for these species appear to be working in all cases, so SG80 is met.</p> <p>SG100 is met for those 'main' retained species where there is an analytical stock assessment and the stock is at target levels (i.e. not Greenland halibut, monkfish and ling). For ling, the biomass has been increasing steadily since 2003, giving high confidence that the strategy is working so SG100 is met for this species. For monkfish, although the biomass has increased strongly in recent years, this increase is recent (the last 2 years of survey index) which probably does not yet give 'high confidence'. For Greenland halibut, although the stock has gradually recovered above $MSY_{trigger}$, the target is B_{MSY}, and progress towards this point appears to have stalled in recent years, again precluding 'high confidence'.</p> <p>In relation to SG100, some of the non-main retained species have a strategy and some do not (scoring issue a). Whether or not the strategy is working can be evaluated by cross-referencing those with a strategy (above) with those which are at the target level (PI 2.1.1 scoring issue a) – i.e. this is only met for North Sea / West of Scotland redfish and megrim, and NEA haddock.</p>	
c	Guide post	There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	Met?	All main species - Y Minor species – Met by default	Main retained species - Y Minor species – UoA 1: N UoA 2: N UoA 3: N UoA 4: N UoA 5: N
	Justification	<p>It can be difficult to determine from the data publically available whether TACs follow ICES advice and landings follow TAC – because the areas over which advice, TACs and landings are grouped are often different (and in some cases, ICES estimate 'landings' following a different methodology – e.g. in the case of ling where for the last 3 years it has included discards). Nevertheless, inspection of all the figures, plus the EU's assertion for all the 'main' retained species that TACs are analytical, suggests that TACs follow science and landings follow TAC – i.e. for each of these species, there is (reasonably) clear evidence that the strategies are being implemented successfully. SG100 is met for the main retained species.</p> <p>For the minor species, scoring issue b suggests that only 4 have a clearly successful strategy at present (NEA haddock, IV/VI megrim, Vb saithe and redfish) – for the others, either there is no strategy or there is not 'clear' evidence of its success in that the stocks are not clearly at the target level.</p>	
d	Guide post		There is some evidence that the strategy is achieving its overall objective.

	Met?			Hake, NEA cod - Y Greenland halibut, monkfish, ling - N Minor species – UoA 1: N UoA 2: N UoA 3: N UoA 4: N UoA 5: N
	Justification	As noted above (scoring issue b) the strategy for hake and NEA cod is clearly achieving its objective. For ling and monkfish, while the strategy appears to be working (stronger evidence for ling than monkfish), there is no defined objective. For Greenland halibut, the strategy has achieved the objective for MSY _{trigger} , but not yet B _{MSY} . For the minor species, this is met for NEA haddock, IV/VI megrim, Vb saithe and redfish, as described above.		
e	Guide post	It is likely that shark finning is not taking place.	It is highly likely that shark finning is not taking place.	There is a high degree of certainty that shark finning is not taking place.
	Met?	not relevant	not relevant	not relevant
	Justification	Only Scapêche has a shark (small-spotted catshark; lesser-spotted dogfish) as a 'non-main' retained species, but it is not the kind of species of shark which would be finned in any case.		
References	<p>ICES, 2015e. ICES Advice on fishing opportunities, catch, and effort Celtic Seas and Greater North Sea Ecoregions. 5.3.1 Anglerfish (<i>Lophius piscatorius</i> and <i>L. budegassa</i>) in Subareas IV and VI and Division IIIa (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 5.</p> <p>ICES, 2015f. ICES Advice on fishing opportunities, catch, and effort Northeast Atlantic. 9.3.24 Ling (<i>Molva molva</i>) in Subareas VI-IX, XII, and XIV, and in Divisions IIIa and IVa (other areas). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 9.</p> <p>ICES, 2015g. 3.3.4. Cod (<i>Gadus morhua</i>) in Subareas I and II (Northeast Arctic)</p> <p>ICES 2015h. 6.3.10. Haddock (<i>Melanogrammus aeglefinus</i>) in Subarea IV and Divisions VIa and IIIa West (North Sea, West of Scotland, Skagerrak)</p> <p>ICES 2015i. 9.3.6. Blue ling (<i>Molva dypterygia</i>) in Subareas I, II, VIII, IX, and XII, and Divisions IIIa and IVa (other areas)</p> <p>ICES 2015j. 6.3.10. Cod (<i>Gadus morhua</i>) in Subarea IV and Divisions VIId and IIIa West (North Sea, Eastern English Channel, Skagerrak)</p> <p>ICES 2015k. 6.3.56. Whiting (<i>Merlangius merlangus</i>) in Subarea IV and Division VIId (North Sea and Eastern English Channel)</p> <p>ICES 2015l. 9.3.4. Widely distributed and migratory stocks: Black scabbardfish (<i>Aphanopus carbo</i>) in the Northeast Atlantic: Subareas I, II, IV, VI, VII, VIII, X, and XIV, and Divisions IIIa, Va, Vb, IXa, and XIIb advice black scabbardfish VI</p> <p>ICES 2015m. 9.3.49. Tusk (<i>Brosme brosme</i>) in Subareas IV, VII-IX, and in Divisions IIIa, Vb, VIa, and XIIb (Northeast Atlantic)</p>			

	<p>ICES 2015n. 2.3.10. Golden redfish (<i>Sebastes norvegicus</i>) in Subareas V, VI, XII, and XIV (Iceland and Faroes grounds, West of Scotland, North of Azores, East of Greenland)</p> <p>ICES 2015o. 9.3.8. Widely distributed and migratory stocks: Greater forkbeard (<i>Phycis blennoides</i>) in the Northeast Atlantic</p> <p>ICES 2015p. 3.3.8. Haddock (<i>Melanogrammus aeglefinus</i>) in Subareas I and II (Northeast Arctic)</p> <p>ICES 2015q. 3.3.6. Barents Sea and Norwegian Sea STOCK Beaked redfish (<i>Sebastes mentella</i>) in Subareas I and II</p> <p>ICESs 2015r. 3.3.7. Greenland halibut (<i>Reinhardtius hippoglossoides</i>) in Subareas I and II (Northeast Arctic)</p> <p>ICES 2015s. 5.3.7. Cod (<i>Gadus morhua</i>) in Division VIa (West of Scotland)</p> <p>ICES 2015t. 5.3.22. Megrin (<i>Lepidorhombus</i> spp.) in Divisions IVa and VIa (Northern North Sea, West of Scotland)</p> <p>ICES 2015u. 5.3.20. Lesser-spotted dogfish (<i>Scyliorhinus canicula</i>) in Subarea VI and Divisions VIIa–c, e–j (west of Scotland, Irish Sea, and southern Celtic Seas)</p> <p>ICES, 2015cc. ICES Advice on fishing opportunities, catch, and effort Greater North Sea, Celtic Seas, Bay of Biscay and Iberian coast Ecoregions. 9.3.14 Hake (<i>Merluccius merluccius</i>) in Subareas IV, VI, and VII and Divisions IIIa, VIIIa,b,d (Northern stock) (Greater North Sea, Celtic Seas, Northern Bay of Biscay). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 9.</p> <p>ICES, 2015dd. 2.3.11. Greenland halibut (<i>Reinhardtius hippoglossoides</i>) in Subareas V, VI, XII, and XIV (Iceland and Faroes grounds, West of Scotland, North of Azores, East of Greenland)</p> <p>ICES, 2015ee. 4.3.4. Saithe (<i>Pollachius virens</i>) in Division Vb (Faroes grounds)</p> <p>EC 2016. Council Regulation 2016/72 of 22 January 2016 fixing for 2016 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters, and amending Regulation (EU) 2015/104</p>					
	UoA 1 (Euronor North Sea / West of Scotland)	UoA 2 (Euronor Northeast Arctic)	UoA 3 (Cie des Pêches North Sea / West of Scotland)	UoA 4 (Cie des Pêches Northeast Arctic)	UoA 5 (Scapêche North Sea / West of Scotland)	Score scoring element
Score hake	x		x		x	100
Score Greenland halibut	x					90
Score ling					x	95
Score Northeast Arctic cod		x		x		100

Score monkfish					x	90
Score minor species	x	x	x	x	x	80 (UoA 1, 3, 5) 85 (UoA 2, 4)
OVERALL SCORE UOA	85	85	85	85	85	
CONDITION NUMBER (if relevant):						N/A

Evaluation table 15 - 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	Guide post	Qualitative information is available on the amount of main retained species taken by the fishery.	Qualitative information and some quantitative information are available on the amount of main retained species taken by the fishery.	Accurate and verifiable information is available on the catch of all retained species and the consequences for the status of affected populations.
	Met?	All main species - Y Minor species – Met by default	All main species - Y Minor species – Met by default	All main species - Y Minor species – N for all UoAs
	Justification	<p>All the main retained species are subject to quota and therefore landings are carefully tracked via electronic logbooks, landings declarations and ‘notes de vente’ as described in PI 3.2.3. In areas where discarding is (or was) permitted, discards are evaluated in a more or less quantitative way (except for very small quantities) in observer reports (Euronor and Scapêche North Sea / W. Scotland; UoA 1 and UoA 5), except for the Grande Hermine in the North Sea (UoA 3). These catches are, however, much smaller in comparison, so assuming a similar proportion of discards, the impact of discarding by the Grande Hermine in the North Sea will be negligible. As of 2016, the landings obligation is being phased in for this fishery, so discarding will presumably cease altogether for commercially important species over the next few years. In the NEA, discarding is not permitted.</p> <p>On this basis, both landings and discards may be evaluated reasonably accurately, hence SG80 is met. For SG100 in relation to ‘main’ species, the team considered that catch data in this fishery are overall accurate and verifiable – discards are estimated with more error than landings but comprise a very small percentage of the catch overall, where they are not forbidden (see Table 9 and Table 10). For the main retained species, the status of the populations is tracked either via an analytical stock assessment or via survey or fisheries indices (monkfish, ling), allowing the impact of the fishery on stock status to be evaluated (see rationale for 2.1.1).</p> <p>SG100 requires information on catch and consequences for population status for all retained species. The team considered that landings data (the vast majority of the catch) in this fishery can be considered ‘accurate and verifiable’ because of stringent enforcement and verification methods (see PI3.2.3) so the first part of SG100 is met. As set out in the rationales for PIs 2.1.1 and 2.1.2, there is some kind of management strategy and some kind of assessment for most of the non-main retained species, but not all. For the North Sea / W. Scotland area, problems are <i>Phycis blennoides</i> (Euronor UoA 1 and Scapêche UoA 5) and chimaeras and squid (Scapêche, UoA 5); there may be small quantities of discards of these species by the Grande Hermine also, but this is not known. For the NEA, there is a group quota for ‘other’; this may include species which have some kind of stock assessments (e.g. ling) but may also include others which do not.</p>		

b	Guide post	Information is adequate to qualitatively assess outcome status with respect to biologically based limits.	Information is sufficient to estimate outcome status with respect to biologically based limits.	Information is sufficient to quantitatively estimate outcome status with a high degree of certainty.
	Met?	All main species - Y Minor species – Met by default	All main species - Y Minor species – Met by default	Hake, NEA cod, Greenland halibut - Y Monkfish, ling - N Minor species – N for all UoAs
	Justification	As set out in the rationale for 2.1.1, the status of all the 'main' retained stocks can be estimated with respect to biologically-based limits. SG80 is met in full for all UoAs. SG100 is met for the retained species with an analytical stock assessment – i.e. for the main retained species hake, NEA cod and Greenland halibut. For the minor species, SG100 is met for some stocks (e.g. haddock in all areas) but for all UoAs there are at least some for which it is not met (e.g. <i>Phycis</i> , NEA 'other', catsharks, chimaera)		
c	Guide post	Information is adequate to support measures to manage main retained species.	Information is adequate to support a partial strategy to manage main retained species.	Information is adequate to support a strategy to manage retained species, and evaluate with a high degree of certainty whether the strategy is achieving its objective.
	Met?	All main species - Y Minor species – Met by default	All main species - Y Minor species – Met by default	Hake, NEA cod - Y Greenland halibut, monkfish, ling - N Minor species - N for all UoAs
	Justification	All the main retained species have a management strategy, as described in PI2.1.2 above. SG80 is met. For SG100 'main' retained species hake and NEA cod are above the target level with a high degree of certainty; the other main retained species are not (Greenland halibut) or there is a not a clearly-defined objective (monkfish, ling). For the minor species, as above, SG100 is met for some but not others.		
d	Guide post		Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator score or the operation of the fishery or the effectiveness of the strategy)	Monitoring of retained species is conducted in sufficient detail to assess ongoing mortalities to all retained species.
	Met?		All main species - Y Minor species – Met by default	Hake, NEA cod, Greenland halibut - Y Monkfish, ling - N Minor species - N for all UoAs

	Justification	As described above, landings and discards are monitored for this fishery at a level of accuracy which allow the impact of the fishery on these stocks (in terms of removals) to be monitored quantitatively. All the main retained species are also monitored at the stock level, either via an analytical assessment or via survey or CPUE indices (ling, monkfish) which allow the stock status and the effectiveness of the management strategy to be evaluated. SG80 is met. For SG100, fishing mortality can be estimated for all except monkfish and ling. For the minor species, as above, SG100 is met for some but not others.
References		<p>, 2015e. ICES Advice on fishing opportunities, catch, and effort Celtic Seas and Greater North Sea Ecoregions. 5.3.1 Anglerfish (<i>Lophius piscatorius</i> and <i>L. budegassa</i>) in Subareas IV and VI and Division IIIa (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 5.</p> <p>, 2015f. ICES Advice on fishing opportunities, catch, and effort Northeast Atlantic. 9.3.24 Ling (<i>Molva molva</i>) in Subareas VI-IX, XII, and XIV, and in Divisions IIIa and IVa (other areas). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 9.</p> <p>, 2015g. 3.3.4. Cod (<i>Gadus morhua</i>) in Subareas I and II (Northeast Arctic)</p> <p>2015h. 6.3.10. Haddock (<i>Melanogrammus aeglefinus</i>) in Subarea IV and Divisions VIa and IIIa West (North Sea, West of Scotland, Skagerrak)</p> <p>2015i. 9.3.6. Blue ling (<i>Molva dypterygia</i>) in Subareas I, II, VIII, IX, and XII, and Divisions IIIa and IVa (other areas)</p> <p>2015j. 6.3.10. Cod (<i>Gadus morhua</i>) in Subarea IV and Divisions VIId and IIIa West (North Sea, Eastern English Channel, Skagerrak)</p> <p>2015k. 6.3.56. Whiting (<i>Merlangius merlangus</i>) in Subarea IV and Division VIId (North Sea and Eastern English Channel)</p> <p>2015l. 9.3.4. Widely distributed and migratory stocks: Black scabbardfish (<i>Aphanopus carbo</i>) in the Northeast Atlantic: Subareas I, II, IV, VI, VII, VIII, X, and XIV, and Divisions IIIa, Va, Vb, IXa, and XIIb advice black scabbardfish VI</p> <p>2015m. 9.3.49. Tusk (<i>Brosme brosme</i>) in Subareas IV, VII-IX, and in Divisions IIIa, Vb, VIa, and XIIb (Northeast Atlantic)</p> <p>2015n. 2.3.10. Golden redfish (<i>Sebastes norvegicus</i>) in Subareas V, VI, XII, and XIV (Iceland and Faroes grounds, West of Scotland, North of Azores, East of Greenland)</p> <p>2015o. 9.3.8. Widely distributed and migratory stocks: Greater forkbeard (<i>Phycis blennoides</i>) in the Northeast Atlantic</p> <p>2015p. 3.3.8. Haddock (<i>Melanogrammus aeglefinus</i>) in Subareas I and II (Northeast Arctic)</p> <p>2015q. 3.3.6. Barents Sea and Norwegian Sea STOCK Beaked redfish (<i>Sebastes mentella</i>) in Subareas I and II</p> <p>s 2015r. 3.3.7. Greenland halibut (<i>Reinhardtius hippoglossoides</i>) in Subareas I and II (Northeast Arctic)</p> <p>2015s. 5.3.7. Cod (<i>Gadus morhua</i>) in Division VIa (West of Scotland)</p> <p>2015t. 5.3.22. Megrin (<i>Lepidorhombus</i> spp.) in Divisions IVa and VIa (Northern North Sea, West of Scotland)</p> <p>2015u. 5.3.20. Lesser-spotted dogfish (<i>Scyliorhinus canicula</i>) in Subarea VI and Divisions VIIa-c, e-j (west of Scotland, Irish Sea, and southern Celtic Seas)</p> <p>ICES, 2015cc. ICES Advice on fishing opportunities, catch, and effort Greater North Sea, Celtic Seas, Bay of Biscay and Iberian coast Ecoregions. 9.3.14 Hake (<i>Merluccius merluccius</i>) in Subareas IV, VI, and VII and Divisions IIIa, VIIIa,b,d (Northern stock) (Greater North Sea, Celtic Seas, Northern Bay of Biscay). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 9.</p> <p>, 2015dd. 2.3.11. Greenland halibut (<i>Reinhardtius hippoglossoides</i>) in Subareas V, VI, XII, and XIV (Iceland and Faroes grounds, West of Scotland, North of Azores, East of Greenland)</p> <p>, 2015ee. 4.3.4. Saithe (<i>Pollachius virens</i>) in Division Vb (Faroes grounds)</p>

	UoA 1 (Euronor North Sea / West of Scotland)	UoA 2 (Euronor Northeast Arctic)	UoA 3 (Cie des Pêches North Sea / West of Scotland)	UoA 4 (Cie des Pêches Northeast Arctic)	UoA 5 (Scapêche North Sea / West of Scotland)	Score scoring element
Score hake	x		x		x	100
Score Greenland halibut	x					95
Score ling					x	85
Score Northeast Arctic cod		x		x		100
Score monkfish					x	85
Score minor species	x	x	x	x	x	80
OVERALL SCORE UOA	85	85	85	85	85	
CONDITION NUMBER (if relevant):						N/A

Evaluation table 16 - 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	Guide post	Main bycatch species are likely to be within biologically based limits (if not, go to scoring issue b below).	Main bycatch species are highly likely to be within biologically based limits (if not, go to scoring issue b below).	There is a high degree of certainty that bycatch species are within biologically based limits.
	Met?	Minor bycatch species – Met by default	Minor bycatch species – Met by default	Minor bycatch species – N
	Justification	<p><u>North Sea / West of Scotland (UoA 1, 3 and 5)</u>: No ‘main’ bycatch species have been identified in the North Sea / W. Scotland fishery (UoA1, 3 and 5). Hence SG80 is met by default.</p> <p>According to observer reports, most of the discards are made up of small quantities of commercially-important species which are otherwise usually or sometimes retained (mainly undersized individuals, according to the observer reports). These would be considered under ‘retained’ species above. Some species are always discarded: this includes gurnards, some rays, catsharks and pelagic species (herring, boarfish). For the most part, there is not a ‘high degree of certainty’ that these species are within biologically-based limits. SG100 is not met.</p> <p><u>Northeast Arctic (UoA 2 and 4)</u>: In the NEA, discarding is forbidden and enforcement is strict (see PI 3.2.3). On this basis (and as harmonised with other fisheries in the Barents Sea) the team were confident that bycatch rates are low in this fishery; likely to be <5% of the catch in total and therefore no main bycatch species have been identified. Nevertheless, there is a lack of direct data from this fishery, so the team evaluated data from the Norwegian reference fleet (see Table 11 and Table 12). Five <u>possible</u> bycatch species were identified, considered here as minor bycatch species, of which two (round skate and spinytail skate) are assessed by IUCN as ‘least concern’ and on this basis (and given the likelihood of low catches by the fishery) evaluated to be ‘highly likely’ to be within biologically-based limits (SG80 met), but not a ‘high degree of certainty’ since IUCN evaluations are semi-quantitative at best (SG100 not met). Starry ray status is not known for the Barents Sea but the species is thought to be declining further south; velvet-belly lanternshark is assessed by IUCN as ‘near threatened’ and stock status of grenadier is unknown – these are considered under scoring issue b below.</p>		
b	Guide post	If main bycatch species are outside biologically based limits there are mitigation measures in place that are expected to ensure that the fishery does not hinder recovery and rebuilding.	If main bycatch species are outside biologically based limits there is a partial strategy of demonstrably effective mitigation measures in place such that the fishery does not hinder recovery and rebuilding.	
	Met?	Minor bycatch species – Met by default	Minor bycatch species – Met by default	

	Justification	<p>Although this scoring issue is met by default for minor bycatch species, scoring was investigated in further detail: This applies to starry ray and velvet-belly lanternshark (possibly) in the NEA.</p> <p>There are bycatch mitigation measures in place in the form of a discard ban which is strongly enforced. Measures are also in place (large mesh-size, sorting grids) to ensure that the fishery is as selective as possible. Although there are no direct data from this fishery, there is an evaluation of the discard ban based on observers from other fisheries (e.g. on board Russian vessels) as well as via evaluation of data from the Norwegian reference fleet (comparison of commercial landings with total catch of reference vessels; IMR, 2011). On this basis, the team concluded that there is a partial strategy of demonstrably effective mitigation measures which will ensure that the fishery is not impacting stock status of these species. SG80 is met.</p>		
c	Guide post	If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the bycatch species to be outside biologically based limits or hindering recovery.		
	Met?	Minor bycatch species – Met by default		
	Justification	<p>Although this scoring issue is met by default for minor bycatch species, scoring was investigated in further detail: This applies to grenadier (possibly) in the NEA. The argument is the same as for scoring issue b. Met.</p>		
References	<p>See data provided in Section 2.2.3 IMR, 2011. Evaluation of the Norwegian Reference Fleet. A Report to the Institute of Marine Research by an International Committee. 15 August 2011 (Final Report)</p>			
OVERALL PERFORMANCE INDICATOR SCORE:				80 for all UoAs
CONDITION NUMBER (if relevant):				N/A

Evaluation table 17 - 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	Guide post	There are measures in place, if necessary, that are expected to maintain the main bycatch species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a partial strategy in place, if necessary, that is expected to maintain the main bycatch species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a strategy in place for managing and minimizing bycatch.
	Met?	Minor bycatch species – Met by default	Minor bycatch species – Met by default	N – UoA 1, 3 and 5 Y – UoA 2 and 4
	Justification	<p><u>North Sea / West of Scotland (UoA 1, 3 and 5)</u>: Since there are no ‘main’ bycatch species, SG80 is met by default for all UoAs.</p> <p>For SG100:</p> <p>There are various measures in place for reducing bycatch: this includes mesh-size regulations (EU Regulation 850/1998), the requirement for a square-mesh panel in some areas and the system of real-time closed areas to avoid aggregations of cod or of juveniles. Starting in 2016, the landings obligation will start to be phased in in this fishery, with a complete ban on discarding of quota species foreseen to be in place by 2019.</p> <p>The team considered that the landings obligation certainly constitutes a ‘strategy’ as required by SG100. The team debated whether the current measures, which are fairly comprehensive, by themselves constitute a ‘strategy’ but noted that this would leave ‘nowhere to go’ in scoring when the landings obligation, which is a big step change in policy on discarding, is implemented. Therefore, the team concluded that SG100 is not (yet) met.</p> <p><u>Northeast Arctic (UoA 2 and 4)</u>: Since there are no ‘main’ bycatch species, SG80 is met by default for all UoAs.</p> <p>Discarding is not allowed in this fishery, and enforcement is strict (see PI 3.2.3). Measures are also in place to ensure that the fishery is selective for cod (large mesh-size, sorting grill, move on rule, real-time closures, fishing area selection). Although the possibility of some discarding is evaluated in PI 2.2.1 above (on a precautionary basis), the team concluded that these measures constitute a strategy for minimising bycatch (discards) – SG100 is met.</p>		
b	Guide post	The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/species).	There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or species involved.	Testing supports high confidence that the strategy will work, based on information directly about the fishery and/or species involved.

