

PUBLIC CERTIFICATION REPORT FOR THE

Reassessment of the Norway North East Arctic saithe fishery

Norges Fiskarlag

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Objective:

Re-assessment of the Norway North East Arctic saithe fishery against MSC Fisheries Standards v2.0 (Assessment tree v.1.3).

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2	2018-02-26	Public Comment Draft Report	Hans Lassen, Lucia Revenga, Geir Hønneland & Sandhya Chaudhury	
3	2018-04-22	Final Report	Hans Lassen, Lucia Revenga, Geir Hønneland & Sandhya Chaudhury	
3.1	2018-05-03	Final Report & Determination	Hans Lassen, Lucia Revenga, Geir Hønneland & Sandhya Chaudhury	
4	2018-06-11	Public Certification Report	Hans Lassen, Lucia Revenga, Geir Hønneland & Sandhya Chaudhury	

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ABBREVIATIONS & ACRONYMS

ACOM	(ICES) Advisory Committee
CPUE	Catch per unit effort
DoF	Directorate of Fisheries
EEZ	Exclusive Economic Zone
ETP	Endangered, threatened and protected species
FAO	Food and Agriculture Organization of the United Nations
FCR	Fisheries certification Requirements
ICES	International Council of the Seas
IMR	Institute for Marine Research
JNRFC	Joint Norwegian-Russian Fisheries Commission
MAREANO	Marine AREA database for Norwegian waters / Marin AREA database for Norske kyst- og havområder
MFCA	Ministry of Fisheries and Coastal Affairs
MINSA	Mackerel Industry Northern Sustainability Alliance
MSC	Marine Stewardship Council
NEA	North East Arctic
NFA	Norges Fiskarlag
PI	Performance indicator
PISG	Performance Indicator Scoring Guidepost
SAM	State-Space assessment model
SG	Scoring Guidepost
SSB	Spawning stock biomass
TAC	Total allowable catch
UOC	Unit of Certification
VME	Vulnerable marine ecosystems
VMS	Vessel monitoring system
WGDEEP	(ICES) Working Group on the Biology and Assessment of Deep-sea Fisheries Resources
XSA	Extended survivor's analysis

STOCK ASSESSMENT REFERENCE POINTS

B_0	The (spawning) biomass expected if there had been no fishing (assuming recruitment as estimated through stock assessment).
B_{lim}	Spawning biomass limit reference point, sometimes used as a trigger within harvest control rules, or defined as the point below which recruitment is expected to be impaired or the stock dynamics are unknown
B_{msy}	Spawning Biomass at which the maximum sustainable yield is expected (sometimes expressed as SB_{msy})
B_{targ}	Spawning biomass target reference point
F_{lim}	Exploitation rate limit reference point, often taken as F_{msy} based on UNFSA
F_{msy}	Fishing mortality rate associated with the achieving maximum sustainable yield
F_{targ}	Fishing mortality target reference point
MSY	Maximum Sustainable Yield

1 EXECUTIVE SUMMARY

This report provides information on the re- assessment of the Norway North East Arctic saithe fishery against MSC Fisheries Standard and Guidance v2.0. The report is prepared by DNV GL for the client Norges Fiskarlag.

The Norway North East Arctic saithe fishery received its