	Met?	Minor bycatch species – Met by default	Minor bycatch species – Met by default	N
	Justification	<p><u>North Sea / West of Scotland (UoA 1, 3 and 5)</u>: Since there are no ‘main’ bycatch species, SG80 is met by default for all UoAs. SG100: Since the team concluded that there is not (yet) a strategy for the North Sea / W. Scotland, it cannot be met.</p> <p><u>Northeast Arctic (UoA 2 and 4)</u>: Since there are no ‘main’ bycatch species, SG80 is met by default for all UoAs. SG100: The team was confident that enforcement of the discard ban is good and that the fishery is selective. An analysis of possibly bycatch species (based on IMR 2011) in 2.2.1 suggests that the fishery is not likely to be having a significant impact on these stocks, even if there is any discarding. In the absence of direct data, however, we could not say that ‘testing supports high confidence’, so SG100 is not met here either.</p>		
c	Guide post		There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	Met?		Minor bycatch species – Met by default	N
	Justification	<p><u>North Sea / West of Scotland (UoA 1, 3 and 5)</u>: Since there are no ‘main’ bycatch species, SG80 is met by default for all UoAs. SG100: For the North Sea / W Scotland, there is no ‘strategy’, so SG100 is not met.</p> <p><u>Northeast Arctic (UoA 2 and 4)</u>: Since there are no ‘main’ bycatch species, SG80 is met by default for all UoAs. SG100: There is a ‘strategy’ with indirect evidence from various sources (other fisheries, reference fleet analysis, enforcement and control records) that it is being implemented. There is not, however clear (direct) evidence from this fishery (such as observer reports) to demonstrate beyond doubt that the strategy is being implemented. SG100 is not met.</p>		
d	Guide post			There is some evidence that the strategy is achieving its overall objective.
	Met?			N
	Justification	<p><u>North Sea / West of Scotland (UoA 1, 3 and 5)</u>: – no strategy. Not met.</p> <p><u>Northeast Arctic (UoA 2 and 4)</u>: There is only limited information about population trends in the species identified as possible discards (see 2.2.1); individuals which would otherwise be discarded are landed under ‘other’. Since we do not know for sure what these are, we cannot state what their stock status is – i.e. whether the strategy is working. Not met.</p>		
References		<p>EC, 1998. 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</p> <p>IMR, 2011. Evaluation of the Norwegian Reference Fleet. A Report to the Institute of Marine Research by an International Committee. 15 August 2011 (Final Report)</p>		

	<p>Gullestad P. 2013. The “Discard Ban Package” – Norwegian experiences in efforts to improve fisheries exploitation patterns. Available at http://www.fisheries.no/PageFiles/21748/HSM/pdf_vedlegg/Norwegian%20discard%20policy.pdf</p> <p>Real-time closures in Scottish waters: http://www.gov.scot/Topics/marine/Sea-Fisheries/management/restrictions/closed</p> <p>Details of Norwegian regulations on discarding: https://www.regjeringen.no/globalassets/upload/fkd/brosjyrer-og-veiledninger/fact_sheet_discard.pdf</p> <p>How the discard ban will be phased in for demersal fisheries in Scottish waters: http://www.gov.scot/Topics/marine/Sea-Fisheries/discards/demersal</p>
OVERALL PERFORMANCE INDICATOR SCORE:	<p>80 – UoA 1, 3 and 5</p> <p>85 – UoA 2 and 4</p>
CONDITION NUMBER (if relevant):	N/A

Evaluation table 18 - 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	Guide post	Qualitative information is available on the amount of main bycatch species taken by the fishery.	Qualitative information and some quantitative information are available on the amount of main bycatch species taken by the fishery.	Accurate and verifiable information is available on the catch of all bycatch species and the consequences for the status of affected populations.
	Met?	Minor bycatch species – Met by default	Minor bycatch species – Met by default	N
	Justification	<p><u>North Sea / West of Scotland (UoA 1, 3 and 5)</u>: Since there are no ‘main’ bycatch species, SG80 is met by default for all UoAs. Some species are always discarded: this includes gurnards, some rays, catsharks and pelagic species (herring, boarfish). From the observer reports, a rough estimate of the total catch of these species can be made for Euronor and Scapêche (see Table 8, Table 9 and Table 10 in the main report); and extrapolated by assuming the proportional discard rate and species composition is similar for the Grande Hermine as for Euronor in the North Sea since it is targeting the same stock in the same areas (this approach is reasonable given that the catch of Cie des Pêches in the North Sea is much smaller than that of the other companies). For some (e.g. the small pelagic species) the status of populations and size of total directed catch is well known, and it is clear that that consequence of this fishery for these populations is zero; however for most of these species (gurnards, small catsharks and rays) this is not the case. SG100 is not met in full.</p> <p><u>Northeast Arctic (UoA 2 and 4)</u>: There is no direct information on discarding from this fishery, because there are no observer reports available (and for the reason that discarding is not allowed). Based on the measures in place for selectivity, strong Norwegian enforcement, as well as indirect data sources used by the Norwegians (e.g. reference fleet), the team were confident that there is at least not enough discarding for any species to qualify as a ‘main’ discard species (defined as >2% of the total catch if vulnerable – this would amount to ~80t each for Euronor and Cie des Pêches St. Malo, per species – an amount of discarding which would doubtless attract the attention of the authorities. A precautionary analysis in 2.2.1 above of possibly bycatch species also suggests that the fishery is not likely to be having an impact on these stocks). On this basis (no ‘main’ bycatch species), SG80 is met. SG100 ‘accurate and verifiable information’ is not met.</p>		
b	Guide post	Information is adequate to broadly understand outcome status with respect to biologically based limits	Information is sufficient to estimate outcome status with respect to biologically based limits.	Information is sufficient to quantitatively estimate outcome status with respect to biologically based limits with a high degree of certainty.
	Met?	Minor bycatch species – Met by default	Minor bycatch species – Met by default	N

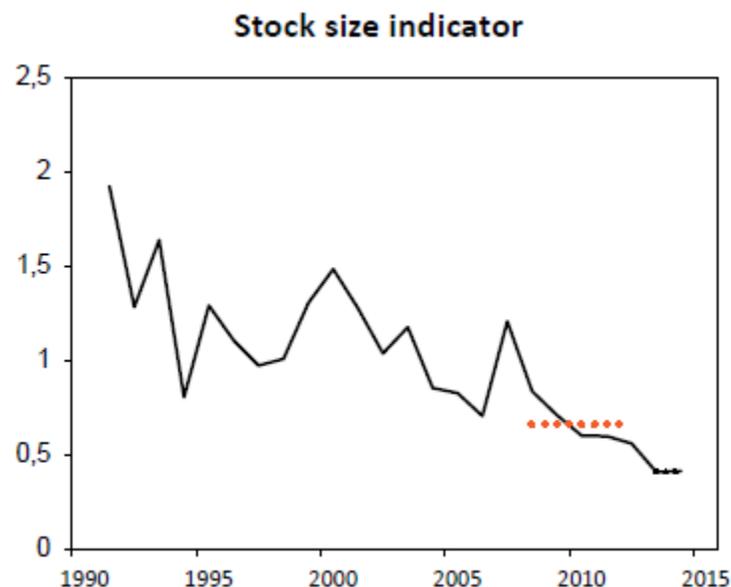
	Justification	<p>Since there are no 'main' bycatch species, SG80 is met by default for all UoAs.</p> <p>SG100: As noted above, the outcome status of minor bycatch species in the North Sea / West of Scotland is mainly not know; for the NEA, there is no 'high degree of certainty' because of lack of directly verifiable data. SG100 is not met.</p>		
c	Guide post	Information is adequate to support measures to manage bycatch.	Information is adequate to support a partial strategy to manage main bycatch species.	Information is adequate to support a strategy to manage retained species, and evaluate with a high degree of certainty whether the strategy is achieving its objective.
	Met?	Minor bycatch species – Met by default	Minor bycatch species – Met by default	N
	Justification	<p>Since there are no 'main' bycatch species, SG80 is met by default for all UoAs.</p> <p>For all UoAs, the team concluded that information is sufficient to support a strategy – in the case of the NEA there is a strategy; and for the North Sea / W. Scotland, a strategy (the landings obligation) is being phased in from 2016. The first part of SG100 is met for all UoAs.</p> <p>Presuming that the objective of the strategy in both cases is zero discards; SG100 is not met, because the NEA has no direct information (e.g. observer reports) while for the North Sea / W. Scotland, coverage is quite low (~9% in 2014 for Scapêche and lower for Euronor) and at-sea enforcement is less good than in the NEA. SG100 is not met for any UoA.</p>		
d	Guide post		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.
	Met?		Minor bycatch species – Met by default	N
	Justification	<p>Since there are no 'main' bycatch species, SG80 is met by default for all UoAs.</p> <p>For the North Sea / W Scotland (UoA 1, 3 and 5), observer coverage is too low to evaluate catches with much accuracy, and in any case there is usually insufficient information about the stock to estimate fishing mortality (with the exception of the small pelagic species). For the NEA (UoA 2 and 4), aside from enforcement (which is strong) there is no direct monitoring of bycatch of the type which would allow fishing mortalities to be estimated, although the team considered that it was reasonable to assume that these would be negligible. SG100 is not met.</p>		
References	<p>Details of Norwegian regulations on discarding: https://www.regjeringen.no/globalassets/upload/fkd/brosjyrer-og-veiledninger/fact_sheet_discard.pdf</p> <p>How the discard ban will be phased in for demersal fisheries in Scottish waters: http://www.gov.scot/Topics/marine/Sea-Fisheries/discards/demersal</p>			

OVERALL PERFORMANCE INDICATOR SCORE:	80 for all UoAs
CONDITION NUMBER (if relevant):	N/A

Evaluation table 19 - PI 2.3.1

PI 2.3.1		The fishery meets national and international requirements for the protection of ETP species		
		The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Known effects of the fishery are likely to be within limits of national and international requirements for protection of ETP species.	The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species.	There is a high degree of certainty that the effects of the fishery are within limits of national and international requirements for protection of ETP species.
	Met?	Y – all UoAs	Y – UoA 1, 2, 4 and 5 N – UoA 3	Y – UoA 2 and 4 N – UoA 1, 3 and 5
	Justification	<p>ETP species interacting with each of the UoAs are as follows (see Section 2.2.3):</p> <p>UoA 1 (Euronor North Sea / West of Scotland): starry ray</p> <p>UoA 2 (Euronor Northeast Arctic): none</p> <p>UoA 3 (Cie des Pêches North Sea / West of Scotland): unclear; assumed to be the same as Euronor</p> <p>UoA 4 (Cie des Pêches Northeast Arctic): none</p> <p>UoA 5 (Scapêche North Sea / West of Scotland): common skate</p> <p><u>Starry ray <i>Amblyraja radiata</i></u>: ICES notes that although the species is widespread in the central and northern North Sea, the survey abundance index has been decreasing continuously since the 1990s (see Figure below from ICES 2015v). ICES advice is 'no directed fishery; measures to reduce bycatch'. EU regulations are 'landing forbidden; if caught must not be harmed and must be returned promptly'. A (very approximate) estimate of total Euronor catch of this species, from observer reports, is ~6.8 t/yr (see Table 9). EU regulations are followed and the vessels have on board ray identification guides provided by Ifremer. It is not possible to evaluate from the ObsMer reports the status of individuals on discarding, but information from other fisheries (Jo Gascoigne pers. obs.) suggests that most individuals arrive on board dead or injured, so it is not clear that the requirement to discard promptly has much effect for this species. Nevertheless, the team considered that international requirements (not to target, not to retain, to discard promptly when alive) were highly likely to be being met for this fishery, and hence SG80 is met for Euronor (UoA 1).</p> <p>In the absence of data on discards, the Grande Hermine has been assumed to have the same overlap with ETP species as the Euronor vessels in the North Sea (although at a lower level because of lower effort and catches; if catch of starry ray can scale with saithe catch in the North Sea, the estimated total catch by the Grande Hermine in 2015 would be 0.23 t). Nevertheless, SG80</p>		

requires that 'the effects of the fishery are known', which is not the case for this fishery since there are no direct data; although 'known effects' can be extrapolated as above. SG60 is met, but SG80 is not met for Cie des Pêches St. Malo (UoA 3).



Starry ray stock size indicator from trawl survey (number per hour); from ICES 2015v

Common skate *Dipturus batis*: ICES considers that the *D. batis* species complex is depleted and notes that 'individuals are rarely encountered in surveys' (ICES, 2015x), although it seems likely from the analysis of Scapêche observer data (Table 8 and Table 10) that the species remains more abundant in deeper areas; perhaps not overlapping with surveys as much as it used to. ICES advice and EU regulations are the same as above, and Scapêche actions are the same as for Euronor; therefore the scoring is the same.

SG100 is not met because the effects of the fishery are not known with a high degree of certainty, observer coverage being limited.

In the NEA (UoA 2, UoA 4), since no overlapping ETP species have been identified, 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 and SG100 is met.

b	Guidepost	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.
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	Met?	Y – all UoAs	Y – UoA 2 and 4 N – UoA 1, 3 and 5	N – all UoAs
	Justification	<p>North Sea / West of Scotland (UoA 1, 3 and 5):</p> <p>In relation to SG60, the team noted that the fisheries are doing everything asked of them by the regulatory authorities. Overall trawl effort in both IV and VI has declined over the last few decades, which should result in reduced pressure on these stocks.</p> <p>For <u>starry ray</u> (UoA 1 and 3), the team noted that interactions are patchy (out of 13 observer reports, 6 recorded zero catch and the other seven 2, 9, 12, 22, 22, 103 and 504 individuals). The team concluded that since regulatory requirements are being met following ICES advice, direct impacts could be evaluated (qualitatively) as ‘unlikely’ to create unacceptable impacts (SG60 met). It is at least possible, however, that the fishery could do more, perhaps by evaluating the areas or conditions under which large quantities of the species are caught together, and/or the circumstances in which the individuals are brought on board in good or bad condition – i.e. it was possible to do more to avoid fishing or killing these individuals. On this basis, the team considered that SG80 was not fully met.</p> <p>Note: Starry ray was not included as an ETP species in the previous assessment cycle, hence this new condition. Starry ray was only included as a protected species in EU Fisheries Regulations in 2015. This scoring is harmonised with SFSAG haddock.</p> <p>For <u>common skate</u> (UoA 5) likewise, the regulatory requirements are being met (SG60 met). Although the total catch of common skate by Scapêche appears to be potentially significant, the team noted that it overlaps with the saithe fishery specifically to a much more limited extent than with Scapêche’s other fisheries, although the fact that these fisheries are all undertaken close together in time and space makes it hard to untangle the patterns of bycatch (see Table 8 and Table 10). In the previous certification cycle, Scapêche had a condition on this issue which was closed after close inspection of observer reports. Nevertheless, the team felt that it is not possible on the basis of the data provided for this re-assessment to say that direct impacts of Scapêche’s saithe fishery are ‘highly unlikely’ to create unacceptable impacts on common skate as is required for SG80. The team noted that this scoring is harmonised with a similar approach for other MSC fisheries: SFSAG haddock and saithe fishery, Germany North Sea saithe trawl and SFPO North Sea saithe.</p> <p><u>Northeast Arctic (UoA 2 and 4)</u>: Since there is no evidence of any interactions with ETP species, the team considered that SG80 is met. However, lacking definitive first-hand objective data such as observer reports, there is not a ‘high degree of confidence’ so SG100 is not met.</p>		
c	Guidepost		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.
	Met?		Y – all UoAs	N – all UoAs

	Justification	From trophic studies there is no evidence that saithe or the other main retained species interact significantly with ray species. Disturbance is unquantifiable, but most likely is not significant compared to direct impacts from fishing. SG80 is met. SG100 is not met because there is not a 'high degree of confidence' about indirect effects.
References	<p>ICES, 2015v. ICES Advice on fishing opportunities, catch, and effort Greater North Sea Ecoregion. 6.3.50 Starry ray (<i>Amblyraja radiata</i>) in Subareas II and IV and Division IIIa (Norwegian Sea, North Sea, Skagerrak, and Kattegat). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 6.</p> <p>ICES, 2015w. ICES Advice on fishing opportunities, catch, and effort Greater North Sea Ecoregion. 6.3.5 Common skate (<i>Dipturus batis</i>-complex) in Subarea IV and Division IIIa (North Sea, Skagerrak, and Kattegat). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 6.</p> <p>ICES 2015x. 5.3.29.16. Celtic Sea and west of Scotland STOCK Common skate (<i>Dipturus batis</i> complex (<i>Dipturus</i> cf. <i>flossada</i> and <i>Dipturus</i> cf. <i>intermedia</i>), <i>Dipturus nidarosiensis</i>, and <i>Dipturus oxyrinchus</i>) in Subareas VI and VII (excluding Division VIId)</p> <p>EC, 2016. Council Regulation 2016/72 of 22 January 2016 fixing for 2016 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters, and amending Regulation (EU) 2015/104 – see Article 13</p>	
OVERALL PERFORMANCE INDICATOR SCORE:		UoA 1: 75 UoA 2: 85 UoA 3: 65 UoA 4: 85 UoA 5: 75
CONDITION NUMBER (if relevant):		1

Evaluation table 20 - PI 2.3.2

PI 2.3.2		The fishery has in place precautionary management strategies designed to: <ul style="list-style-type: none"> • Meet national and international requirements; • Ensure the fishery does not pose a risk of serious harm to ETP species; • Ensure the fishery does not hinder recovery of ETP species; and • Minimise mortality of ETP species. 		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	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.
	Met?	Y – all UoAs	Y – all UoAs	N – all UoAs
	Justification	<p>North Sea / West of Scotland (UoA 1, 3 and 5):</p> <p>ICES provide advice on all three elasmobranch stocks (starry ray IV, common skate complex IV and VI; ICES, 2015v,w,x; summarised in 2.3.1 above), which is in summary to avoid catching where possible. This advice is reflected in the EU Regulations (also quoted above). On this basis, the team considered that this constitutes a strategy for managing the impact of fisheries (in general, including this one) on these stocks. They include measures to minimise mortality (no targeting, avoid bycatch, carefully handling if taken alive), and are designed to reduce the fishery impact to the lowest practicable level. The team also noted that the fishery for saithe is a clean fishery, with measures in place to minimise bycatch of other species (gear, sorting grid, targeting of saithe specifically); these measures will also help incidentally to reduce bycatch of rays. Hence SG80 is met.</p> <p>In relation to SG100, the team did not consider that these measures constitute a 'comprehensive strategy' because, as discussed above, it seems at least plausible to us that additional measures are possible, at least for the rays.</p> <p>Northeast Arctic (UoA 2 and 4):</p> <p>For the NEA, although there is not an 'ETP species' strategy specifically, there is also no evidence that the fishery interacts with any ETP species, and the fishery has various measures in place to ensure selectivity for cod, as far as possible, because discarding is banned and haddock bycatch severely limited for EU vessels (mesh size, sorting grid, move on rules, real-time closures, fishing strategy). The team considered that this would constitute a strategy for managing impact on bycatch species, including ETP, if any. SG80 is met. The team considered, however, that a 'comprehensive strategy' would require measures with particular species in mind, hence SG100 is not met.</p>		

b	Guide post	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.
	Met?	Y – all UoAs	N – UoA 1, 3 and 5 Y – UoA 2 and 4	N – all UoAs
	Justification	<p>North Sea / West of Scotland (UoA 1, 3 and 5):</p> <p>For starry ray (UoA 1 and 3) and common skate (UoA 5), since the measures are aligned with scientific (ICES) advice, they can be considered 'likely to work'. They are also supported by measures to reduce bycatch (gear selectivity via mesh size and design; saithe targeting; phasing in of the landings obligation) as well as an overall reduction in trawl effort in the North Sea in recent years. The team did not consider, however, that there is currently an objective basis for confidence that they will work. This is problematic, in as much as a reduction in bycatch rates could be attributed either to the measures working, or to a reduction in the population. ICES advice suggests that the overall situation with the population remains of concern. On this basis, SG80 is not met for either species.</p> <p>Note: This scoring is harmonised with the SFSAG haddock fishery (both species), and DFPO and SFSAG saithe (common skate) as described for 2.3.1 above.</p> <p>Northeast Arctic (UoA 2 and 4):</p> <p>Information from the fishery (landings, the discard ban) suggests that there are no significant interactions with any ETP species, so SG80 is met. For SG100 to be met, the team considered that more direct information from the fishery (such as observer reports) would be required.</p>		
c	Guide post		There is evidence that the strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	Met?		Y – all UoAs	N – all UoAs
	Justification	<p>North Sea / West of Scotland (UoA 1, 3 and 5):</p> <p>The regulatory requirements for the rays are being implemented in this fishery (no targeting, no landings, good handling practices when alive). Ifremer have provided ray identification charts. SG80 is therefore met. SG100 is not met because there is only direct information about discard rates and mortality from a subset of trips (those with observers).</p> <p>Northeast Arctic (UoA 2 and 4):</p> <p>On the basis that there is no evidence of any interactions, SG80 is met. SG100 would require more specific and direct data, however.</p>		
d	Guide post			There is evidence that the strategy is achieving its objective.

	Met?		N – UoA 1, 3 and 5 Y – UoA 2 and 4
	Justification	<p>North Sea / West of Scotland (UoA 1, 3 and 5): There is no evidence of the recovery of starry ray or common skate populations, so this is not met.</p> <p>Northeast Arctic (UoA 2 and 4): It can be argued that there is evidence that the strategy is achieving its objective, in as much as there are no significant interactions with ETP species.</p>	
References	<p>ICES, 2015v. ICES Advice on fishing opportunities, catch, and effort Greater North Sea Ecoregion. 6.3.50 Starry ray (<i>Amblyraja radiata</i>) in Subareas II and IV and Division IIIa (Norwegian Sea, North Sea, Skagerrak, and Kattegat). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 6.</p> <p>ICES, 2015w. ICES Advice on fishing opportunities, catch, and effort Greater North Sea Ecoregion. 6.3.5 Common skate (<i>Dipturus batis-complex</i>) in Subarea IV and Division IIIa (North Sea, Skagerrak, and Kattegat). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 6.</p> <p>ICES 2015x. 5.3.29.16. Celtic Sea and west of Scotland STOCK Common skate (<i>Dipturus batis complex</i> (<i>Dipturus cf. flossada</i> and <i>Dipturus cf. intermedia</i>), <i>Dipturus nidarosiensis</i>, and <i>Dipturus oxyrinchus</i>) in Subareas VI and VII (excluding Division VIId)</p> <p>EC, 2016. Council Regulation 2016/72 of 22 January 2016 fixing for 2016 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters, and amending Regulation (EU) 2015/104 – see Article 13</p> <p>Gullestad P. 2013. The “Discard Ban Package” – Norwegian experiences in efforts to improve fisheries exploitation patterns. Available at http://www.fisheries.no/PageFiles/21748/HSM/pdf_vedlegg/Norwegian%20discard%20policy.pdf</p>		
OVERALL PERFORMANCE INDICATOR SCORE:		<p>UoA 1: 75</p> <p>UoA 2: 85</p> <p>UoA 3: 75</p> <p>UoA 4: 85</p> <p>UoA 5: 75</p>	
CONDITION NUMBER (if relevant):		2	

Evaluation table 21 - PI 2.3.3

PI 2.3.3		Relevant information is collected to support the management of fishery impacts on ETP species, including:		
		<ul style="list-style-type: none"> • Information for the development of the management strategy; • Information to assess the effectiveness of the management strategy; and • Information to determine the outcome status of ETP species. 		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	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.
	Met?	Y – all UoAs	Y – all UoAs	N – all UoAs
	Justification	<p>North Sea / West of Scotland (UoA 1, 3 and 5): Information on interactions with ETP comes from the French ObsMer observer programme, which allows an approximate quantitative estimate of fishery-related mortality to be made, as per Table 8, Table 9 and Table 10. In terms of the impact of this mortality on the stock, ICES provides analyses and advice. SG80 is met. There is not, however, a 'high degree of certainty', according to ICES, so SG100 is not met.</p> <p>Northeast Arctic (UoA 2 and 4): Since there is no evidence of any interaction with ETP species, SG80 is met. There is not, however, a 'high degree of certainty' so SG100 is not met.</p>		
b	Guide post	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.
	Met?	Y – all UoAs	Y – UoA 1, 2, 3 and 4 N – UoA 5	N – all UoAs
	Justification	<p>North Sea / West of Scotland (UoA 1, 3 and 5): Observer information provides a (semi)quantitative assessment of the total impact from the fishery for both Euronor and Scapêche, (and by extrapolation Cie des Pêches) hence SG60 is met. For starry ray ICES provide quantitative advice (ICES, 2015v). SG80 is met for starry ray (UoA 1 and 3) but in the absence of accurate and verifiable information (through increased observer coverage for example), SG100 is not met. There is, however, no quantitative assessment of common skate populations in Subarea VI (CES, 2015w). SG80 is not met for common skate (UoA 5). Note: This scoring for common skate is harmonised with SFSAG haddock and saithe.</p>		

		<p>Northeast Arctic (UoA 2 and 4): Since there is no evidence of any interaction with ETP species, SG80 is met. There is not, however, accurate and verifiable information so SG100 is not met.</p>		
c	Guide post	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.
	Met?	Y – all UoAs	Y – all UoAs	N – all UoAs
	Justification	As argued in 2.3.2 scoring issue a) there is a strategy in place for all the ETP species, in all areas. The strategy does not particularly rely on gathering information – rather on minimising any fisheries impacts. On this basis, SG80 is met. In relation to SG100, since there has not been argued to be a 'comprehensive strategy' for any of the species (see 2.3.2a) then it cannot be met.		
References	<p>ICES, 2015v. ICES Advice on fishing opportunities, catch, and effort Greater North Sea Ecoregion. 6.3.50 Starry ray (<i>Amblyraja radiata</i>) in Subareas II and IV and Division IIIa (Norwegian Sea, North Sea, Skagerrak, and Kattegat). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 6.</p> <p>ICES, 2015w. ICES Advice on fishing opportunities, catch, and effort Greater North Sea Ecoregion. 6.3.5 Common skate (<i>Dipturus batis</i>-complex) in Subarea IV and Division IIIa (North Sea, Skagerrak, and Kattegat). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 6.</p>			
OVERALL PERFORMANCE INDICATOR SCORE:				<p>UoA 1: 80 UoA 2: 80 UoA 3: 80 UoA 4: 80 UoA 5: 75</p>
CONDITION NUMBER (if relevant):				3

Evaluation table 22 - PI 2.4.1

PI 2.4.1		The fishery does not cause serious or irreversible harm to habitat structure, considered on a regional or bioregional basis, and function		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	The fishery is unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.	The fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.	There is evidence that the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.
	Met?	Y – all UoAs	Y – all UoAs	N – all UoAs
	Justification	<p>This fishery takes place in areas which have been trawled consistently for many years, and habitat protection has to be seen in that context.</p> <p>North Sea / West of Scotland (UoA 1, 3 and 5):</p> <p>The fishery in this area takes place mainly in Scottish waters. There is starting to be an extensive framework for the protection of marine habitats in offshore areas of the Scottish EEZ (Table 17). The Natura 2000 framework (SACs and SPAs) is continuing to be extended in marine areas but more extensive is the process of designating NCMPAs to establish a network which meets the requirements for protection of OSPAR vulnerable and threatened habitats. According to SNH, these areas cover >10% of Scottish waters. Although these areas have been formally designated, however, there is as yet no final decision on management, although options have been set out and consultation (sometimes vigorous; see http://www.bbc.com/news/uk-scotland-highlands-islands-35412565) is ongoing (Table 18).</p> <p>The fishery also takes place in Norwegian waters of the northern North Sea. Norway has relatively extensive closed areas for cold-water corals, and has set a target to protect 10% of coastal and marine areas by 2020 (see integrated plan for the Barents Sea, 2011); it is not known, however, whether this will include areas used by the fishery in the North Sea.</p> <p>It is clear that past trawling has changed North Sea demersal habitats considerably. Nevertheless, some apparently sensitive species and habitats have survived (e.g. sea pens in the Fladen Ground, <i>Arctica islandica</i>) and a structure is now being put in place to protect these species; carbonate mounds, sponge aggregations, burrowed mud (seapen habitat) and <i>Arctica</i> aggregations are two of the designation features for the NCMPAs. It is also worth noting that trawl effort around Scotland has declined by more than a quarter in the last 20 years.</p> <p>On this basis, the team concluded that the fishery is highly unlikely to have further significant impacts on existing habitats – i.e. SG80 is met. In relation to SG100, the team considered that ‘evidence’ would only be available when management is in place for the protected areas and their impact can be evaluated.</p> <p>Northeast Arctic (UoA 2 and 4):</p> <p>VMEs identified in the general area of the fishery are cold water corals, sponge beds and sea pens / coral gardens (MAREANO). There are several closed areas in the Norwegian Economic Zone (NEZ) protecting cold water corals, but none to protect the other VMEs</p>		

	<p>specifically. There is, however, excellent mapping from MAREANO that allows vessels to avoid these areas. There is less mapping available for the Fisheries Protection Zone around Svalbard (SFPZ), and no offshore closed areas specifically for habitats, although inshore areas around all the islands are closed to trawling (part of a National Park); this reportedly protects significant areas of vulnerable habitat. However, the rules on haddock bycatch limits for the EU fleets have the effect of ensuring that vessels keep to areas where they know that the catch will be mainly cod – i.e. it keeps the fishery within a known and established footprint. In any case, hardly any saithe is taken in this area, since it has a more southerly distribution than cod and haddock. On this basis, the team considered that SG80 is met. SG100 is not met because of a lack of information about habitats and changes over time, particularly in the SFPZ.</p> <p>Note on harmonisation for the NEA:</p> <p>The outcome of the harmonisation meeting for Barents Sea habitats is given in Appendix 6. It was noted that different fisheries may have different outcomes for the scoring of this PI based on various factors:</p> <ul style="list-style-type: none"> • Differences in target species (saithe fished further south, cod and haddock intermediate latitudes and prawn furthest north) • Differences in intelligence available about fishing zone (best information in NEZ, less information in SFPZ although improving, Russian zone a bit unclear - information may exist but be hard to access). • Differences in the number of vessels in fleet and type of vessels (size but also what technology they have on board for identifying bottom types and how they use it) • Vessel/Operation nationalities. E.g EU vs non-EU fishing activity - this is relevant in the Barents Sea because due to the rules on haddock bycatch for the EU fleet their footprint is more constrained than that of the Norwegian and Russian fleets. • Spatial extent of the vessel footprint – do they continuously fish over the same areas or is it widely dispersed. <p>This fishery scores relatively high in these factors: the target species is saithe meaning that only the southern part of the NEA is relevant (which has the best information on habitats); the fleet is small (3 vessels); it is an EU fleet so constrained in its footprint by haddock bycatch rules. On this basis, and considering the range of scores in Table 2 (harmonisation table), the team concluded that this score is consistent with the outcome of the harmonisation meeting.</p>
<p>References</p>	<p>Nature Conservation Marine Protected Areas: http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/national-designations/mpas/</p> <p>Scottish MPA Project. (2014) http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/national-designations/marine-protected-areas-(mpa)/scottish-mpa-project/</p> <p>Norwegian MPAs, including maps: http://www.miljodirektoratet.no/en/Areas-of-activity1/Marine-and-coastal-areas/Marine-protected-areas-in-the-OSPAR-network/</p> <p>Full information on NCMPAs: http://jncc.defra.gov.uk/page-5269</p> <p>Norwegian Ministry of the Environment 2011. First update of the Integrated Management Plan for the Marine Environment of the Barents Sea–Lofoten Area. Meld. St. 10 (2010–2011) Report to the Storting (white paper).</p> <p>Norwegian Ministry of the Environment 2013. Integrated Management of the Marine Environment of the North Sea and Skagerrak (Management Plan). Meld. St. 37 (2012–2013) Report to the Storting (white paper)</p>

	MAREANO: www.mareano.no	
OVERALL PERFORMANCE INDICATOR SCORE:		80 for all UoAs
CONDITION NUMBER (if relevant):		N/A

Evaluation table 23 - 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	Guide post	There are measures in place, if necessary, that are expected to achieve the Habitat Outcome 80 level of performance.	There is a partial strategy in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above.	There is a strategy in place for managing the impact of the fishery on habitat types.
	Met?	Y – all UoAs	Y – all UoAs	N – all UoAs
	Justification	<p>There is a process underway in all the areas of the fishery to map habitats and designate MPAs in sensitive areas. Key areas of cold water corals and carbonate mounds have already been closed to towed gears in both Norwegian and Scottish waters, and authorities are now considering options for other vulnerable habitats such as sponge aggregations and burrowed mud. In the NEA there is a move-on rule (2 nm) if vessels bring up >60kg of corals or >800kg of sponges, but this is reportedly not effective (never or rarely triggered).</p> <p>Both areas have ecosystem management plans in place (Scotland: National Marine Plan; Norway: three plans covering the North Sea/Skaggeak, the Norwegian Sea and the Barents Sea-Lofoten area), all of which include consideration of the impacts of demersal fishing on vulnerable habitats and how this can be managed.</p> <p>Other aspects of fisheries management, particularly the need to avoid bycatch (haddock bycatch restrictions and a discard ban in the NEA, restrictions under the Cod Recovery Plan and the coming landings obligation in EU waters) means that vessels tends to keep within a known footprint where they can get a clean catch of saithe (or cod in the NEA).</p> <p>The team considered that this constitutes a 'partial strategy' (SG80). The fact that there is a plan in place may constitute a full strategy, but the team felt that as regards habitat impacts specifically, they were not sufficiently detailed, and that SG100 would not be met until the process of mapping, designation of vulnerable areas and agreeing management for MPAs was completed; in relation to the NEA, the team noted that the strategy is less complete for other VMEs (sponges, sea pens) than for cold water corals, and is hence 'partial' in that sense.</p>		
b	Guide post	The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/habitats).	There is some objective basis for confidence that the partial strategy will work, based on information directly about the fishery and/or habitats involved.	Testing supports high confidence that the strategy will work, based on information directly about the fishery and/or habitats involved.
	Met?	Y – all UoAs	Y – all UoAs	N – all UoAs

	Justification	<p><u>Scottish waters</u>: Habitats are known and mapped, areas have been designated on an objective basis and management options and their consequences have been evaluated. There is therefore an objective basis for confidence that this strategy will work to protect habitats, once management has been put in place. Further, there is an objective basis for considering that management will be put in place, since this has already been done for the inshore MPAs (not directly relevant to this fishery, except as an example of the process). SG80 is met. The team considered, however, that 'high confidence' was only possible once it is clear how each area will be managed, so SG100 is not met.</p> <p><u>Norwegian waters</u> are mainly mapped (see MAREANO), although there are gaps, particularly around Svalbard. Norway has undertaken, however, to complete mapping and designate 10% of coastal and marine areas by 2020. Again, Norway has a record of closing areas where vulnerable habitats are found (e.g. closed areas for corals, inshore areas around Svalbard), although the focus up till now has been corals specifically, with other VMEs not specifically protected in closed areas. The 2011 updated Barents Sea-Lofoten plan acknowledges that habitat damage in north Norway has been worse than previously thought, and includes further management actions for habitat protection. On this basis, the team considered that there is a reasonable objective basis for confidence that the partial strategy will continue to be implemented and will work to protect vulnerable habitats. Like Scotland, however, there was not 'high confidence' until more progress has been made.</p>		
c	Guide post		There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	Met?		Y – all UoAs	N – all UoAs
	Justification	<p><u>Scotland</u>: It is clear that the partial strategy is being implemented: areas have been evaluated and designated and there is now a clear process ongoing for evaluating management options and their costs (a business impact evaluation), consulting with stakeholders and in due course arriving at a decision about management for each area, as has already been done for the inshore areas. Nevertheless, since the team concluded in scoring issue a) that there is not (yet) a full strategy, SG100 cannot be met.</p> <p><u>Norway</u>: The Barents-Sea Lofoten management plan was updated in 2011; this includes an analysis of which aspects have been successful and which less successful (including an acknowledgement that habitat damage has been worse than thought); where objectives are identified as not being met, the updated plan includes new actions. The other plans are too new to have been updated, but this gives confidence that they are being applied and monitored. On the ground, closed areas are strongly enforced (like everything in Norwegian waters). The fishing companies in this fishery (and other EU fishing companies operating on the Barents Sea) report that the haddock bycatch limit (per haul) is effective at forcing them to fish only in areas which are known to have clean cod catches; i.e. within an existing footprint – this is clearly visible in the reduced proportion of haddock in the NEA catch of the Grande Hermine, Cap Nord and Klondyke through the surveillance reports for the previous certification cycle for this fishery. As for Scotland, SG80 is met but SG100 is not met.</p>		
d	Guide post			There is some evidence that the strategy is achieving its objective.
	Met?			N – all UoAs

	Justification	<p><u>Scotland</u>: Since there is as yet no management in place, and no subsequent evaluation of the results, then the strategy is not yet achieving its objective.</p> <p><u>Norway</u>: The Barents Sea plan acknowledges that habitat damage was worse than previously through and more work is needed to ensure habitat protection in this area. This may be true also in other areas although the plans are in their first iteration and have not yet been reviewed. Not met.</p>
References		<p>Nature Conservation Marine Protected Areas: http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/national-designations/mpas/</p> <p>Scottish MPA Project. (2014) http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/national-designations/marine-protected-areas-(mpa)/scottish-mpa-project/</p> <p>Norwegian MPAs, including maps: http://www.miljodirektoratet.no/en/Areas-of-activity1/Marine-and-coastal-areas/Marine-protected-areas-in-the-OSPAR-network/</p> <p>Full information on NCMPAs: http://jncc.defra.gov.uk/page-5269</p> <p>Scottish Marine Habitat Atlas: http://www.gov.scot/resource/doc/345830/0115129.pdf</p> <p>Norwegian Ministry of the Environment 2011. First update of the Integrated Management Plan for the Marine Environment of the Barents Sea–Lofoten Area. Meld. St. 10 (2010–2011) Report to the Storting (white paper).</p> <p>Norwegian Ministry of the Environment 2013. Integrated Management of the Marine Environment of the North Sea and Skagerrak (Management Plan). Meld. St. 37 (2012–2013) Report to the Storting (white paper)</p> <p>MAREANO: www.mareano.no</p>
OVERALL PERFORMANCE INDICATOR SCORE:		80 for all UoAs
CONDITION NUMBER (if relevant):		N/A

Evaluation table 24 - PI 2.4.3

PI 2.4.3		Information is adequate to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	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.
	Met?	Y – all UoAs	Y – all UoAs	N – all UoAs
	Justification	<p>Note: UoA 1, 3 and 5 are in Scottish and Norwegian waters. UoA 2 and 4 are entirely in Norwegian waters.</p> <p>As a basis for the designation of MPAs, and more generally as a basis for Scotland's National Marine Plan, Marine Scotland published a marine habitat atlas which includes maps of intertidal, inshore, offshore and deep-sea habitats, as well as the distributions of fish stocks and vulnerable species. It is not clear, however, that this is able to identify all areas of vulnerable habitats over their range. SG80 is met but SG100 is not met for Scottish waters.</p> <p>In Norway, the MAREANO programme provides good information on marine habitats in some areas. It does not (as yet) cover the whole coast; notably the SFPZ, although habitat maps are available for this area from various sources (see Section 2.2.3). On this basis, SG80 is met but SG100 is not met in full for the NEA, because of more limited data in the SFPZ (although mapping is underway according to the Barents Sea / Lofoten Management Plan; there is also not much saithe in this area).</p>		
b	Guide post	Information is adequate to broadly understand the nature of the main impacts of gear use on the main habitats, including spatial overlap of habitat with fishing gear.	Sufficient data are available to allow the nature of the impacts of the fishery on habitat types to be identified and there is reliable information on the spatial extent of interaction, and the timing and location of use of the fishing gear.	The physical impacts of the gear on the habitat types have been quantified fully.
	Met?	Y – all UoAs	Y – all UoAs	N – all UoAs
	Justification	<p>The habitats are mainly mapped, as set out for scoring issue a; while data are limited for the SFPZ, precluding a score of 100 for scoring issue a, nearly all the saithe comes from further south in the NEZ, which is well mapped (see MAREANO).</p> <p>In relation to fishing gear, all vessels >12m are required to have VMS, which provides the authorities with detailed information about the fishery footprint. Since the habitats are mapped and the footprint of the fishery is known, the impacts of the fishery can be identified – in fact, an assessment is provided in the updated Barents Sea / Lofoten Management Plan, for example (see also Table 18 for Scottish waters). SG80 is met for all UoAs.</p>		

		In relation to SG100, it seems that quantifying the physical impacts of the gear (particularly historical impacts) remains a work in progress – the latest iteration of the Barents Sea Management Plan, for example, notes that historical impacts of trawl on habitats has been more significant than previously thought. The information likewise does not exist for Scottish waters as far as the team could establish. Not met for any UoA.		
c	Guide post		Sufficient data continue to be collected to detect any increase in risk to habitat (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).	Changes in habitat distributions over time are measured.
	Met?		Y – all UoAs	N – all UoAs
	Justification	The footprint of the fishery is continually mapped via VMS; this is the key element which would indicate an increased risk to habitat – e.g. if a vessel operated outside the usual footprint of the fishery, or made an incursion into a closed area. SG80 is met. SG100 may be met for some areas (e.g. protected areas) but most likely not for most areas – habitat mapping is expensive.		
References	<p>Scottish Marine Habitat Atlas: http://www.gov.scot/resource/doc/345830/0115129.pdf</p> <p>Scotland’s National Marine Plan: http://www.gov.scot/Resource/0047/00475466.pdf</p> <p>MAREANO: http://www.mareano.no/kart/mareano_en.html?language=en</p> <p>Kaiser, M.J., Collie, J.S., Hall, S.J., Jennings, S. and Poiner I.R. 2001. Impacts of fishing gear on marine benthic habitats. Reykjavik Conference on Responsible Fisheries in the Marine Ecosystem. 19pp. ftp://ftp.fao.org/fi/document/reykjavik/pdf/12kaiser.PDF</p> <p>Norwegian Ministry of the Environment 2011. First update of the Integrated Management Plan for the Marine Environment of the Barents Sea–Lofoten Area. Meld. St. 10 (2010–2011) Report to the Storting.</p>			
OVERALL PERFORMANCE INDICATOR SCORE:				80 for all UoAs
CONDITION NUMBER (if relevant):				N/A

Evaluation table 25 - PI 2.5.1

PI 2.5.1		The fishery does not cause serious or irreversible harm to the key elements of ecosystem structure and function		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	The fishery is unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	The fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	There is evidence that the fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.
	Met?	Y – all UoAs	Y – all UoAs	P – all UoAs
	Justification	<p>North Sea / West of Scotland (UoA 1, 3 and 5):</p> <p>For all three companies in this area, the majority of the catch (when saithe is being targeted for Scapêche) is saithe, so a key impact on the ecosystem depends on the status of the saithe stock, which is approximately at $MSYB_{trigger}$ – i.e. above the point of recruitment impairment with high probability, but not necessarily at maximum productivity (B_{MSY}). The second most important species in the fishery is hake, the biomass of which has been exploding in recent years and is now well above all reference points. Stocks of other demersal species taken as bycatch by the fishery (Greenland halibut, ling, hake, monkfish and other minor) are all either at target level or increasing (see rationale for PI 2.1.1). There is a management strategy in place for all these stocks, which seems to be working (see rationale for PI 2.1.2). Discard rates are low (and will be reduced further by the landings obligation starting in 2016) (see rationale for PI 2.2.1). The gear will have an impact on the benthic ecosystem, but a system of protected areas is in place and being expanded (see rationale for PI 2.4.1).</p> <p>The evidence suggests that the North Sea ecosystem is mainly influenced by climate-driven bottom-up forces rather than predator-driven top-down forces (e.g. Beaugrand, 2004; Alheit et al., 2005; Beaugrand and Ibanez, 2004). Through the running of an Ecopath model with Ecosim, Mackinson and Daskalov (2007) suggest that the removal of saithe from the North Sea ecosystem through fishing mortality would result in a reduction in predation on prey species, but unlikely to cause a trophic cascade that would impact other elements in the North Sea ecosystem.</p> <p>The ICES working group WGINOSE (2014; not updated in 2015) evaluated the status of the North Sea ecosystem via PCA using as input >100 state or pressure variables. For the northern North Sea specifically, PC1 accounted for 29% of the variability, and including the following key variables: decreasing cod landings, decreasing otter trawl effort, increasing hake biomass, increasing herring biomass and increasing <i>Calanus heligolandicus</i> (see Figure below). In other words, the ecosystem has been changing over the last 30 years, with trends driven by changes in fish stocks (decline and then recovery), fishing effort (reduction) and most likely environmental change (although WGINOSE report that the signal for directional environmental change in the northern North Sea from this analysis is equivocal; nevertheless, other studies demonstrate that climate change is most likely having an impact; e.g. Clark and Frid 2011).</p>		

		<p>Overall, the team concluded that while the ecosystem in the North Sea (and presumably, around the west of Scotland as well) is certainly changing, this is being driven by very large-scale drivers such as overall fishing pressure and climate change, within which any impacts of this fishery are lost. Furthermore, fishery-related impacts have tended to reverse direction over the last few decades, as overall demersal fishing pressure has been reduced and trends in associated stocks have started to reverse from decline towards recovery. On this basis, the team considered that the fishery is 'highly unlikely' to disrupt this ecosystem – SG80 is met.</p> <p>In relation to SG100, there is some evidence available in the form of studies such as those cited above and others, as well as the output of ecosystem models as noted above. There is, however, less evidence in general for the west of Scotland than for the North Sea, and while these ecosystems are linked, the differences in, for example, the bycatch species between Scapêche and Euronor suggest that they are not the same. The team considered that SG100 is partially met, and gave an overall score of 90.</p>
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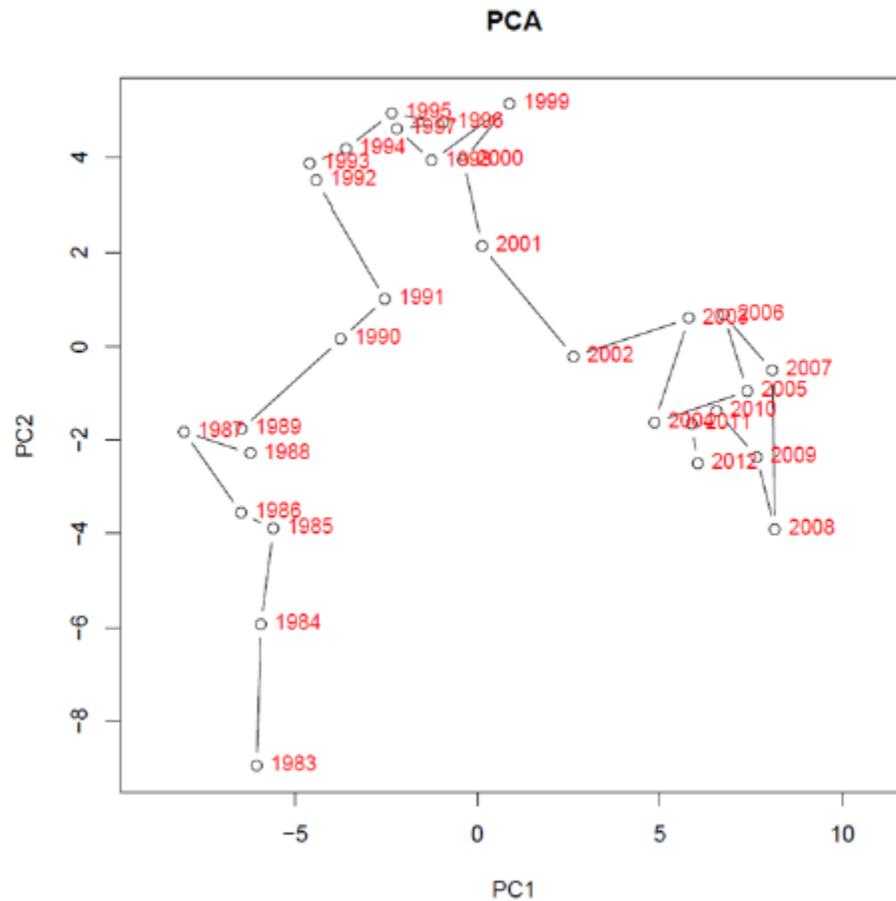


Figure: Trajectory of the PC1 and PC2 for a principle component analysis of the northern North Sea ecosystem (WGINOSE, 2014).

NEA (UoA2 and 4): The main impact of the fishery in this area is likewise likely to be the removal of the main target species, which in this case is cod rather than saithe (comprising >90% of catches for both companies). The NEA cod stock biomass is at ~2X target levels; haddock and saithe stocks are also healthy. There is a management strategy in place for all these stocks, which seems to be working successfully. Discard rates are presumed negligible (discarding is not allowed). The gear will have an impact on the benthic

		<p>ecosystem, but as noted above, other regulations (notably the haddock bycatch limit) forces the fishery to operate within an established footprint.</p> <p>The ICES working group WGIBAR provided an assessment of the Barents Sea ecosystem in 2015 (ICES, 2015y), with the following summary headline points:</p> <ul style="list-style-type: none"> • The system appears to be warming, although not in a linear fashion (recent peak reached in 2012) • Zooplankton biomass remains high but there is a possible shift underway from larger to smaller forms (declining krill and pelagic amphipods) • Capelin biomass (the main zooplankton grazer) has been high in recent years; cod and haddock biomass have likewise been high; cod predation rates on capelin are high but the stock has apparently been able to sustain them • Polar cod has declined in the northern Barents Sea • Minke whales and harp seals are the main piscivores along with cod; their condition has declined in recent years perhaps due to strong competition from cod • Snow crab are increasing in biomass and range • Total biomass removed by demersal fishing (all species) was ~1.3 million t in 2014 (compare to biomass of cod ~3.5 million tonnes; capelin predation by cod ~3.5 million t in 2014) <p>In other words, the impression (as for the North Sea) is of a system which is relatively healthy, with large stocks of key species (notably cod and capelin). The ecosystem may be changing, but driven most likely by environmental change rather than fisheries (although fisheries clearly play a role in the ecosystem, but not one which could be characterised as ‘serious or irreversible harm’). SG80 is met.</p> <p>In relation to SG100, as noted above, some evidence is available, not only as synthesised by ICES but also from Norwegian-Russian scientific collaboration (e.g. the joint environmental status report; also extensive information and references are available at www.barentsportal.com), but some is still lacking (such as habitat mapping in some areas). SG100 is partially met.</p>
<p>References</p>		<p>Beaugrand, G. 2004. The North Sea regime shift: evidence, causes, mechanisms and consequences. Progress in Oceanography 60: 245–262.</p> <p>Beaugrand, G. Ibanez F. 2004. Monitoring marine plankton ecosystems. II: Long-term changes in North Sea calanoid copepods in relation to hydro-climatic variability. Marine Ecology-Progress Series 284: 35–47.</p> <p>Alheit, J., Möllmann, C., Dutz, J., Kornilovs, G., Loewe, P. et al. 2005. Synchronous ecological regime shifts in the central Baltic and the North Sea in the late 1980s. Ices Journal of Marine Science 62: 1205–1215.</p> <p>Mackinson, S. and Daskalov, G., 2007. An ecosystem model of the North Sea to support an ecosystem approach to fisheries management: description and parameterisation. Sci. Ser. Tech Rep., Cefas Lowestoft, 142: 195 pp.</p> <p>Clark RA and Frid CLJ 2011. Long-term changes in the North Sea ecosystem. Environmental Reviews 9, 131-187.</p> <p>ICES 2015a,cc,dd,e,f</p>

	<p>ICES, 2015a. Saithe (<i>Pollachius virens</i>) in Subareas IV and VI and Division IIIa (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat). In: ICES Advice on fishing opportunities, catch, and effort Greater North Sea and Celtic Seas Ecoregions. ICES Advice 2015, Book 6</p> <p>ICES, 2015e. ICES Advice on fishing opportunities, catch, and effort Celtic Seas and Greater North Sea Ecoregions. 5.3.1 Anglerfish (<i>Lophius piscatorius</i> and <i>L. budegassa</i>) in Subareas IV and VI and Division IIIa (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 5.</p> <p>ICES, 2015f. ICES Advice on fishing opportunities, catch, and effort Northeast Atlantic. 9.3.24 Ling (<i>Molva molva</i>) in Subareas VI-IX, XII, and XIV, and in Divisions IIIa and IVa (other areas). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 9.</p> <p>ICES, 2015cc. ICES Advice on fishing opportunities, catch, and effort Greater North Sea, Celtic Seas, Bay of Biscay and Iberian coast Ecoregions. 9.3.14 Hake (<i>Merluccius merluccius</i>) in Subareas IV, VI, and VII and Divisions IIIa, VIIIa,b,d (Northern stock) (Greater North Sea, Celtic Seas, Northern Bay of Biscay). In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 9.</p> <p>ICES, 2015dd. 2.3.11. Greenland halibut (<i>Reinhardtius hippoglossoides</i>) in Subareas V, VI, XII, and XIV (Iceland and Faroes grounds, West of Scotland, North of Azores, East of Greenland)</p> <p>ICES, 2015y. Second Interim Report of the Working Group on Integrated Assessments of the Barents Sea (WGIBAR). 1-4 June 2015, Kirkenes, Norway.</p> <p>ICES, 2014d. First Interim Report of the Working Group on Integrated Assessments of the North Sea (WGINOSE). 10-14 March 2014, Copenhagen.</p> <p>Barents Portal: www.barentsportal.com</p>
OVERALL PERFORMANCE INDICATOR SCORE:	90 – all UoAs
CONDITION NUMBER (if relevant):	N/A

Evaluation table 26 - PI 2.5.2

PI 2.5.2		There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	There are measures in place, if necessary.	There is a partial strategy in place, if necessary.	There is a strategy that consists of a plan, in place.
	Met?	Y – all UoAs	Y – all UoAs	Y – all UoAs
	Justification	<p><u>Scotland (UoA 1, 3 and 5):</u> UoA 1, 3 and 5 mainly take place in Scottish waters, and Scotland has a National Marine Plan which has been developed as part of Scotland’s response to the EU’s Marine Strategy Framework Directive (Directive 2008/56/EC on establishing a framework for community action in the field of marine environmental policy). The MSFD 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, with the overarching goal of achieving ‘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 MSFD requires member states to:</p> <ul style="list-style-type: none"> • Provide an assessment of the current state of their seas by July 2012 • Provide a set of detailed characteristics of what good environmental status means for their waters, and associated targets and indicators, by July 2012 • Establish a monitoring programme to measure progress by July 2014 • Establish a programme of measures for achieving good environmental status by 2016 <p><u>Norway North Sea (UoA 1, 3 and to a lesser extent 5):</u> For the Norwegian waters of the North Sea and Skaggerak, an integrated ecosystem management plan was adopted by the Norwegian government in 2013. The plan evaluates the status of the ecosystem, the main activities, the cumulative impact of these activities on different components of the ecosystem and sets goals for different parts of the ecosystem, as well as measures and monitoring indicators designed to achieve those goals – in other words, the framework and timetable is similar to that set for the EU by the MSFD.</p> <p>Overall, for the North Sea / West Scotland area (UoA 1, 3 and 5), the team considered that the MSFD in itself constitutes an overarching strategy, as implemented by Scotland’s National Marine Plan, while for Norway, there is a strategy that consists of a plan in place along similar lines. SG100 is met.</p> <p><u>Northeast Arctic (UoA 2 and 4):</u> There are integrated ecosystem management plans for both the Norwegian Barents Sea and Lofoten area (updated 2011) and the Norwegian Sea (2009), covering the area used by this fishery; along similar lines to those described above for the Norwegian Sea. SG100 is met.</p>		

b	Guide post	The measures take into account potential impacts of the fishery on key elements of the ecosystem.	The partial strategy takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance.	The strategy, which consists of a plan, contains measures to address all main impacts of the fishery on the ecosystem, and at least some of these measures are in place. The plan and measures are based on well-understood functional relationships between the fishery and the Components and elements of the ecosystem. This plan provides for development of a full strategy that restrains impacts on the ecosystem to ensure the fishery does not cause serious or irreversible harm.
	Met?	Y – all UoAs	Y – all UoAs	N – UoA 1, 3 and 5 Y – UoA 2 and 4
	Justification	<p><u>North Sea / West of Scotland (UoA 1, 3 and 5):</u> The Scottish National Marine Plan includes specific policy objectives for fisheries, including:</p> <ul style="list-style-type: none"> • an ecosystem approach, protection of vulnerable species and stocks, protection of the seabed • management of conflicts between fisheries and other activities, including in relation to sustainability of stocks • delivery of international commitments, including the discard ban <p>Measures to deliver these policy objectives include:</p> <ul style="list-style-type: none"> • Implement the reformed CFP – MSY by 2020 and the discard ban • Moving towards monitoring total removals rather than landings • Stabilising fishing effort at a sustainable level • Spatial management for inshore areas • Monitoring and adaptation to climate change <p>The plan is based on a strong evidence base, including fisheries data (stock assessments, spatial distribution of fishing effort and landings), as well as other inputs such as the Habitat Atlas. On this basis, the team considered that SG80 is met.</p> <p>In relation to the specific effects of this fishery on the ecosystem, although none have been noted particularly (see 2.5.1), the plan is probably a bit general to address possible impacts such as, for example, the depletion of elasmobranch stocks (although it is addressed in a general way by the MSY objective). Overall, however, the team considered that the plan was too unspecific for SG100 to be met. The MSFD includes more detailed descriptors around 'good environmental status' but these remain to be specifically defined in many cases. The overall score is therefore 80 for Scottish waters.</p>		

		<p>The Norwegian Plan for the North Sea / Skaggerak includes the following (relevant) policy objectives for biodiversity and ecosystems and fisheries:</p> <ul style="list-style-type: none"> • achieve good environmental status, particular vulnerable and/or valuable areas; • protection of habitats and species will ensure i) their continued role in the ecosystem; ii) the maintenance or recovery of threatened and protected species; iii) establishment of a network of representative MPAs; • an ecosystem approach to harvesting of marine organisms, such that ecosystem structure and function is maintained and undesirable bycatch minimised. • avoid the introduction / spread of non-native species • manage fisheries such that they provide high sustainable long-term yield <p>Measures to deliver these in relation to fisheries include (only those relevant here are given):</p> <ul style="list-style-type: none"> • continue to develop ecosystem-based management • ensure that depleted stocks (e.g. cod) are rebuilt • encourage R&D on selectivity of fishing gear • reinforce at-sea and on-land enforcement • continue system of area closures for juveniles • continue elasmobranch surveys • participate in international efforts to ensure overall sustainability of North Sea fisheries and strengthen cooperation with the EU, particularly on the discard ban, selectivity and long-term management plans <p>The plan is based on a strong evidence base, including fisheries data (stock assessments, spatial distribution of fishing effort and landings), as well as other inputs such as habitat maps and the evaluation of cumulative impacts from different sources. On this basis, the team considered that SG80 is met.</p> <p>In relation to the specific effects of this fishery on the ecosystem, although none have been noted particularly (see 2.5.1), the team noted that the plan is more detailed and specific than the Scottish plan, and concluded that SG100 could be met for the Norwegian North Sea. However, since SG100 is not met for Scottish waters, the overall score for UoA 1, 3 and 5 is 80.</p> <p><u>Northeast Arctic (UoA 2 and 4):</u> The integrated plan for the Barents Sea-Lofoten area was first drafted in 2006 and updated in 2011, and includes an analysis of progress towards the goals of the original plan. In relation to fisheries, this analysis is generally optimistic that impacts of fisheries have reduced (biomass of commercial species higher, effort lower, impact on benthos lower) but also notes that some stocks remain depleted, while improved data suggest that benthic impacts were more significant than previously thought. The plan presents a detailed analysis of the areas, activities and populations or habitats for which objectives are not being achieved, and sets out new activities and targets where required, including some relevant to this fishery as follows:</p>
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		<ul style="list-style-type: none"> continue seabed habitat mapping with the target of completion by 2020, prioritising areas thought most likely have sensitive habitats; ensure these data are generally available introduce a specific Norwegian move-on rule for benthic organisms (NB: this was done but has not been reported to be effective) introduce regular review of protection measures for vulnerable habitats by the management agencies develop a strategy for MPAs to protect at least 10% of coastal and marine areas by 2020, as per the objective of the Convention on Biological Diversity further develop systematic monitoring of fisheries and fish stocks put in place special measures to rebuild depleted stocks (coastal cod, redfish and blue ling) <p>What is impressive about this is that it demonstrates that the plan is a living document, with objectives, targets and actions open to analysis, review and revision as required. This is in advance of the other plans cited in here, which are all in their first iteration. SG100 is met.</p>		
c	Guide post	The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems).	The partial strategy is considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems).	The measures are considered likely to work based on prior experience, plausible argument or information directly from the fishery/ecosystems involved.
	Met?	Y – all UoAs	Y – all UoAs	N – UoA 1, 3 and 5 Y – UoA 2 and 4
	Justification	<p>North Sea / West of Scotland (UoA 1, 3 and 5): The measures being put in place via both the Scottish and Norwegian plans boil down to the usual measures for marine and fisheries conservation – i.e. reduce effort and set TACs such that exploitation of stocks is kept at a sustainable level; limit/eliminate discards; protection measures for endangered species; spatial protection for habitats – all based on analysis of the available scientific data. The team also noted that other, more general ecosystem issues, such as conflicts between different uses of the marine environment and climate change, are taken into account. The Scottish plan is evaluated via a Strategic Environmental Assessment, providing a further basis for confidence that the measures proposed are appropriate. On this basis, SG80 is met.</p> <p>In relation to SG100, there have been various ecosystem studies of the impacts of fisheries on the North Sea (e.g. Cook and Heath, 2005; Mackinson and Daskalov, 2007) which show that fisheries have had a measureable impact on various aspects of the ecosystem, quantitatively but not qualitatively (i.e. relative proportions of secondary production and consumption by different consumer groups have changed, but the overall ecosystem structure and function remains intact). This gives confidence that the measures are likely to work, based on information about the ecosystem, for the North Sea – SG100 is met. Much less information exists, however, in relation to the west of Scotland. Although the ecosystems are clearly linked, they are not apparently the same, and in general,</p>		

		demersal stocks are in worse condition on the west coast (e.g. no evidence of cod recovery as yet). The team considered on this basis that SG80 is met (likely to work based on comparison with similar ecosystem), but SG100 is not met in full. <u>Northeast Arctic (UoA 2 and 4):</u> The 2011 revised Barents Sea-Lofoten plan includes an explicit analysis of which measures have worked and which have not, with additional activities set out where measures have not so far been successful. On this basis, the team had confidence in the implementation of the plan – SG100 is met.	
d	Guide post	There is some evidence that the measures comprising the partial strategy are being implemented successfully.	There is evidence that the measures are being implemented successfully.
	Met?	Y – all UoAs	N – UoA 1, 3 and 5 Y – UoA 2 and 4
	Justification	Many of the measures which protect the ecosystem are already in place or underway – e.g. TACs, quotas, effort limitations and other restrictions on fishing pressure, the designation of MPAs, the protection of ETP species etc. – the implementation of these measures is discussed in the other P2 PIs above. On this basis, SG80 is met for all UoAs. In relation to SG100, since the Scottish National Marine Plan, the Norwegian North Sea-Skagerrak Plan and the MSFD are all relatively new, not all the measures required under these plans are yet in place, hence SG100 is not met in full for the North Sea / West of Scotland. For the NEA, however, the plan is in its second iteration, and the implementation of measures (as well as their success or otherwise in achieving progress towards objectives) is described, hence there is evidence of successful implementation and SG100 is met for the NEA.	
References	<p>Norwegian Ministry of the Environment 2011. First update of the Integrated Management Plan for the Marine Environment of the Barents Sea–Lofoten Area. Meld. St. 10 (2010–2011) Report to the Storting.</p> <p>Norwegian Ministry of the Environment 2013. Integrated Management of the Marine Environment of the North Sea and Skagerrak (Management Plan). Meld. St. 37 (2012–2013) Report to the Storting</p> <p>Norwegian Ministry of the Environment 2009. Integrated Management of the Marine Environment of the Norwegian Sea. Report number 37 (2008-2009) to the Storting.</p> <p>Cook, R. M., and M. R. Heath. 2005. "The implications of warming climate for the management of North Sea demersal fisheries." ICES Journal of Marine Science: Journal du Conseil 62.7 (2005): 1322-1326. Defra, 2014. Marine Strategy Part Two: UK Marine Monitoring Programmes, July 2014, 86p.</p> <p>Mackinson, S. and Daskalov, G., 2007. An ecosystem model of the North Sea to support an ecosystem approach to fisheries management: description and parameterisation. Sci. Ser. Tech Rep., Cefas Lowestoft, 142: 195 pp.</p>		
OVERALL PERFORMANCE INDICATOR SCORE:		UoA 1: 85 UoA 2: 100 UoA 3: 85	

	UoA 4: 100 UoA 5: 85
CONDITION NUMBER (if relevant):	N/A

Evaluation table 27 - 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	Guide post	Information is adequate to identify the key elements of the ecosystem (e.g., trophic structure and function, community composition, productivity pattern and biodiversity).	Information is adequate to broadly understand the key elements of the ecosystem.	
	Met?	Y – all UoAs	Y – all UoAs	
	Justification	This fishery is information-rich in all areas, with information included stock assessments for (nearly) all species, including all the significant P2 species (referenced in 2.1.1-2.3.2), ecosystem evaluations and models (e.g. ICES WGINOR, WGIBAR and WGINOSE, as well as the ICES working group on the ecosystem impacts of fisheries WGECO; see references for 2.5.1), evaluations of interactions between stocks and fisheries (e.g. ICES mixed fisheries advice for the North Sea; ICES stock assessment for Barents Sea cod which includes trophic interactions with capelin; ICES 2015z,b), mapping of benthos (see 2.4.1 and 2.4.3) and ongoing work under the various ecosystem management plans and the MSFD as discussed in 2.5.1 and 2.5.2. The key elements of the ecosystem are broadly understood for all areas fished.		
b	Guide post	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.
	Met?	Y – all UoAs	Y – all UoAs	N – UoA 1, 3 and 5 Y – UoA 2 and 4
	Justification	North Sea / West of Scotland (UoA 1, 3 and 5): The main impact of the fishery on the ecosystem is considered to be the removal of demersal fish biomass. Catches and assessments are presented on a yearly basis by ICES as mixed-species advice for the North Sea fisheries. These consider the effect of the fishery on the key relevant stocks (haddock, cod, saithe, whiting, plaice, sole and <i>Nephrops</i>) in the North Sea (ICES, 2015z). The advice investigates the main impacts in detail, for example landings of species by gear type, fishing patterns and estimates by stock and by scenario. These then provide catch options for the following year, which bolster the single stock advice. On this basis SG80 is met. There has also been investigation into the main interactions between the fishery and ecosystem elements, for example between trawl fisheries in the North Sea and benthic habitats. ETP species interactions have also been investigated. Ecosystem models (as referenced in 2.5.1 and 2.5.2) have examined the effects of different fishing activities/methods on commercial species, and estimated the effects of those changes to the populations of their prey species and on their predators. SG100 is therefore met for the North Sea. As noted above, there is less information available on the West of Scotland		

		<p>ecosystem – main impacts can be inferred by analogy with the North Sea. Some detailed work has been done (synthesised in Bailey et al., 2011) – e.g. work on developing an Ecopath model, although there was difficulty in getting a good fit with data, a detailed evaluation of the role of cod and seals, etc. SG80 is met but SG100 is not met.</p> <p><u>Northeast Arctic (UoA 2 and 4):</u> ICES likewise evaluate the ecosystem effects of fisheries in the Barents Sea, via WGIBAR and also more directly via the cod stock assessment which uses a multispecies approach because of the close interactions between cod and capelin stocks, which are significant drivers in the ecosystem. There have likewise been investigations of the impacts of the fishery on other parts of the ecosystem, as summarised in the updated management plan. SG100 is met.</p>		
c	Guide post		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.
	Met?		Y – all UoAs	Y – all UoAs
	Justification	As discussed in scoring issue a, and in more detail in earlier PIs, the impacts of the fishery on target, bycatch, retained and ETP species and habitats are identified. The functions of each of these components in the North Sea, West of Scotland and NEA ecosystems are well known, and have been the subject of various kinds of modelling to further elucidate the importance of each component and interactions between these. SG100 is met.		
d	Guide post		Sufficient information is available on the impacts of the fishery on these Components to allow some of the main consequences for the ecosystem to be inferred.	Sufficient information is available on the impacts of the fishery on the Components and elements to allow the main consequences for the ecosystem to be inferred.
	Met?		Y – all UoAs	N – all UoAs
	Justification	<p>North Sea / West of Scotland (UoA 1, 3 and 5):</p> <p>In general, as set out above, there is a great deal of information available about all aspects of the ecosystem and the fishery, allowing the main consequences for the fishery on the ecosystem to be inferred as done in the rationale for PI 2.5.1. For the North Sea, SG100 is met. However, it is not clear that there is, as yet, sufficient information on the West of Scotland ecosystem, except by analogy with the North Sea. The team considered that SG80 is met but SG100 may not be met for this area.</p> <p>Northeast Arctic (UoA 2 and 4):</p> <p>For the NEA, a question remains as to whether there is sufficient habitat mapping data as yet to evaluate in full the impact of demersal trawl fisheries on vulnerable habitats; noting that much of the fishing area is not yet mapped in full. Since the fishery tends to operate within an established footprint, the impact is probably more historic than present, but nevertheless, the 2011 updated management plan noted that as more data is collected, the evidence for significant historical impacts on habitats has accumulated. On this basis,</p>		

		the team concluded that it may not yet be possible to infer the overall impact of the fishery on this aspect of the ecosystem, so SG100 is not met for the NEA.		
e	Guide post		Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).	Information is sufficient to support the development of strategies to manage ecosystem impacts.
	Met?		Y – all UoAs	Y – all UoAs
	Justification	Sufficient data continue to be collected on the fishery (landings, effort, VMS) to detect changes in risk, meeting SG80. Strategies are in place to manage ecosystem impacts (see 2.5.2); in relation to Barents Sea habitats specifically (see scoring issue d) the management plan includes an objective to finish mapping by 2020. SG100 is met.		
References	<p>ICES, 2015b. Saithe (<i>Pollachius virens</i>) in Subareas I and II (Northeast Arctic). In: ICES Advice on fishing opportunities, catch and effort Barents Sea and Norwegian Sea Ecoregions, ICES Advice 2015, Book 3</p> <p>ICES, 2015z. 6.2.2.2. Mixed-fisheries advice for Subarea IV (North Sea) and Divisions IIIa North (Skagerrak) and VIId (Eastern Channel)</p> <p>Norwegian Ministry of the Environment 2011. First update of the Integrated Management Plan for the Marine Environment of the Barents Sea–Lofoten Area. Meld. St. 10 (2010–2011) Report to the Storting.</p> <p>Bailey N, Bailey DM, Bellini LC, Fernandes PG, Fox C, Heymans S, Holmes S, Howe J, Hughes S, Magill S, McIntyre F, McKee D, Ryan MR, Smith, I.P, Tyldesley G, Watret R and Turrell WR, 2011. Marine Scotland Science Report 09/11 THE WEST OF SCOTLAND MARINE ECOSYSTEM: A REVIEW OF SCIENTIFIC KNOWLEDGE. November 2011. Available at http://www.gov.scot/resource/doc/295194/0123085.pdf</p>			
OVERALL PERFORMANCE INDICATOR SCORE:				UoA 1: 90 UoA 2: 95 UoA 3: 90 UoA 4: 95 UoA 5: 90
CONDITION NUMBER (if relevant):				N/A

Evaluation Table 28 - PI 3.1.1

PI 3.1.1		<p>The management system exists within an appropriate legal and/or customary framework which ensures that it:</p> <ul style="list-style-type: none"> • Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2; and • Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and • Incorporates an appropriate dispute resolution framework. 		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	There is an effective national legal system and <u>a framework for cooperation</u> with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2	There is an effective national legal system and <u>organised and effective cooperation</u> with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2.	There is an effective national legal system and <u>binding procedures governing cooperation with other parties</u> which delivers management outcomes consistent with MSC Principles 1 and 2.
	Met?	Y – all UoAs	Y – all UoAs	Y – all UoAs
	Justification	<p>North Sea / West of Scotland (UoA 1, 3 and 5):</p> <p>Management of the fishery is conducted under the EC CFP and national legislation. This is all consistent with laws aimed at achieving the MSC Principles 1 and 2. The EC CFP states that: “Access to a fishery should be based on transparent and objective criteria including those of an environmental, social and economic nature. Member States should promote responsible fishing by providing incentives to those operators who fish in the least environmentally damaging way and who provide the greatest benefits for society.” (EC, 2013).</p> <p>According to the main objectives of the CFP, fishing opportunities are set at levels that ensure sustainable exploitation of resources in environmental, economic and social terms (basic fisheries regulation 2371/2002 and amending acts 865/2007, 1224/2009 and 1152/2012).</p> <p>The North Sea saithe fisheries (IIIa, IV, VI) occur on a stock that is shared between Norway and the EU. The division of the saithe stock between these has been agreed since 1981, TACs are set on the basis of ICES advice. The bilateral cooperation has been functioning for almost 4 decades (EU-Norway cooperation beginning in 1978). The management is covered by the EU-Norway fishery agreement (Anonymous, 2014).</p> <p>Northeast Arctic (UoA 2 and 4):</p> <p>The North East Arctic (I, II) saithe stock is managed by Norway under a comprehensive legislative/regulatory framework, especially the Marine Resources Act (Norway, 2008) and relevant secondary legislation. The Act provides for a formal system of cooperation between regulatory bodies of governance, such as the Ministry of Trade, Industry and Fisheries, the Directorate of Fisheries and the Coast Guard, and further for cooperation between management authorities and scientific research institutes, primarily the Institute of Marine Research.</p>		

		<p>Both:</p> <p>The EU and Norway have ratified the United Nations Convention on the Law of the Sea of 10 December 1982 (UN 1982) which set out the principle that all States have a duty to adopt appropriate measures to ensure sustainable management of marine resources and to cooperate with each other to this end.</p> <p>The management systems follows the principles set out in the FAO Code of Conduct for Responsible Fisheries (FAO 1995a), which includes the application of a precautionary approach. It also complies with the requirements in the UN Fish Stocks Agreement (FAO 1995b) regarding reference points and application of the precautionary approach as well as the Agreement to promote compliance with international conservation and management measures by fishing vessels on the high seas (FAO, 1993)</p> <p>Norway and EU have implemented actions against IUU fishing in accordance with the FAO Global Plan of Action against IUU fishing (FAO, 2001).</p> <p>The system is considered to be effective, at the national and international level, cooperation does exist through the EU-Norway fishery agreement which has proven to be effective in the management of the NEA saithe fishery since 1978. There is clear evidence of continued international cooperation on science and research and together these have delivered the outcomes, in terms of stock and marine ecosystem status, consistent with MSC Principles1 and 2. Therefore SG 100 is met for all UoAs.</p>		
b	Guide post	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.
	Met?	Y – all UoAs	Y – all UoAs	N – all UoAs
	Justification	<p>Within Europe there are well-established and transparent mechanisms in place for resolving legal disputes. These systems are appropriate for the saithe fishery, and ensure that management measures can be enforced in EC Member State waters, Norwegian waters and the EC EEZ. Transgressions of fisheries regulations are heard in courts with an independent judiciary that operate according to principles of natural justice to enforce the requirements of both fisheries and environmental legislation. Although there is no evidence of any legal disputes resulting from infringements of fisheries regulations by the UoAs, there is good evidence available of the action of the Courts and authorities within Europe to address transgressions, which demonstrates that the system has been tested and proven to be effective.</p> <p>There is no evidence that the client fleet has been involved in legal disputes, but evidence from disputes in other fisheries proves that this system has been tested and is proven to be effective.</p> <p>While the resolution of legal disputes between member states is considered to be effective and has been tested and proven there seem to be no equivalent mechanism at the international level, as the ongoing conflict in relation to pelagic stocks between the EU and Norway</p>		

		on the one hand and Iceland and the Faroe Islands on the other clearly demonstrates (EC News Room, 2012; EC Press Release, 2014). Although a state can institute proceedings against another state through mechanisms such as the International Court of Justice and the International Tribunal for the Law of the Sea this has not been tested and proven in the fisheries sector. The management of both stocks involves international cooperation. Hence the SG100 cannot be reached for any of the UoAs.		
d	Guide post	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.
	Met?	Y – all UoAs	Y – all UoAs	Y – all UoAs
	Justification	<p><u>EU waters:</u></p> <p>The management system contains formal commitments to the legal rights of people dependent on fishing for food and livelihood by ensuring that fishing opportunities are based upon historic fishing activity. The EC CFP states that: “<i>In view of the precarious economic state of the fishing industry and the dependence of certain coastal communities on fishing, it is necessary to ensure the relative stability of fishing activities by allocating fishing opportunities among Member States, based on a predictable share of the stocks for each Member State</i>” (EC, 2013).</p> <p>In addition, the North Sea / Northwest Waters Advisory Councils provides a formal mechanism for engaging people dependent on fishing (and also environmental stakeholders) in the management system (NSAC website, NWWAC website). On the basis SG100 is met.</p> <p><u>Norwegian waters:</u></p> <p>The Norwegian Marine Resource Act formally commits the management system to the legal rights created explicitly or by custom on the people of Norway dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2 (Section 2), this includes e.g. a principle for ensuring that management measures help to maintain the material basis for Sami culture (Section 7). SG100 is met.</p>		
References	Anonymous 2014; EC, 2003; EC, 2009; EC, 2013; EC News Room, 2012; EC Press Release, 1014; EU, 2012; FAO, 1993; FAO, 1995a, FAO, 1995b; FAO, 2001; Norway, 2008; UN, 1982			
OVERALL PERFORMANCE INDICATOR SCORE:				95 for all UoAs
CONDITION NUMBER (if relevant):				N/A

Evaluation Table 29 - 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	Guide post	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are generally understood.	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for key areas of responsibility and interaction.	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for all areas of responsibility and interaction.
	Met?	Y – all UoAs	Y – all UoAs	Y – all UoAs
	Justification	<p>EU waters:</p> <p>Stakeholders involved in the management of the fisheries are organisations and individuals involved in the management process identified as scientific organisations, research institutes, fishery industry organisations, NGOs, regional counties and relevant government bodies.</p> <p>Scientific advice from ICES forms the basis of the management system. The advice is scrutinised by the STECF, an expert group of government and independent economic and management advisors. STECF also advises the EC on fisheries-specific aspects. The team considered that functions, roles and responsibilities are clearly defined and understood, and could not think of an issue or organisation for which responsibilities are unclear. SG100 is met.</p> <p><u>Norwegian waters:</u></p> <p>Based on the Marine Resources Act, fisheries management in Norway involves Government bodies such as the Ministry of Trade, Industry and Fisheries, the Directorate of Fisheries and the Coast Guard as well as sales organizations, fishermen’s organizations and Fiskebåt (the Norwegian Fishing Vessel Owners Association). Their functions, roles and responsibilities are well understood and clearly defined in the legislation. Again, the team could not think of an issue where responsibilities are ill-defined. SG100 is met.</p>		
b	Guide post	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.
	Met?	Y – all UoAs	Y – all UoAs	Y – all UoAs
	Justification	<p><u>EU waters:</u></p> <p>Local knowledge is sought through the involvement of Advisory Councils (North Sea AC, Northwest Waters AC, Long distance AC and ACFA - which comprises a contact group at the European level for all stakeholders at national and regional levels) in the management process. These consultation processes respond both to ad-hoc management issues, the annual TAC negotiations for this stock under the EC-Norway agreement, and also the decadal review of the EC CFP.</p> <p>The outcome of meetings of the EU Council of Ministers clearly demonstrates that all of this information is taken into account, and explains how the information is used (Council Meetings). The annual consultation process for TACs and the decadal consultation on the review of the CFP provide opportunities for stakeholders to engage directly in the management process, and this involvement is facilitated at the EC and national level.</p> <p>At a national level, administrations operate formal consultation procedures. The quotas belong to the member state and are distributed among the POs based on customary rights. They have the right to distribute their quota among their member vessels. While quotas can be changed between members of a PO, this is not the case if quotas are to be changed between POs (within a country or between member states). Such transfers have to be channelled through the relative Authority.</p> <p>The management system includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information and explains how it is used or not used (Council meetings). SG100 is met.</p> <p><u>Norwegian waters:</u></p> <p>The Fisheries Directorate coordinates the consultation by organising a yearly meeting attended by all stakeholders such as the Norwegian Fishermen’s Association, Federation of Norwegian Fishing Industries, the Norwegian Seamen’s Union, The Norwegian Food and Allied Workers’ Union, The Sami Parliament, environmental NGOs, the regional counties. On the basis of this meeting and on the quota discussions with other states, the Fisheries Ministry fixes next year’s quotas. In case one of the stakeholders disagree, more meetings and discussions take place until the problems are resolved.</p> <p><u>Both:</u></p> <p>The management system for these fisheries involves scientists, stakeholders and fisheries managers in a consultative process that explicitly defines and explains the respective roles of all parties in all areas of responsibility.</p>		

		<p>Scientific advice from ICES forms the core of the management system. At a European level, key institutions are the Advisory Committee on Fisheries and Aquaculture (ACFA) - which comprises a contact group at the European level for all stakeholders at national and regional levels – and the Regional Advisory Councils (RACs) – which comprise a contact group dealing with particular fisheries at the regional level.</p> <p>SG100 is met for all UoAs.</p>		
c	Guide post		The consultation process provides opportunity for all interested and affected parties to be involved.	The consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement.
	Met?		Y – all UoAs	N – all UoAs
	Justification	<p>Opportunities for interested and affected parties to be involved in the management process are provided by the Advisory Councils, the annual Norwegian stakeholder meeting (described above), the annual consultation on fishing opportunities under the EC-Norway agreement, and the decadal review of the EC CFP. Meetings are announced publicly and all relevant stakeholders are well informed about where and when the meetings take place. At these consultation meetings the management authorities actively seek advice from all interested parties in preparation for international consultations and negotiations.</p> <p>Since 2010, the annual consultation on fishing opportunities has been made more transparent and accessible, with early publication of consultation documents (such as EC COM (2014) 388 Final).</p> <p>The creation of the Advisory Councils and the current consultation on the review of the EC CFP provides evidence of how the consultation process facilitates the effective engagement of interested and affected parties.</p> <p>Although adequate opportunities are present to participate in the consultation process, the engagement is not fully encouraged nor facilitated. SG100 is therefore not met.</p>		
References		Council Meetings; EC, 2013; EC, 2014a; Norway, 2008		
OVERALL PERFORMANCE INDICATOR SCORE:				95 for all UoAs
CONDITION NUMBER (if relevant):				N/A

Evaluation Table 30 - 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	Guide post	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 – all UoAs	Y – all UoAs	Y – all UoAs
	Justification	<p>The management system in both the EU and Norway contains overarching environmental management objectives arising from international agreements (such as the UN Convention on the Law of the Sea and the UN Convention on Biological Diversity) and EU legislation (the CFP and environmental directives (e.g. the Habitats Directive)) and their Norwegian equivalents.</p> <p>The precautionary approach is required by the CFP, UNCLOS and the Norway Marine Resources Act. The CFP explicitly states in Article 2(2): <i>The CFP shall apply the precautionary approach to fisheries management, and shall aim to ensure that exploitation of living marine biological resources restores and maintains populations of harvested species above levels which can produce the maximum sustainable yield.</i></p> <p>These objectives are, however, limited to sustainable management of the target stock (MSC Principle 1) and not for all non-target species (MSC Principle 2). However, the EC and Norwegian management regimes both address this shortcoming. In this context it is worth mentioning that Scotland has started to develop an extensive framework for the protection of marine habitats and that Norway has closed several areas to protect cold water corals and disposes of an excellent mapping of biotopes that allow vessels to avoid sensitive areas. Both Norway and Scotland have explicit objectives to develop a representative system of protected areas (under OSPAR) – see details in 2.4.1-3.</p> <p>Clear long-term objectives for the North Sea saithe are set out in the 2008 EU-Norway agreement. The management plan for the Northeast Arctic saithe has been implemented in 2007 and was revised in 2013. Both plans set long-term objectives for the target species and also imposes constraints on management measures (such as a limit on the amount that the TAC may be increased annually).</p> <p>SG100 is met.</p>		
References	EC, 1992; EC, 2013; Norway, 2008; UN, 1982; UN, 1992			

OVERALL PERFORMANCE INDICATOR SCORE:	100 for all UoAs
CONDITION NUMBER (if relevant):	N/A

Evaluation Table 31 - PI 3.1.4

PI 3.1.4		The management system provides economic and social incentives for sustainable fishing and does not operate with subsidies that contribute to unsustainable fishing		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and seeks to ensure that perverse incentives do not arise.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and explicitly considers incentives in a regular review of management policy or procedures to ensure they do not contribute to unsustainable fishing practices.
	Met?	Y – all UoAs	Y – all UoAs	Partial – all UoAs
	Justification	<p>The management system provides for negative incentives designed to prevent fishermen from violating regulations, designed to meet the outcomes expressed by MSC Principles 1 and 2. This includes the discard ban that has always been part of the Norwegian management system and is now also being phased in in the new CFP; there are also quotas and technical measures backed up by enforcement. The CFP is periodically reviewed, likewise the Norwegian management system.</p> <p>Economic and social incentives are provided by the management regime through the allocation of resources through guaranteed proportion of quotas fixed at a level compatible with sustainable fishery management.</p> <p>Recovery plans (part of the EU/Norway/ICES framework) can be considered as an incentive because they help to rebuild the respective stock and therefore guarantee the continuity of the fishery.</p> <p>After the Financial Instrument for Fisheries Guidance (FIG, 2000-06) and the European Fisheries Fund (EFF, 2007-2013) the Commission has set up the European Maritime and Fisheries Fund (EMFF, 2014-20). This fund helps fishermen in the transition to sustainable fishing, supports coastal communities in diversifying their economies, finances projects that create new jobs and improve quality of life along European coasts, and makes it easier for applicants to access financing. Applications to the EMFF are now subject to analysis to ensure that the project will not inadvertently increase capacity.</p> <p>There are, therefore, elements of the management system which constitute explicit review of incentives, however this does not apply to all aspects of the management system. SG100 is therefore not fully met but partially met.</p>		
References		EC, 2013; EC, 2014b; Norway, 2008		
OVERALL PERFORMANCE INDICATOR SCORE:				90 for all UoAs
CONDITION NUMBER (if relevant):				N/A

Evaluation Table 32 - 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	Guide post	Objectives, which are broadly consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are implicit within the fishery's management system	Short and long-term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.	Well defined and measurable short and long-term objectives, which are demonstrably consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.
	Met?	Y – all UoAs	Y – all UoAs	Partial – all UoAs
	Justification	<p>The overall objectives for managing this fishery are set out in the EC Common Fisheries Policy, in the bilateral agreement between the EC and Norway as well as in Norwegian legislation (see 3.1.3).</p> <p>Harvest controls rules are in place in form of management plans, which entered into force in 2004 (North Sea) and 2007 (Northeast Arctic) respectively and which are consistent with a precautionary approach and designed to ensure a rational exploitation pattern and provide for stable and high yields. The North Sea management plan from 2008 was evaluated in 2012 and reconsidered in 2013 without modifications.</p> <p>Well-defined and measurable short and long term objectives are explicit within the fishery's management system, but are not always demonstrably consistent with meeting the outcomes expressed by Principle 1 such as the reference points. There are no similarly well-defined and explicit objectives for all of the Principle 2 outcomes, although these have been defined for some of the components (such as non-target and ETP species and habitats – see details in Principle 2 rationales) there are still problems with ecosystem-level objectives (although these are being developed – e.g. under the MSFD in the EU). It should be noted that all main retained species are within a framework of agreed management.</p> <p>The SG80 requirements are fully met but only a part of the SG100 requirements. Therefore a score of 90 has been fixed.</p>		
References		Anonymous, 2014; EC, 2012; ICES 2013; ICES, 2014c; ICES, 2015a; Norway, 2008		
OVERALL PERFORMANCE INDICATOR SCORE:				90 for all UoAs
CONDITION NUMBER (if relevant):				N/A

Evaluation table 28 - 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	Guide post	There are some decision-making processes in place that result in measures and strategies to achieve the fishery-specific objectives.	There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.	
	Met?	Y – all UoAs	Y – all UoAs	
	Justification	<p>In Norway and the EU there are well-established decision-making procedures in place resulting in measures and strategies to achieve the fishery-specific objectives – details are given above (e.g. see rationale for 3.1.2). For example, ICES advice and the management plans are the basis for the allocation of quotas which are then divided between Norway and EU and between the member countries according to pre-agreed keys or negotiated agreements between the EU and Norway (depending on the stock). In France, quota is distributed via the POs according to pre-agreed proportions.</p> <p>Norway collaborates not only with the EU (EU-Norway fisheries agreement and Skagerrak Agreement with Sweden and Denmark) but, since 1974, also with Russia. The JFRNFC provides a framework for joint management of the most important fish stocks of both countries in the Barents Sea and the Norwegian Sea, likewise following scientific advice provided by ICES.</p> <p>For Principle 2, the overarching framework is a little less clear, but it is evident that in both Scotland and Norway, there is a decision-making framework based on clear objectives to achieve P2 objectives – e.g. in Scotland this is described in 2.4.2 in relation to the process for the designation and management of MPAs based on objectives from OSPAR and the MSFD; in Norway the process is likewise described in 2.4.2, and is based on clear ecosystem management plans for all marine areas, which set out objectives to guide decision-making, and which are then evaluated.</p> <p>SG80 is met.</p>		
b	Guide post	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.
	Met?	Y – all UoAs	Y – all UoAs	N – all UoAs

	Justification	<p>The decision-making process responds to ICES advice on the stock and ecosystem issues, and also to ad-hoc issues raised by the EU, Norway or the ACs (e.g. via a request to ICES to evaluate a particular issue). The response of the management system to such issues is set out in reports and minutes that are available to stakeholders, providing transparency. The EC-Norway management agreement responds in a timely and adaptive manner to the state of the stock.</p> <p>All outcomes expressed by Principle 1 are met by the decision-making processes in a transparent, timely and adaptive manner through the management plans for this fishery. But this may not apply to all issues identified in relation to Principle 2; e.g. in relation to non-commercial species which are discarded in small numbers (although important issues are generally considered, as described above). Therefore SG100 is not met.</p>		
c	Guide post		Decision-making processes use the precautionary approach and are based on best available information.	
	Met?		Y – all UoAs	
	Justification	<p>Fisheries management is consistent with the precautionary approach intended to constrain harvesting within safe biological limits and designed to provide for sustainable fisheries (MSY approach). The management plan further provides for specific reference points for spawning stock biomass and fishing mortality as demanded by the CFP, the Norwegian Marine Resources Act and UN Fish Stock Agreement. This process is based upon the best available information, provided by ICES and stakeholder groups. SG80 is met.</p>		
d	Guide post	Some information on fishery performance and management action is generally available on request to stakeholders.	Information on fishery performance and management action is available on request, and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.	Formal reporting to all interested stakeholders provides comprehensive information on fishery performance and management actions and describes how the management system responded to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.
	Met?	Y – all UoAs	Y – all UoAs	N – all UoAs
	Justification	<p>EU waters ICES advice and agreed records of EU-Norway negotiations provide explanations for measures that have been taken in response to scientific advice. The meetings of Council Ministers provide information on the decision-making process. Both are readily accessible on the respective websites. On the North Sea RAC website all responses from EC to NSAC advice is published. There is however no formal reporting to all interested stakeholders, SG100 is not met.</p> <p>Norwegian waters</p>		

		Scientific results are published on the ICES and the IMR websites. The Fisheries Ministry, the Coast Guard and other agencies involved in fisheries management produce annual reports that are available for the public. Also decisions taken by the JNRF are published on its website. There is however no formal reporting to all stakeholders, SG 100 is not met.		
e	Guide post	Although the management authority or fishery may be subject to continuing court challenges, it is not indicating a disrespect or defiance of the law by repeatedly violating the same law or regulation necessary for the sustainability for the fishery.	The management system or fishery is attempting to comply in a timely fashion with judicial decisions arising from any legal challenges.	The management system or fishery acts proactively to avoid legal disputes or rapidly implements judicial decisions arising from legal challenges.
	Met?	Y – all UoAs	Y – all UoAs	Y – all UoAs
	Justification	<p>Neither the management authorities nor one of the fisheries under assessment are subject to continuing court challenges in relation to this fishery.</p> <p>There are a number of mechanisms which act proactively to avoid legal disputes, and these are much improved in recent years. The CFP pays special attention to the stakeholder engagement in the management process as a means of proactively avoiding disputes. Stakeholder consultation through Advisory Councils (AC) is an integral part of the functioning of this system. For the saithe fishery under assessment the North Sea, Northwest Waters and Long Distance ACs plays an important role in bringing parties together early on in the management process, thereby reducing the likelihood of management measures which trigger dispute. Norway likewise has a similar stakeholder consultation process, as described in 3.1.2.</p> <p>There are examples of difficulties in negotiations and delays solving disputes at international level in trans-boundary fisheries (mainly with the joint management of shared stocks with Norway, Iceland and the Faeroe Islands). A recent example is the enduring conflict over the mackerel fishery in the NE Atlantic between Norway and EU on the one hand and Iceland and Faroe Islands on the other hand. While the dispute with Faroe Islands have been meanwhile solved through thorough negotiations, the quarrel continues with Iceland. It should be also mentioned that there is a longstanding disagreement between Norway and European fishermen regarding the Svalbard haddock fishery.</p> <p>Overall and despite the named problems, evidence indicates that the management system is acting proactively to avoid disputes and would rapidly implement any judicial decisions, meeting the SG100.</p>		
References	Anonymous, 2014; EC, 2013; EC Council Meetings ; EC News Room, 2012; EC Press Release, 2014; Norway, 2008; NSAC website ; UN, 1982			
OVERALL PERFORMANCE INDICATOR SCORE:				85 for all UoAs
CONDITION NUMBER (if relevant):				N/A

Evaluation table 29 - 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	Guide post	Monitoring, control and surveillance mechanisms exist, are implemented in the fishery under assessment and there is a reasonable expectation that they are effective.	A monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated an ability to enforce relevant management measures, strategies and/or rules.	A comprehensive monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules.
	Met?	Y – all UoAs	Y – all UoAs	N - UoA 1, 3 and 5 Y - UoA 2 and 4
	Justification	<p>There are two enforcement regimes at sea, in Norwegian waters and in European waters. Both systems are comprehensive and have demonstrated their ability to enforce management measures. Enforcement measures include the use of satellite VMS und VHF-communication, patrol vessels and aerial surveillance as well as landside controls while landing the catches.</p> <p><u>EU waters (UoA 1, 2 and 3):</u> It is the responsibility of the EU Member States to make sure that the rules agreed under the CFP are enforced. Fisheries controls play a central role in encouraging compliance, deterring fraud and ensuring sustainable fishing. The European Fisheries Control Agency (EFCA), set up in 2005 and operational since 2007, has the mission “<i>to promote the highest common standards for control, inspection and surveillance under the CFP</i>”. According to interviews during the site visit, the control density is, however, considerably lower than in Norwegian waters. On this basis, the team concluded that the EU MCS system has not demonstrated a ‘consistent’ ability to enforce relevant measures. It therefore only meets SG80 requirements.</p> <p><u>Norwegian waters (UoA 2 and 4):</u> The Norwegian MCS system is significantly more stringent than the European system, and particularly for foreign vessels. The Fisheries Monitoring Centre (FMC) receives position and daily electronic catch and activity data reports. Electronic data are handled automatically, and exchanged via a secure data line with the foreign country’s FMC. The Norwegian MCS system meets all requirements for SG100.</p>		
b	Guide post	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.
	Met?	Y – all UoAs	Y – all UoAs	N - UoA 1, 3 and 5 Y - UoA 2 and 4

	Justification	<p>A variety of sanctions to deal with non-compliance are set out in Norwegian and EC Member State legislation. There is evidence that these measures are consistently applied, where necessary. Non-compliance is dealt with by the relevant national authorities through their criminal justice systems, and using agreed and tested procedures.</p> <p>In Norwegian waters fishermen proactively use nets with mesh sizes that exceed the requirements specified in order to avoid sanctions (feedback from the clients) that indicates that controls and sanctions are handled more stringent by the Norwegian MSC system than in EU waters.</p> <p>The team concluded that in EU waters, sanctions are 'thought to provide effective deterrence, while in Norwegian waters they 'demonstrably provide effective deterrence. Again the Norwegian system meets all SG100 requirements while the EU system only meets SG80.</p>		
c	Guide post	Fishers are generally thought to comply with the management system for the fishery under assessment, including, when required, providing information of importance to the effective management of the fishery.	Some evidence exists to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery.	There is a high degree of confidence that fishers comply with the management system under assessment, including, providing information of importance to the effective management of the fishery.
	Met?	Y – all UoAs	Y – all UoAs	N - UoA 1, 3 and 5 Y - UoA 2 and 4
	Justification	<p>Based on information provided by the Norwegian Directorate of Fisheries there is no evidence of any records of non-compliance associated with the client fleets fishing in ICES areas i and II (UoA 2 and 4), which strongly indicates that fishers are complying with the management system. Furthermore no non-compliance was reported concerning UoAs 1, 3 and 5.</p> <p>The UoA fleets provide catch and landings data that are important for the management of the fishery, and also participate actively in the fishery observer programme ObsMer (where possible) which provides additional information required for stock assessment and management.</p> <p>The Norwegian MCS system meets SG 100. As stated above (3.2.3), the EU MCS system has not demonstrated to the satisfaction of the team a consistent ability to enforce relevant measures. Hence there can't be a 'high degree of confidence' of compliance in EU waters. Therefore SG 100 is not met for EU waters, but is met for Norwegian waters.</p>		
d	Guide post		There is no evidence of systematic non-compliance.	
	Met?		Y- all UoAs	

	Justification	As mentioned under 3.2.3 b information of the Norwegian Directorate of Fisheries indicates that there is a high degree of compliance for the vessels fishing in Norwegian waters (UoA 2 and 4). None of the vessels was on the Norwegian Black List or on their IUU-list for having taken part in fishing operations that contravene regulatory measures in international waters. Although there has been sent no such information on the fisheries in the North Sea and the Scottish waters, there is effectively no evidence of systematic non-compliance.
References	EC, 2005; Consultations with relevant enforcement agencies; Interviews with clients	
OVERALL PERFORMANCE INDICATOR SCORE:		UoA 1: 80 UoA 2: 100 UoA 3: 80 UoA 4: 100 UoA 5: 80
CONDITION NUMBER (if relevant):		N/A

Evaluation table 30 - 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	Guide post	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.
	Met?	Y- all UoAs	Y- all UoAs	N - all UoAs
	Justification	<p>Research is principally coordinated by ICES through ACOM and is regularly undertaken by the member states' and Norway's research institutes, namely IFREMER (France) and IMR (Norway). IFREMER, with 4 centres and 13 stations along the Atlantic and Mediterranean coast (and another centre with 4 stations overseas). The "Laboratoire des Ressources Halieutiques" in Boulogne concentrates on research on whiting, saithe and plaice. The institute participates in the ITBS program and takes samples at different landing sites (Boulogne, Lorient and others). In addition to fisheries research programs covering all economical important species the IMR also has an extensive programme of seabed and benthic habitat surveys in support of OSPARs Biodiversity Committee marine habitat mapping efforts that are consistent with Principle 2. Results are shared and discussed in ICES' various working and study groups (AFWG, IBTSWG; WGNSSK and others) and regularly reviewed by STECF.</p> <p>But there is no comprehensive research plan covering all issues concerning P1, P2 and P3. Recent uncertainty over the stock assessment for 2010 and 2011 necessitates most probably complementary research across P1 may need to be complemented and there is no comprehensive research plan across P3. SG80 is met but SG100 is not met.</p>		
b	Guide post	Research results are available to interested parties.	Research results are disseminated to all interested parties in a timely fashion.	Research plan and results are disseminated to all interested parties in a timely fashion and are widely and publicly available.
	Met?	Y- all UoAs	Y- all UoAs	N - all UoAs
	Justification	<p>All research is disseminated through national institutes (publications) and through ICES (reports on ICES website) to all interested parties in a timely fashion. Reports from Ifremer are available on their website but not easy to find, unless published in the scientific literature. However, observer reports are not publicly available (although an annual synthesis is published). The research plan itself is</p>		

		not disseminated and widely and publicly available, but the calendar of benchmarking can be found on the ICES website. Therefore SG80 is met but SG100 is not met.
References	Websites of research institutes and ICES	
OVERALL PERFORMANCE INDICATOR SCORE:		80 for all UoAs
CONDITION NUMBER (if relevant):		N/A

Evaluation table 31 - PI 3.2.5

PI 3.2.5		There is a system of monitoring and evaluating the performance of the fishery-specific management system against its objectives		
		There is effective and timely review of the fishery-specific management system		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	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.
	Met?	Y- all UoAs	Y- all UoAs	Y - all UoAs
	Justification	<p>Both the Norwegian and the European fisheries management systems include formal consultation and review processes involving all fisheries administrations as well as relevant stakeholders, and committees such as ACOM (the body through which ICES provides formal advice), STECF (the committee by which the European Commission seeks expert opinion on fisheries management), the ACFA (dealing with industry concerns at a European / “horizontal” level), and the Advisory Councils (ACs) dealing with regionally specific technical issues (of which the body specifically incorporating the industry interests is the North Sea AC for Subarea IV, the Northwest Waters AC for Subarea VI, and the Long Distance AC for Areas I and II) in the EU or the annual consultation meetings in Norway. SG 100 is met.</p> <p>France has put in place a process called a ‘grenelle’ (after Rue de la Grenelle where the first one took place) of stakeholder discussion and review for various policy areas, including the sea (Grenelle de la Mer). This process is driven by stakeholder concerns, and discusses and makes policy recommendations over a wide range of marine issues, including various fisheries, protected areas, marine pollution etc.</p> <p>On this basis, the team concluded that all (significant) parts of the management system are evaluated in various ways. SG100 is met.</p>		
b	Guide post	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.
	Met?	Y- all UoAs	Y- all UoAs	N - UoA 1,3 and 5 Y - UoA 2 and 4

	Justification	<p>All areas: The ICES reviews of the fishery status are independent, and the occasional review of the EU-Norway management plan provides an opportunity for occasional external review of the management system in all areas.</p> <p>EU waters: By contrast, formal reviews external to ICES are limited. ICES can, and does, involve external scientists in extensive review of its methodologies if considered necessary. STECF may review ICES assessments and advice. The CFP itself or some of its key policies (e.g. fleet structure) may be scrutinised by the European Court of Auditors. The CFP has been adapted and updated periodically (twice so far). However there is no clear external review of the entire EU management system.</p> <p>Norwegian waters: The Norwegian system has been evaluated by the Auditor General in 2003/04 and 2007/08. In addition, every 3-5 years the national fisheries management system is reviewed by different international organisations such as the FAO Committee of Fisheries, the UN Resolution on Sustainable Fisheries and the OECD.</p> <p>While the EU management system meets only SG 80, the Norwegian system meets SG 100.</p>
References	<p>ACOM website; AFWG website; STECF website; WGNSSK website Commissariat Général au Développement Durable 2012. Grenelle de la mer. Deuxième rapport d'étape. March 2012. http://www.developpement-durable.gouv.fr/IMG/pdf/Grenelle_de_la_mer_2eme_rapport.pdf</p>	
OVERALL PERFORMANCE INDICATOR SCORE:		<p>UoA 1: 90 UoA 2: 100 UoA 3: 90 UoA 4: 100 UoA 5: 90</p>
CONDITION NUMBER (if relevant):		

Appendix 1.2 Conditions

Table 1.2.1: Condition 1

Performance Indicator	2.3.1 – ETP species outcome
Score	75 (UoA 1, UoA 5) 65 (UoA 3)
Rationale	<p><u>UoA 1 (Euronor, North Sea):</u> For <u>starry ray</u>, the team noted that interactions are patchy (out of 13 observer reports, 6 recorded zero catch and the other seven 2, 9, 12, 22 22, 103 and 504 individuals). The team concluded that since regulatory requirements are being met following ICES advice, direct impacts could be evaluated (qualitatively) as ‘unlikely’ to create unacceptable impacts (SG60 met). It is at least possible, however, that the fishery could do more, perhaps by evaluating the areas or conditions under which large quantities of the species are caught together, and/or the circumstances in which the individuals are brought on board in good or bad condition – i.e. it was possible to do more to avoid fishing or killing these individuals. On this basis, the team considered that SG80 was not fully met.</p> <p><u>UoA 3 (Cie des Pêches St Malo, North Sea):</u> note in the absence of observer reports for this UoA, the following is based on the Euronor data: for <u>starry ray</u>, the team noted that interactions are patchy (out of 13 observer reports, 6 recorded zero catch and the other seven 2, 9, 12, 22 22, 103 and 504 individuals). The team concluded that since regulatory requirements are being met following ICES advice, direct impacts could be evaluated (qualitatively) as ‘unlikely’ to create unacceptable impacts (SG60 met). It is at least possible, however, that the fishery could do more, perhaps by evaluating the areas or conditions under which large quantities of the species are caught together, and/or the circumstances in which the individuals are brought on board in good or bad condition – i.e. it was possible to do more to avoid fishing or killing these individuals. On this basis, the team considered that SG80 was not fully met.</p> <p>In the absence of data on discards, the Grande Hermine has been assumed to have the same overlap with ETP species as the Euronor vessels in the North Sea (although at a lower level because of lower effort and catches; if catch of starry ray can scale with saithe catch in the North Sea, the estimated total catch by the Grande Hermine in 2015 would be 0.23 t). Nevertheless, SG80 requires that ‘the effects of the fishery are known’, which is not the case for this fishery since there is no direct data; although ‘known effects’ can be extrapolated as above. SG60 is met, but SG80 is not met for Cie des Pêches St. Malo (UoA 3).</p> <p><u>UoA 5 (Scapêche):</u> For <u>common skate</u>, the regulatory requirements are being met (SG60 met). Although the total catch of common skate by Scapêche appears to be potentially significant, the team noted that it overlaps with the saithe fishery specifically to a much more limited extent than with Scapêche’s other fisheries, although the fact that these fisheries are all undertaken close together in time and space makes it hard to untangle the patterns of bycatch (see Table 8 and Table 10). In the previous certification cycle, Scapêche had a condition on this issue which was closed after close inspection of observer reports. Nevertheless, the team felt that it is not possible on the basis of the data provided for this re-assessment to say that direct impacts of Scapêche’s saithe fishery are ‘highly unlikely’ to create unacceptable impacts on common skate as is required for SG80. The team noted that this scoring is harmonised with a similar approach for other MSC fisheries: SFSAG haddock and saithe fishery, Germany North Sea saithe trawl and SFPO North Sea saithe.</p>

<p>Condition</p>	<p>UoA 1: Euronor should show by the end of Year 5 that direct effects of their fishery are highly unlikely to create unacceptable impacts to starry ray in the North Sea.</p> <p>UoA 3: Cie des Pêches St. Malo should show by the end of Year 5 that direct effects of their fishery are highly unlikely to create unacceptable impacts to starry ray in the North Sea. The effects of the fishery should be shown to be highly likely to be within limits of national and international requirements for protection of starry ray in the North Sea.</p> <p>UoA 5: Scapêche should show by the end of Year 5 that the direct effects of their fishery are highly unlikely to create unacceptable impacts to common stake in Subarea VI.</p>
<p>Milestones</p>	<p>Note: Euronor and Cie des Pêches St. Malo may collaborate on addressing this condition or may address it independently, as they choose.</p> <p><u>UoA1 (Euronor, North Sea):</u></p> <p>Year 1: Euronor should collate available data on bycatch and populations of starry ray in the North Sea, from its own catch records or observer reports or other sources of information. Score 75.</p> <p>Year 2: Euronor should analyse the available data in order to assess whether it demonstrates that the direct impacts of the fishery are 'highly unlikely' (probability < 30%) of creating unacceptable impacts (a declining population or a failure of the population to recover). Score 75.</p> <p>Year 3: If the analysis cannot demonstrate this, Euronor should evaluate ways in which starry ray bycatch could be reduced. Score 75.</p> <p>Year 4: Develop a plan to reduce impacts on starry ray in the North Sea to an acceptable level. Score 75.</p> <p>Year 5: Implement the plan and demonstrate a reduction in mortality to an appropriate level, or a reasonable expectation of such a reduction. Score 80.</p> <p><u>UoA 3 (Cie des Pêches St Malo, North Sea):</u></p> <p>Year 1: Cie des Pêches St Malo should collate available data on bycatch and populations of starry ray in the North Sea, from its own catch records or observer reports or other sources of information. Score 65.</p> <p>Year 2: Cie des Pêches St Malo should analyse the available data in order to assess whether it demonstrates that the direct impacts of the fishery are 'highly unlikely' (probability < 30%) of creating unacceptable impacts (a declining population or a failure of the population to recover). Score 65.</p> <p>Year 3: If the analysis cannot demonstrate this, Cie des Pêches St Malo should evaluate ways in which starry ray bycatch could be reduced. Score 65.</p> <p>Year 4: Develop a plan to reduce impacts on starry ray in the North Sea to an acceptable level. Score 65.</p> <p>Year 5: Implement the plan and demonstrate a reduction in mortality to an appropriate level, or a reasonable expectation of such a reduction. Score 80.</p> <p><u>UoA 5 (Scapêche):</u></p>

	<p>Year 1: Scapêche should collate available data on bycatch and populations of common skate in the area of the fishery, from its own catch records or observer reports or other sources of information. Score 75.</p> <p>Year 2: Scapêche should analyse the available data in order to assess whether it demonstrates that the direct impacts of the fishery are 'highly unlikely' (probability < 30%) of creating unacceptable impacts (a declining population or a failure of the population to recover). Score 75.</p> <p>Year 3: If required, Scapêche should evaluate ways in which common skate bycatch could be reduced. Score 75.</p> <p>Year 4: Develop a plan to reduce impacts on common skate to an acceptable level. Score 75.</p> <p>Year 5: Implement the plan and demonstrate a reduction in mortality to an appropriate level, or a reasonable expectation of such a reduction. Score 80.</p>
Client action plan	See Appendix 8
Consultation on condition	See Appendix 8

Table 1.2.2: Condition 2

Performance Indicator	2.3.2 – ETP species management
Score	75 (UoA 1, 3 and 5)
Rationale	For starry ray and common skate, since the measures are aligned with ICES advice, they can be considered 'likely to work'. The team did not consider, however, that there is currently an objective basis for confidence that they will work. This is problematic, in as much as a reduction in bycatch rates could be attributed either to the measures working, or to a reduction in the population. ICES' advice suggests that the overall situation with the population remains of concern. On this basis, SG80 is not met for either species.
Condition	<p><u>UoA 1 and 3</u>: In relation to Euronor and Cie des Pêches St Malo, the fishery needs to show by the end of Year 5 that there is an objective basis for confidence that the strategy to protect starry ray in the North Sea will work, based on information directly about the fishery and/or the species involved.</p> <p><u>UoA 5</u>: For Scapêche, the fishery needs to show by the end of Year 5 that there is an objective basis for confidence that the strategy to protect common skate in Subarea VI will work, based on information directly about the fishery and/or the species involved.</p>
Milestones	<p>Year 1: No milestone. Score 75.</p> <p>Year 2: From the information gathered and analysed under Condition 1, determine how likely the existing strategy to protect starry ray (UoA 1 and 3) / common skate (UoA 5) is likely to work. Score 75.</p> <p>Year 3: Evaluate ways in which the strategy could be improved, as per Condition 1 Year 3 milestone. Score 75.</p> <p>Year 4: Develop a plan to improve the existing strategy. Score 75.</p> <p>Year 5: Implement the revised strategy and demonstrate that there is an objective basis for confidence that it will work to reduce impacts on starry ray (UoA 1 and 3) or common skate (UoA 5) to acceptable levels. Score 80.</p>
Client action plan	See Appendix 8
Consultation on condition	See Appendix 8

Table 1.2.3: Condition 3

Performance Indicator	2.3.3 – ETP species information
Score	75 (UoA 5)
Rationale	Observer information provides a (semi)quantitative assessment of the total impact from the fishery for both Euronor and Scapêche, hence SG60 is met. For starry ray ICES provide quantitative advice. SG80 is met for starry ray (UoA 1 and 3). There is, however, no quantitative assessment of common skate populations in Subarea VI. SG80 is not met for common skate (UoA 5).
Condition	By the end of Year 5, Scapêche should show that information on common skate in Subarea VI is sufficient to determine whether the Scapêche saithe fishery may be a threat to protection and recovery of the species.
Milestones	<p>Year 1: Scapêche should collate available data on bycatch and populations of common skate in the area of the fishery, from its own catch records or observer reports or other sources of information. Score 75.</p> <p>Year 2: Scapêche should analyse the available data in order to assess whether it is able to provide sufficient information to demonstrate whether Scapêche is a threat to the recovery of common skate populations. Score 75.</p> <p>Year 3: Work with a suitable scientific body (e.g. Ifremer, Marine Scotland Science, ICES Elasmobranch Working Group or another suitable individual or organisation) to support further data collection and analysis of common skate in the area of the fishery if required. Score 75.</p> <p>Year 4: Analyse data, show that information is now sufficient to evaluate the threat to common skate, or that there is a reasonable expectation of such an evaluation being possible. Score 80.</p>
Client action plan	See Appendix 8
Consultation on condition	See Appendix 8

Appendix 2. Peer Review Report

Overall Opinion

<i>Has the assessment team arrived at an appropriate conclusion based on the evidence presented in the assessment report?</i>	Yes	Conformity Response	Assessment	Body
<i>Justification:</i> The report is well reasoned and well presented. This is a reduced reassessment carried out under CR v1.3 and, as shown in the assessment, the client continues to meet the MSC standard.		<i>Thank you</i>		

<i>Do you think the condition(s) raised are appropriately written to achieve the SG80 outcome within the specified timeframe?</i>	Yes	Conformity Response	Assessment	Body
<i>Justification:</i> The overall intent of the three conditions relating to starry ray or common skate is clear and satisfactory performance would meet SG80 requirements. However, the conditions apply to different UoAs and (in some cases) different species. For clarity, it may be worth separating them – especially as closing of the conditions may proceed separately? Specific comments in relation to the separate conditions are included below.		<i>We believe the wording of the conditions is very clear about which UoAs they apply to. The corresponding action plans are also separate for each client. We do not feel amendments to the condition wording is required in this regard.</i>		

If included:

<i>Do you think the client action plan is sufficient to close the conditions raised?</i>	Partly	Conformity Response	Assessment	Body
<i>Justification:</i> The Action Plans are directed towards evaluating the impact of the fisheries and 'if significant' reducing/minimising this impact. This is well considered and seems entirely appropriate. What appears missing, however, is an indication of what level of effect would be sufficient to trigger such actions. UoA5 does include consultations with external bodies which could provide this information; the Euronor action plan seems less specific.		<i>The MSC does not define 'significant impacts', thus leaving the definition to the CAB, rather than to external bodies. While external validation of whether impacts are 'significant' or not is helpful, it is not essential.</i>		

General Comments on the Assessment Report (optional)

As we approach the transition between v1.3 and v2.0, it would be useful to make clear at the beginning of the report which version of the CR is being applied.

Agreed, this has been added.

2.1.1 References SFSAG, presumably incorrectly?

Indeed, this has been corrected – thank you!

Does not Table 21 need to list all species (main and minor) and habitats affected?

The table does list all main and minor species affected (due to the amount of minor species, reference is made to another table). Habitats have been added.

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
UoA1, UoA 3 and UoA 5 – North Sea and West of Scotland					
1.1.1	Y	Probably	NA	Slb has SSB above (and fluctuating around over recent years) MSY Btrigger. Whilst MSY Btrigger represents the lower limit of the likely range of Bmsy, it is noted in the latest MSC (v2.0) guidance that “in ICES assessments, fisheries with B>Btrigger may be regarded as fluctuating around Bmsy (thereby achieving an 80 score)”. While B has fallen slightly below MSY Btrigger in some recent years, fishing is in accordance with the Management Plan and F is below Fmsy/Fpa. A score of 80 therefore seems to be justified, but this should perhaps be expanded upon in the explanation..	In principle the guidepost a refers to the point where recruitment would be impaired, which is Blim. Btrigger is simply a buffer at which action should be taken to avoid approaching Blim, therefore if the stock is generally above Btrigger a 80 score is justified. However, the following wording has been added for clarity: “SSB is currently above (and fluctuating around over recent years) MSY Btrigger. Whilst MSY Btrigger represents the lower limit of the likely range of Bmsy, it is noted in the latest MSC (v2.0) guidance that “in ICES assessments, fisheries with B>Btrigger may be regarded as

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
					fluctuating around Bmsy (thereby achieving an 80 score)". While SSB has fallen slightly below MSY Btrigger in some recent years, fishing is in accordance with the Management Plan and F is below Fmsy/Fpa. A score of 80 therefore is considered appropriate"
1.1.2	Y	Probably	NA	See comments above, the relationship between B and F target RPs should be made clearer – is F the target RP, and if so this should be specifically stated?	If the reviewer refers to guidepost a, it includes F as well as biomass reference points. We think the current text is making clear the difference between these.
1.1.3	NA	NA	NA		
1.2.1	Y	Y	NA		
1.2.2	Y	Y	NA		
1.2.3	Y	N	NA	It is not clear that there is sufficiently comprehensive information on stock structure and productivity to support a score of 100 for Sla.	The ICES reports contains a wide range of information on "stock structure, stock productivity, fleet composition, stock abundance,

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
					fishery removals and other information such as environmental information" to justify a score of 100 for guidepost a. The report is also included in the reference list and thus can be consulted by the readers.
1.2.4	Y	Y	NA		
UoA2 and UoA 4 - NEA					
1.1.1	Y	Probably	NA	For SIb, the comments on UoA1 also apply – it should be clearly justified what the TRP is (Fmgt?) and how this relates to Bmsy or Fmsy.	See our response to 1.1.1 previously.
1.1.2	Y	Probably	NA	As for comments above.	See our response to 1.1.2 previously.
1.1.3	NA	NA	NA		
1.2.1	Y	Y	NA		

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
1.2.2	Y	Y	NA		
1.2.3	Y	N	NA	It is not clear that there is sufficiently comprehensive information on stock structure and productivity to support a score of 100 for SIa.	See our response to 1.2.3 previously
1.2.4	Y	Y	NA		
2.1.1	Y	Y	NA	The MSC system has incurred some complicated scoring, but this may take the prize! While the scores (85 for all UoAs) seem sound (all meet SG80 and a few achieve higher scores), it may help to state this explicitly – i.e. scores per UoA per Scoring Issue.	We feel providing scores per UoA per scoring issue would actually add to the complexity, rather than add clarity. We would prefer to keep the current wording.
2.1.2	Y	Y	NA	Again, this is a complicated picture (see comments above), and the overall scoring appears defensible, but SIc asks for successful implementation, SId asks for	The team feels that the management measures in place at a higher level (e.g. through the setting of TACs) are more appropriate to the scoring of this PI.

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
				achievement of objectives – this is not necessarily the same thing and could vary for vessels and wider fleets. Presumably the vessels under assessment do not have their own strategies.	The rationale therefore doesn't refer to what is in place at vessel or fleet-level but rather what is in place to sustainably manage the species themselves. Scoring issues c and d were not considered by the team to be the same thing and different rationales are in fact provided. The wording was not changed.
2.1.3	Y	Y	NA	Comments as per 2.1.1	Please see our response to 2.1.1
2.2.1	Y	Y	NA		
2.2.2	Y	Possibly	NA	SlA: while both areas have measures which may well minimise bycatches, these may be more incidental (partial strategy) than designed (strategy). It is also not entirely clear that the differences between UoA1 and 2 constitute a real difference in the effectiveness of the measures	This scoring issue was only met at SG100 level for the UoAs that apply to the Northeast Arctic where a discard ban is in place. The discard ban is surely 'designed' to minimise bycatch (i.e. discards), so the team stands by its scoring of 100 for UoAs 2 and 4. The scoring was not

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
				applied to bycatch species.	changed.
2.2.3	Y	Y	NA		
2.3.1	Y	Y	Y	<p>The scoring of UoA3 may be a little exacting, but as the vessels have different fishing patterns, this seems a reasonably precautionary approach.</p> <p>For the condition, the scoring in the milestones for UoA3 may be incorrect (start at 65)? Milestones for Yrs 4 and 5 are conditional on Year 3 results.</p> <p>The conditions would need to be closed in year 4 for recertification to be proceed, n'est ce pas?</p>	<p>For the condition, the peer reviewer is right – the milestones for UoA 3 should begin with a score of 65; this has been corrected. Year 4 and 5 milestones are indeed conditional on Year 3 results.</p> <p>Extract from the FCR v2.0: 7.11.1.3 <i>The CAB shall draft conditions to result in improved performance to at least the 80 level within a period set by the CAB but no longer than the term of the certification. The term of certification ends with the certificate expiry date, i.e. year 5. There is no requirement for a condition to be closed by the fourth year.</i></p>
2.3.2	N	N	Y The conditions is	The logic used for Sla is clear. For Slb, however, it does not necessarily follow that following regulations	Firstly, we disagree that the RBF provides much measure of reassurance ...

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
			very closely aligned with that for PI 2.3.1.	<p>'landing forbidden; if caught must not be harmed and must be returned promptly' would prevent the UoAs creating unacceptable impacts, especially if mortality is high following capture. Population status, UoA as a share of total landings or even RBF would provide this reassurance. Measures within the fishery to minimise bycatches could also be referenced here, providing consistency with SIb.</p> <p>For SIc I assume that indirect effects were to be considered by management, rather than the MSC assessment team; however there has been significant work on trophic relationships between saithe, main bycatch and higher predators that perhaps should be considered here. SIC – needs comment in relation to NEA fishery?</p>	<p>In relation to SIb, the logic at SG60 is not that the regulations are being followed, it is that actions are in line with scientific advice from ICES. An additional note has been added about measures to reduce bycatch as well as effort, to bolster the rationale at the SG60 level. SG80 is only met for the NEA UoCs where there is more direct objective evidence that there are no impacts (lack of interactions).</p> <p>We presume the comment on SIc here actually refers to PI 2.3.1? Anyway, we have responded as if that's the case, otherwise the comment doesn't make much sense. Anyway, the rationale has been adjusted as suggested; the score has not changed. The rationale applies to both areas equally.</p>
2.3.3	Y	Y	Y But see	For the condition, the Milesones	The Year 3 and 4 milestones are in

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
			comments.	appear misaligned – Year 2 and Year 4 are essentially the same; The year 3 milestone may be better in Year 2.	fact conditional on the outcome of Year 2. Only if it is not possible to demonstrate, on the basis of the available data for the Scapeche fleet, that the fishery does not pose a threat to common skate, will it be required to collect further data.
2.4.1	N	N	NA	While the scoring is certainly correct, it is possible to determine more accurately the areas fished by the various UoAs and (certainly for the North Sea/West of Scotland and increasingly for NEA) the habitats encountered or likely to be encountered (e.g. sea pens in the Norwegian Sea). Sufficient information is available to determine the likely extent of impact and recovery times for the habitats present and the restricted number of vessels within each UoA (e.g. Hiddink et al 2006 Can. J. Fish. Aquat. Sci. 63: 721–736).	The team notes that this is a reduced reassessment which focuses on the elements that have changed since the initial certification. In terms of habitats, the only significant changes occurred in relation to the management and more specifically in relation to the protection of important or vulnerable habitats in UK waters and this was taken into account for the scoring. The team considered the available information sufficient to score the outcome PI on the basis that no significant changes in fishing

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
					footprint or habitat distribution have occurred since the initial assessment.
2.4.2	Y	Y	NA		
2.4.3	Y	Y	NA	For Sla the scoring of the North Sea/West of Scotland at only 80 seems very exacting – this sets a high bar, given the amount of information available.	SG100a is a very difficult guidepost to meet. Although Scottish waters are mapped over the whole EEZ, the maps are not particularly detailed, and it is likely that small areas of vulnerable habitat have been missed – although this is admittedly more likely on the west coast. For Norway, MAREANO has some gaps – notably around Svalbard. Other sources of information exist but it was not clear to the team the level of detail or coverage in these sources, hence the scoring was perhaps precautionary.

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
2.5.1	Y	Y	NA		
2.5.2	Y	Y (at least)	NA	Again, the scoring of SIb, while supportable, does set a very high bar, especially as e.g. strategies are in place for elasmobranch stocks.	The question is, to what extent should scoring be based solely on the famous plan (as a 'a strategy that consists of a plan') and to what extent it can be based on other strategies outwith the plan. The team took the approach of considering just the plan, which in Scotland's case is a little too vague to meet the requirements of SG100. This may be an incorrect interpretation (the MSC guidance is not specific on the point) but since it makes no odds overall, and since it is precautionary, it has been left as it is.
2.5.3	Y	Y (at least)		Same comment as above for SIb and d – e.g. for SId, is it not possible to infer the main consequences of the fishery impacts on the ecosystem?	For SIb, SG100 is met everywhere except the west of Scotland, where information is significantly lacking compared to the other areas, and stocks are more depleted. The team considered that this scoring was reasonable.

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
					For SId, we agree that the scoring is perhaps precautionary, but we believe that it is reasonable.
3.1.1	Y	Y	NA	Although probably not affecting the scoring of SIb, it is noted that in 2013 the Faroe Islands referred the EU to the Permanent Court of Arbitration for breach of the obligation under the United Nations Convention on the Law of the Sea (UNCLOS). Members of the Court were appointed and a timeline set, but the case was terminated a year later following agreement between the parties.	The team does not see the necessity to change the scoring. The example supports our justification and shows that there is a transparent mechanism in place for resolving legal disputes.
3.1.2	Y	Y	NA		
3.1.3	Y	Y	NA		
3.1.4	Y	Y	NA		

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
3.2.1	Y	Y	NA	Again, the scoring is not unreasonable, but it could be argued that the management plans for the Norwegian seas may justify a score of 100 for the NEA UoAs.	The score of 90 should be maintained. Despite the ongoing programmes to map and safeguard vulnerable and sensitive marine habitats and ecosystems, there are less well defined and measurable objectives for Principle 2 compared to Principle 1.
3.2.2	Y	Y	NA	While the scores awarded are defensible, the scoring of SIb seems to assume a lack of responsiveness of management to ecosystem-related issues that may neglect the ICES/Norwegian seas management/MSFD initiatives; and for SId it may be that information is reported on relevant websites and so made available to stakeholders.	<p>The team disagrees with the peer reviewer.</p> <p>There are certainly initiatives for a better addressing of also P2 outcomes but relevant objectives have not or only partly been introduced in the management plans. Therefore the decision-making processes do not respond to all issues identified in relevant research, monitoring, evaluation and consultation.</p> <p>Concerning SId the score of 80 is</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
					justified because there is no formal reporting to all stakeholders.
3.2.3	Y	Y	NA	Of course, and particularly for Slc, it is the client vessels and French enforcement agencies that are under consideration regarding compliance. This may be considered in relation to the existing scoring.	The majority of the catches are taken in the Northeast Arctic (subareas I and II) controlled by the Norwegian Directorate of Fisheries and there have been no compliance issues with the client fleet. Fisheries in EU waters are controlled by the member states and all issues should be recorded by the respective French enforcement agencies. Unfortunately, we did not receive replies to our numerous inquiries from any of the French authorities.
3.2.4	Y	Y	NA		
3.2.5	Y	Y	NA		

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:



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Tel: +44 (0)20 7246 8900
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Date: 11/08/2016

SUBJECT: MSC Review and Report on Compliance with the scheme requirements

Dear Jo Gascoigne

Please find below the results of our partial review of compliance with scheme requirements.

CAB	ME Certification Limited (MEC)
Lead Auditor	Jo Gascoigne
Fishery Name	Scapeche, Euronor and Compagnie de Peche de St Malo saithe
Document Reviewed	Public Comment Draft Report

Ref	Type	Page	Requirement	Reference	Details	PI
20678	Guidance	45-48	FCR-7.12.1.5b v.2.0	The CAB shall identify and document: a. The UoC, b. The point of intended change of ownership of product, and c. The point from which subsequent Chain of Custody is required.	The report mentions that chain of custody will be required for certified product at first point of sale. Whilst the report states that differing forms of product may be landed at differing ports and that first point of sale takes place through different mediums (auctions, direct to customer etc.), the report however also mentions that sales are usually pre-agreed, therefore it is unclear in some cases where physically change of ownership and first point of sale may take place in each instance.	

Team response: The team acknowledges that the traceability picture in this fishery is complex due to the number of clients involved although this is not thought to increase the risk to the supply chain. In all cases where the sale is pre-agreed (for example through the electronic auctions of Hanstholm or Boulogne-sur-Mer in the case of Euronor, or by identifying the client prior to the trip taking place in the case of Cie des Pêches

St Malo) the physical change of ownership happens straight after landing in all cases. Either when the product goes straight to the buyer (in the case of Euronor), or to the storage facility 'Compagnie Des Pêches Distribution' which has separate CoC certification (MSC-C-54514).

20679	Minor	15, 66	FCR-7.7.5 v.2.0	If the scope of the fishery contains a fishery that overlaps with another certified or applicant fishery, Annex PB shall be applied	In the context of harmonisation, PB3.3.3 requires that the team explain and justify any difference in scores in the scoring rationale for relevant PI. There does not seem to be clear explanations of some of the differences with respect to P1 scores of overlapping fisheries. For example, a clear explanation for the difference in P1.1.1 scoring between this fishery and others overlapping, in particular the SFSAG fisheries, would be relevant to add.	
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Team response: The SFSAG scoring was based on out-of-date ICES advice. An explanation has been added.

This report is provided for action by the CAB and ASI in order to improve consistency with the MSC scheme requirements; MSC does not review all work products submitted by Conformity Assessment Bodies and this review should not be considered a checking service. If any clarification is required, please contact the relevant FAM for more information.

If you have any questions regarding this response, please do not hesitate to contact the relevant Fisheries Assessment Manager for this fishery.

Marine Stewardship Council
cc: Accreditation Services International

Appendix 4. Surveillance Frequency

Table 4.1: Surveillance level rationale

Year	Surveillance activity	Number of auditors	Rationale
1	On-site audit	1 auditor on-site	The assessment team have determined that the surveillance level for this fishery should be set at the default level 6. (i.e. 4 on-site surveillance audits) as three new conditions have been raised against the ETP species component of Principle 2 during the reassessment. As this is now the second certification period, a reduced surveillance team of only one auditor is required as the fishery has conditions associated with only one Principle (P2) (FCR V2 - 7.23.4.2).

Table 4.2: Timing of surveillance audit

Year	Anniversary date of certificate	Proposed date of surveillance audit	Rationale
1	September 2017	September 2017	N/A as it is proposed that the first surveillance is conducted on the certificate anniversary date.

Table 4.3: Fishery Surveillance Programme

Surveillance Level	Year 1	Year 2	Year 3	Year 4
Level 6	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit & re-certification site visit

Appendix 5. Barents Sea Harmonisation on Principle 2

Harmonisation of the scoring of Barents Sea habitats – conclusions (drafted by MSC)

Barents Sea Harmonisation Call Meeting Note

10/3

Participants:

David Agnew (MSC)	Billy Hynes (Acoura)
Megan Atcheson (MSC)	Lucia Revenga (P2 Assessor - Acoura)
Shaun McLennan (MSC)	Chrissie Sieben (MEC)
Dan Hoggarth (MSC)	Jo Gascoigne (P2 Assessor – MEC)
Stephanie Good (MSC)	Bert Keus Agonus (P2 Assessor - DNVGL)
Sigrun Bekkevold (DNVGL)	Guro Meldre Pedersen (DNVGL)
Andy Hough (P2 Assessor - DNVGL)	Anna Kiseleva (DNVGL)
Virginia Polonio (BV)	Jason Coombes (Acoura)
Macarena Garcia (BV)	Terry Holt (P2 Assessor - DNVGL)

General Conclusions

- MSC introduced the call with some background on harmonisation in the context of V1.3 of the standard. Particular emphasis was placed on the key difference between approaches required for harmonisation against difference Principles. There was also some background provided by MSC on the 14 certified fisheries operating within the Barents Sea, including some of the scoring trends reflected by respective assessments.
- The participants then discussed scoring in their respective fisheries and some of the factors underpinning passes and conditional passes. Some inconsistencies were highlighted, in particular with respect to: i) the interpretation of Scoring Guideposts; ii) the evidence used to supporting scoring; iii) the outcomes of scoring and iv) client action plans (content and challenge).
- In general there seemed to be a range of factors impacting each score scenario which are covered in notes below. **Whilst changes to scores as a result of the meeting are not certain, the value of the discussion was arguably more about providing consistent rationales to explain differences in scores after harmonisation. Indeed this set of notes in itself may act to provide a source of information for CABs and Assessors to help explain differences in assessments undertaken for Version 1.3 of the standard.**
- The MSC team reiterated the implications for fisheries entering new “areas” or in scenarios where there were “material changes” to scores evidenced by new information, including the need to consider at surveillance audits and via expedited audits where necessary.
- The team also touched on changes in Version 2 of the standard and likely harmonisation implications but it was felt that more time was needed/perhaps another session to help prepare CABs and Assessors for transition.

Discussion

2.4.1 Outcome

- Assessors reported they find ambiguity inherent in the language and definitions (e.g. risk probabilities) for the habitat requirements. They rely on expert judgement to assess this PI.
- Scoring tended to focus on VMEs specifically where known. Best practice seems to be to consider each VME individually (as identified in MAREANO or other information source).
- With respect to the information on sensitivity of individual VMEs to trawling - consensus was that this information is available but has not tended to be specifically used (it may be that the assumption is that all VMEs are 'vulnerable' by definition).
- A number of VME and Habitat definitions used including OSPAR papers (e.g. OSPAR, 2010. Background Document for Deep-sea sponge Aggregations. Biodiversity Series, OSPAR, London). For Barents Sea main VMEs identified have been corals, sponges and (more recently) Sea pens / 'coral gardens'.
- Factors that may result in different outcome scores for PI 2.4.1:
 - Differences in target species (Saithe fished further south, cod and haddock intermediate latitudes and prawn furthest north)
 - Differences in intelligence available about fishing zone (best information in NEZ, less information in SFPZ although improving, Russian zone a bit unclear (information may exist but be hard to access)).
 - Differences in the number of vessels in fleet and type of vessels (size but also what technology they have on board for identifying bottom types and how they use it)
 - Vessel/Operation nationalities. E.g EU vs non-EU fishing activity - this is relevant in the Barents Sea because due to the rules on haddock bycatch for the EU fleet their footprint is more constrained than that of the Norwegian and Russian fleets.
 - Spatial extent of the vessel footprint – do they continuously fish over the same areas or is it widely dispersed.
 - Type of benthos
 - Some CABs use a scoring element approach for different types of habitats (sand, rocky, coral etc), while others do not, even though required by CR v1.3 27.10.7.

--> it may be useful for CABs to point to these [and other] factors that may lead to differences in scores, in their rationales.

2.4.2 Management

- Factors that may result in different scores for PI 2.4.2:
 - Scale is an important consideration – there is generally more certainty that strategies are workable with less vessels (less variables); on the flip side large fleets are also more likely to be impacted by a national management framework (e.g entire Norwegian fleet having to comply with “Move On” rules).

- Differences in habitat impact management framework (Norway vs Russia vs both). Norway tended to manage fishery impacts in Marine Protected Areas (MPA); Russia does not have clear habitat protections.
- Differences in approach of the individual client companies (e.g. awareness of VMEs, approach to recording and avoiding, monitoring and updating of their information e.g. via MAREANO).
- The availability of individual skippers was important – it was key to gauge their attitude as well as their experience of seeing VMEs come up in the trawl - but note that this is variable from fishery to fishery (usually only where a small number of vessels but not always even then).

2.4.3 Information

- Factors that may result in different scores for PI 2.4.3:
 - Differences in the sources of information - coastal state information which is readily available - MAREANO notably; coastal state information which is not readily available e.g. scientific reports in Russian
 - individual vessel / fleet data e.g. on-board recording of VMEs
 - VMS data - easier to get in some cases than others, more often seen on the site visit than provided in reports; difficulties in obtaining highlighted
- Other important considerations (whilst not necessarily impacts on scoring, useful context for developing the standard).

Fisheries found it hard to “prove a negative” – there seemed to be scenarios where if interactions with sensitive habitats were not recorded, NGO’s tended to speculate that those fisheries were not complying with monitoring requirements.

Appendix 6. Stakeholders

Stakeholder	Organisation
CNPMEM	CNPMEM
Direction des Peches Maritimes et de l'Aquaculture	Direction des Peches Maritimes et de l'Aquaculture
EU Directorate General for Maritime Affairs and Fisheries	EU Directorate General for Maritime Affairs and Fisheries
FROM Nord	FROM Nord
Marine Scotland	Marine Scotland
Ministere de l'Agriculture et de la Peche	Ministere de l'Agriculture et de la Peche
Noordzee Stichting	Noordzee Stichting
North Sea RAC Secretariat (NSRAC)	North Sea RAC Secretariat
Norwegian Ministry of Fisheries and Coastal Affairs	Norwegian Ministry of Fisheries and Coastal Affairs
Union des Armateurs la Peche de France	Union des Armateurs la Peche de France
Whale and Dolphin Conservation Society	Whale and Dolphin Conservation Society
Alain Biseau	IFREMER
Axelle Bodmer	Association Nationale des Organisations Producteurs
Bjorn Stockhausen	Seas At Risk
Chris Darby	ICES
Elise Petre	WWF France
Ewen Milligan	Fisheries Group Environment and Rural Affairs Department
Iben Wiene Rathje	WWF Denmark
Julien Lamothe	Association Nationale des Organisations Producteurs
Nigel Atkins	Marr Management Ltd.
Peter Breckling	DFV
Pristan Douard	PMA (Pecheurs Manche Atlantique)
Sylvie Alexandre	Direction Regionale des Affaired Maritimes Nord

Appendix 7. Client Action Plan

Appendix 8.1 Client Action Plan – Euronor



Plan d'actions pour lever la condition concernant la raie radiée (starry ray, *Amblyraja radiata*).

Client action plan to close the condition related to starry ray (*Amblyraja radiata*)

Voici pour mémoire les principales raies identifiées par Ifremer dans nos zones de pêches avec la liste IUCN :

For reference, please see below the main ray species identified by IFREMER in our fishing areas with IUCN listing :

DE QUELLE RAIE PARLONS-NOUS ?

NOM COMMUN	NOM LATIN	INFORMATIONS SUR L'ESPÈCE	LISTE IUCN (échelle mondiale)
Raie fleurie	<i>Leucoraja naevus</i>	Reconnaissable grâce à la présence sur chaque aile d'une ocelle, large marque sombre et arrondie au centre, ornée de taches claires.	Préoccupation mineure
Raie douce	<i>Raja montagui</i>	Tachetée de mille points qui n'atteignent pas le bord des ailes.	Quasi menacée
Raie bouclée	<i>Raja clavata</i>	Appelée ainsi en raison de la présence de grosses épines recourbées sur le dos et sur le ventre.	Vulnérable
Raie lisse ou raie blonde	<i>Raja brachyura</i>	Recouverte d'une multitude de petits points sur l'ensemble de sa face supérieure.	En danger
Raie mêlée ou raie batarde	<i>Raja microocellata</i>	Dos sombre, la seule à être ornée de lignes blanchâtres.	En danger critique d'extinction
Pocheteau noir	<i>Dipturus oxyrinchus</i>	Stock épuisé en Atlantique Nord-Est.	Éteinte à l'état sauvage
Raie chardon	<i>Leucoraja fullonica</i>	Elle se reconnaît à son museau pointu.	Préoccupation mineure
Raie circulaire	<i>Leucoraja circularis</i>	Une dizaine de tâches claires recouvrent son dos.	Quasi menacée
Raie brunette ou raie ondulée	<i>Raja undulata</i>	Dos teinté comme un bel imprimé cachemire. TAC nul depuis 2009 en Europe.	Vulnérable
Raie blanche	<i>Rostroraja alba</i>	Stock épuisé en Atlantique-Nord-Est.	En danger
Pocheteau gris	<i>Dipturus batis</i>	Museau long et pointu, autrefois abondant sous les criées françaises (plusieurs milliers de tonnes dans les années 70). TAC nul depuis 2009 en Europe.	En danger critique d'extinction

En analysant les données de rejets contenues dans les rapports d'observateurs OBSMER. Il est également apparu des rejets de **raie radiée**. En extrapolant ces données à l'ensemble de

notre activité, il apparaît que ces rejets occasionnés par notre pêcherie de lieu noir pourraient avoir un impact sur le stock de raie radiée.

Analysis of the discard data available in the OBSMER reports has indicated that discarding of starry ray takes place. Extrapolation of these data to the scale of our fishery indicates our saithe fishery may have an impact on the population of starry ray.

Il est donc nécessaire et urgent d'établir un plan d'actions ayant pour objectifs :

It is therefore necessary and urgent to set up an action plan with the following objectives :

- 1 - De s'assurer que les spécimens de raies rejetées, aujourd'hui identifiées comme raies radiées, soient effectivement toutes des raies radiées.
- 2 – Pour la partie rejetée qui concerne effectivement des raies radiées. Mieux comptabiliser les quantités rejetées et mieux identifier le zonage géographique et temporel.
- 3 – Réduire l'impact de notre pêcherie de lieu noir sur le stock de raie radiée.

- 1 – To ensure that the discarded rays – currently identified as being starry rays – are indeed the correct species
- 2 - For those correctly identified starry rays that are being discarded, improve the estimates of discarding and identify the spatio-temporal patterns involved.
- 3 – Reduce the impact of our saithe fishery on the starry ray population

Pour atteindre ces objectifs, voici les mesures que nous allons mettre en œuvre :

To achieve these objectives, the following actions will be implemented :

Objectif 1 : identification des raies rejetées.

Objective 1 : identification of discarded rays

Travail en coopération entre les équipages et les observateurs OBSMER.

Chaque spécimen de raie capturé doit être confronté au guide des raie disponible à bord afin de s'assurer de ne pas rejeter une autre espèce de raie sous la dénomination raie radiée.

« **Création d'un registre des captures de raie** » pour chaque navire, tenu par le capitaine et rempli conjointement avec l'observateur quand un observateur est embarqué.

Les informations à reporter dans le registre sont reprises dans l'annexe du présent plan d'actions.

Colaboration between crew and OBSMER observers

Each starry ray will be checked against the identification guides aboard to prevent misidentification in the discard data.

Creation of a ray catch logbook for each vessel, held by the captain and completed together with the observer (when aboard)

The information contained within the logbook is shown in the annex at the end of this document.

Objectif 2 : Connaissance des conditions de capture.

Objective 2 : Understanding of catch conditions

Chaque spécimen de raie radiée accidentellement capturé sera identifié et concernant les raies radiées, sera pesé et reporté dans le registre avec le poids du spécimen, la position de virage du chalut ainsi que la date.

Ces informations seront recueillies sur les 3 prochaines années. Elles permettront de juger si les quantités de raie radiées accidentellement capturées sont jugées suffisantes pour justifier la mise en œuvre d'actions supplémentaires.

Le cas échéant un « **travail de cartographie des raies radiées** » sera entrepris à l'aide des informations contenues dans les 3 années du registre à propos des raies radiées. Cette cartographie mettra en évidence le zonage de la présence de raie radiées dans nos zones de pêche et également la saisonnalité de cette présence.

Each starry ray caught will be identified, weighed and recorded in the logbook with information on the weight of the individual, the haul position and the date.

These data will be gathered over the coming three years and will enable to determine whether the accidental catches of starry ray are such that they necessitate further management action. If this is the case, a project 'spatial mapping of starry ray' will be undertaken on the basis of the years' collected data on starry ray. This mapping will highlight zones of increased starry ray presence in our fishing areas, as well as any seasonal patterns.

Objectif 3 : Minimisation des captures.

Objective 3 : Minimise catches

Si le plan les 2 premiers objectifs du plan d'action indique au terme des 3 prochaines années que l'impact de notre pêcherie sur le stock de raie radiée peut être considéré comme significatif par les experts, nous nous servirons alors de l'outil cartographique pour effectuer nos opérations de pêche en minimisant au mieux cet impact. En d'autres termes, les zones géographiques où la présence de raie radiée a été observé à certaines périodes de l'année pourront être évitées et, a contrario, le lieu noir sera en priorité ciblé là où la présence de raie radiée a été observée comme la plus faible au cours des trois premières années de ce plan d'action. Si cette mesure doit être mise en œuvre pendant les années 4 et 5 du plan d'action, nous la nommerons « **plan d'évitement des raies radiées** ».

If the two initial phases of the action plan indicate over the 3 coming years that the fishery's impact on the starry ray population is significant, we will make use of the spatio-temporal mapping to inform on our fishing operations and minimise our impact. In other words, areas or seasons with high starry ray presence would be avoided and saithe would preferentially be targeted in areas or seasons with low starry ray abundance. If this measure needs to be implemented during year 4 and 5 of the action plan, we will call it the 'ray avoidance plan'.

Pour récapituler, les 3 actions à mettre en œuvre – en fonction des résultats qui seront obtenus – pour atteindre les objectifs du plan d'action sont :

- 1 – la création d'un registre des captures de raies. Années 1,2 &3**
- 2 – un travail de cartographie (zonal et temporel) des raies radiées. Au terme de l'année 3.**
- 3 – un plan d'évitement des raies radiées. Années 4 & 5.**

To summarise, the three actions to put in place – depending on the results obtained – to achieve the action plan's objectives are :

- 1. Create logbook for ray catches (years 1, 2 and 3)**
- 2. Spatial and temporal mapping of starry ray catches (year 3)**
- 3. Put in place avoidance plan for starry rays (Years 4 and 5)**

Nous sommes confiants que ce plan d'action, simple et efficace, nous permettra de mieux connaître l'impact éventuel de notre pêche de lieu noir sur le stock de raie radiée et au besoin de le minimiser pour poursuivre notre activité.

We are confident that this action plan, which is simple and efficient, will enable us to better understand the impact our saithe fishery is having on the starry ray population and where required to minimise it so that we can continue our activities.

Appendix 8.2 Client Action Plan – Compagnie des Pêches St Malo

(note: see Euronor action plan for translation into English)



Plan d'actions pour lever la condition concernant la raie radiée

(starry ray, *Amblyraja radiata*).

Voici pour mémoire les principales raies identifiées par Ifremer dans nos zones de pêches avec la liste UICN :

DE QUELLE RAIE PARLONS-NOUS ?

NOM COMMUN	NOM LATIN	INFORMATIONS SUR L'ESPÈCE	LISTE UICN (echelle mondiale)
Raie fleurie	<i>Leucoraja naevus</i>	Reconnaissable grâce à la présence sur chaque aile d'une ocelle, large marque sombre et arrondie au centre, ornée de taches claires.	Préoccupation mineure
Raie douce	<i>Raja montagui</i>	Tachetée de mille points qui n'atteignent pas le bord des ailes.	Quasi menacée
Raie bouclée	<i>Raja clavata</i>	Appelée ainsi en raison de la présence de grosses épines recourbées sur le dos et sur le ventre.	Vulnérable
Raie lisse ou raie blonde	<i>Raja brachyura</i>	Recouverte d'une multitude de petits points sur l'ensemble de sa face supérieure.	En danger
Raie mêlée ou raie batarde	<i>Raja microocellata</i>	Dos sombre, la seule à être ornée de lignes blanchâtres.	En danger critique d'extinction
Pocheteau noir	<i>Dipturus oxyrinchus</i>	Stock épuisé en Atlantique Nord-Est.	Éteinte à l'état sauvage
Raie chardon	<i>Leucoraja fullonica</i>	Elle se reconnaît à son museau pointu.	Préoccupation mineure
Raie circulaire	<i>Leucoraja circularis</i>	Une dizaine de taches claires recouvrent son dos.	Quasi menacée
Raie brunette ou raie ondulée	<i>Raja undulata</i>	Dos teinté comme un bel imprimé cachemire. TAC nul depuis 2009 en Europe.	Vulnérable
Raie blanche	<i>Rostroraja alba</i>	Stock épuisé en Atlantique-Nord-Est.	En danger
Pocheteau gris	<i>Dipturus batis</i>	Museau long et pointu, autrefois abondant sous les criées françaises (plusieurs milliers de tonnes dans les années 70). TAC nul depuis 2009 en Europe.	En danger critique d'extinction

En analysant les données de rejets contenues dans les rapports d'observateurs OBSMER. Il est également apparu des rejets de raie radiée. En extrapolant ces données à l'ensemble de notre activité, il apparaît que ces rejets occasionnés par notre pêcherie de lieu noir pourraient avoir un impact sur le stock de raie radiée.

Il est donc nécessaire et urgent d'établir un plan d'actions ayant pour objectifs :

1 - De s'assurer que les spécimens de raies rejetées, aujourd'hui identifiées comme raies radiées, soient effectivement toutes des raies radiées.

2 – Pour la partie rejetée qui concerne effectivement des raies radiées. Mieux comptabiliser les quantités rejetées et mieux identifier le zonage géographique et temporel.

3 – Réduire l'impact de notre pêcherie de lieu noir sur le stock de raie radiée.

Pour atteindre ces objectifs, voici les mesures que nous allons mettre en œuvre :

Objectif 1 : identification des raies rejetées.

Travail en coopération entre les équipages et les observateurs OBSMER.

Chaque spécimen de raie capturé doit être confronté au guide des raie disponible à bord afin de s'assurer de ne pas rejeter une autre espèce de raie sous la dénomination raie radiée.

« **Création d'un registre des captures de raie** » pour chaque navire, tenu par le capitaine et rempli conjointement avec l'observateur quand un observateur est embarqué.

Les informations à reporter dans le registre sont reprises dans l'annexe du présent plan d'actions.

Objectif 2 : Connaissance des conditions de capture.

Chaque spécimen de raie radiée accidentellement capturé sera identifié et concernant les raies radiées, sera pesé et reporté dans le registre avec le poids du spécimen, la position de virage du chalut ainsi que la date.

Ces informations seront recueillies sur les 3 prochaines années. Elles permettront de juger si les quantités de raie radiées accidentellement capturées sont jugées suffisantes pour justifier la mise en œuvre d'actions supplémentaires.

Le cas échéant un « **travail de cartographie des raies radiées** » sera entrepris à l'aide des informations contenues dans les 3 années du registre à propos des raies radiées. Cette cartographie mettra en évidence le zonage de la présence de raie radiées dans nos zones de pêche et également la saisonnalité de cette présence.

Objectif 3 : Minimisation des captures.

Si le plan les 2 premiers objectifs du plan d'action indique au terme des 3 prochaines années que l'impact de notre pêcherie sur le stock de raie radiée peut être considéré comme significatif par les experts, nous nous servirons alors de l'outil cartographique pour effectuer nos opérations de pêche en minimisant au mieux cet impact. En d'autres termes, les zones géographiques où la présence de raie radiée a été observé à certaines périodes de l'année pourront être évitées et, a contrario, le lieu noir sera en priorité ciblé là où la présence de raie radiée a été observée comme la plus faible au cours des trois premières années de ce plan d'action. Si cette mesure doit être mise en œuvre

pendant les années 4 et 5 du plan d'action, nous la dénommerons « **plan d'évitement des raies radiées** ».

Pour récapituler, les 3 actions à mettre en œuvre – en fonction des résultats qui seront obtenus – pour atteindre les objectifs du plan d'action sont :

- 1 – la création d'un registre des captures de raies. Années 1,2 &3**
- 2 – un travail de cartographie (zonal et temporel) des raies radiées. Au terme de l'année 3.**
- 3 – un plan d'évitement des raies radiées. Années 4 & 5.**

Nous sommes confiants que ce plan d'action, simple et efficace, nous permettra de mieux connaître l'impact éventuel de notre pêche de lieu noir sur le stock de raie radiée et au besoin de le minimiser pour poursuivre notre activité.

Appendix 8.3 Client Action Plan – Scapêche



Euronor, Scapêche and Compagnie des Pêches St. Malo saithe trawl fishery MSC Re-assessment

UoA5 : Scapêche North Sea / West of Scotland

Lors de la réévaluation de la pêcherie de lieu noir Euronor, Scapêche et Compagnie des Pêches est apparue une inquiétude sur l'impact des captures accidentelles de pocheteau gris (*Dipturus batis*) sur la population de cette espèce. Cette inquiétude est basée sur l'extrapolation des captures observées lors du programme Obsmer à l'ensemble de l'activité. Afin de préciser cet impact potentiel, et le réduire si cela s'avère nécessaire, Scapêche propose un plan d'action pour les 5 années à venir dont les objectifs sont fondés sur les conditions soulevées lors de l'évaluation :

- Condition 1 (C1) : montrer qu'il est « très improbable » que la pêcherie de lieu noir Scapêche ait des impacts inacceptables sur le pocheteau gris ;
- Condition 2 (C2) : montrer que la stratégie de protection du pocheteau gris en zone VI est effective avec un degré de confiance suffisant ;
- Condition 3 (C3) : montrer que le degré d'information sur le pocheteau gris est suffisant pour déterminer l'impact de la pêcherie au regard des enjeux de protection et de rétablissement de l'espèce.

During the Euronor, Scapêche and Compagnie des Pêches St. Malo saithe trawl fishery MSC re-assessment, the analysis of Obsmer observer data revealed some concerns on bycatch of common skate (*Dipturus batis*) by UoA5 vessels (Scapêche in ICES area IV and VI) and its potential impact of on the population.

In order to evaluate this potential impact more accurately _ and lower it to an acceptable level if necessary, Scapêche designed an action plan that will be carried out during the 5 years to come. This plan is directly derived from the conditions raised by the MEC evaluation:

- Condition 1 (C1): show that the fishery is “highly unlikely” to create unacceptable impacts to common skate in Subarea VI.
- Condition 2 (C2): show that there is an objective basis for confidence that the strategy to protect common skate in Subarea VI will work.
- Condition 3 (C3): show that information on common skate is sufficient to determine whether the fishery may be a threat to the recovery of the species.

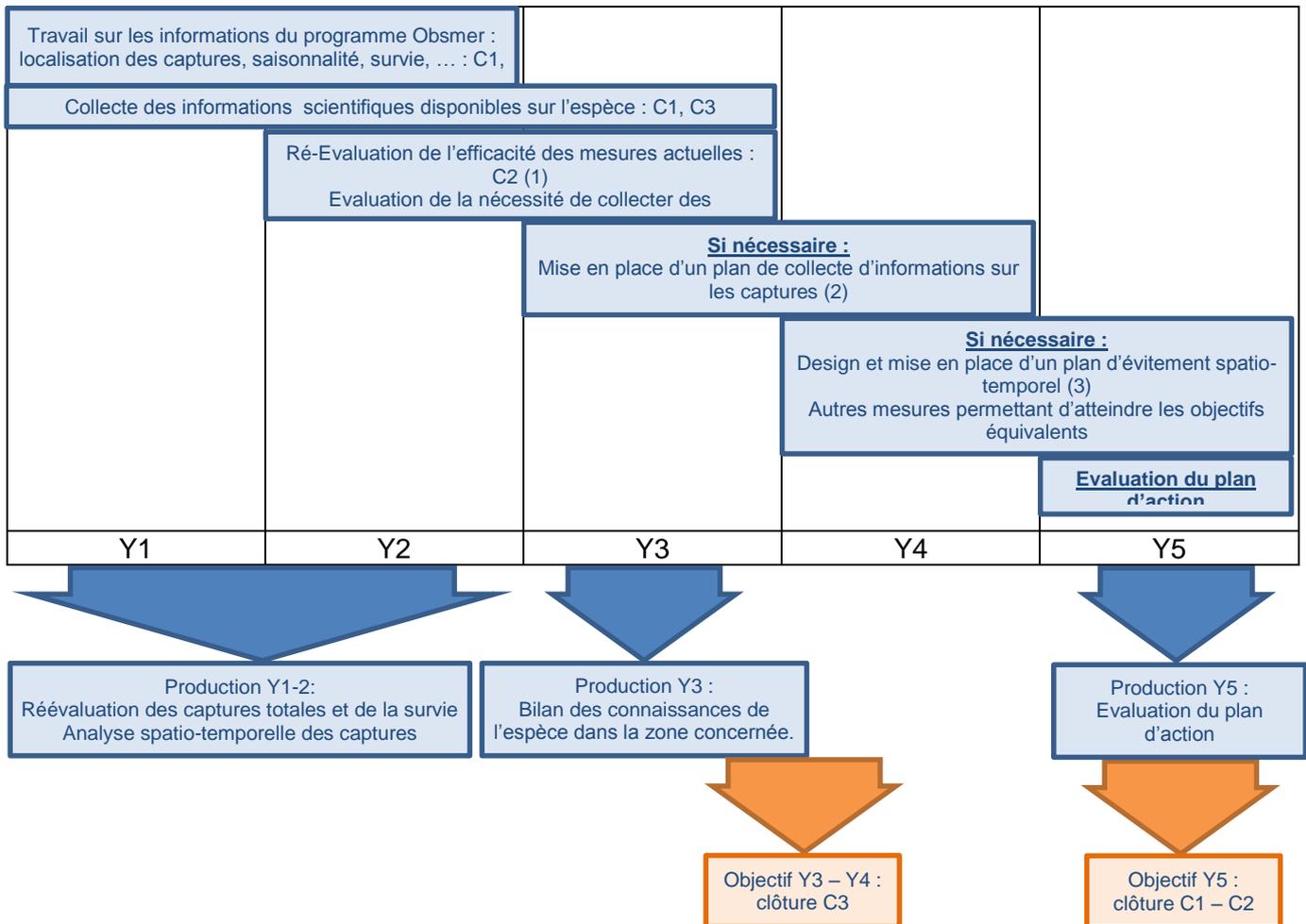
Le plan d'action sera mis en œuvre selon 3 axes:

- L'évaluation des données existantes et leur exploitation optimisée pour préciser le diagnostic actuel
- L'identification des données manquante et leur collecte pour alimenter les décisions
- La mise en œuvre de mesures de gestions optimales basées sur les deux premiers points

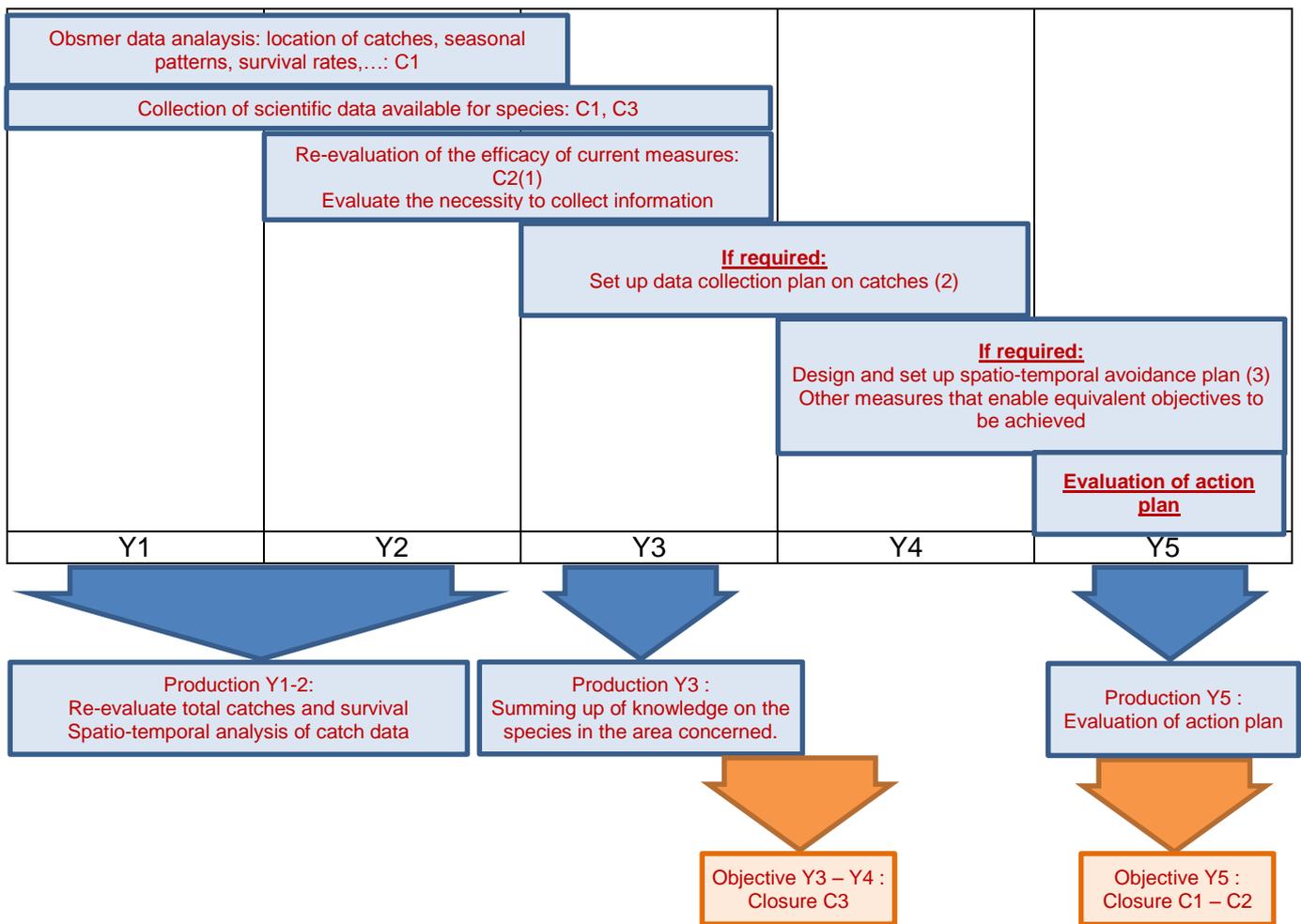
The action plan will be implemented with 3 leads:

- Aggregation, evaluation and exploitation of available data to enhance current diagnosis
- Identification and collection of missing data to back up management
- Design and implement management measures based on latter assessments

Plan d'action « captures accidentelles de pocheteau gris »
Action plan “accidental catches of common skate”



- (1) Le processus d'évaluation des connaissances actuelles et la nécessité de collecte de plus amples informations pourront se faire, le cas échéant, en relation avec un ou des organismes scientifiques (Ifremer, MNHN, etc...).
- (2) Le plan de collecte supplémentaire visera à obtenir des renseignements sur la saisonnalité, la localisation, l'abondance des captures accidentelles de pocheteau gris à bord des navires de l'UoA, en complément de l'échantillonnage Obsmer. Ces observations seront réalisées sur la totalité des marées par l'équipage.
- (3) Dans le cas où les données collectées mettraient en évidence que l'évitement d'une ou plusieurs zones par un ou plusieurs navires pendant une période de l'année permettrait de diminuer l'impact de la pêche sur le pocheteau gris, des mesures internes d'interdiction de zones pourraient être prises.



- (1) The evaluation of current knowledge and requirement for further data collection could be done, if applicable, in consultation with a scientific organisation (IFREMER, MNHN, etc.)
- (2) The plan for the collection of additional data will aim to obtain further information on the seasonality, the distribution and abundance of accidental catches of common skate on UoA vessels, in addition to the OBSMER programme. These observations will be carried out by the crew on all trips.
- (3) In the case where the data collected indicate that the avoidance of one or more zones by one or more vessels during a certain time of year may reduce the impact of the fishery on the common skate, internal avoidance measures will be taken.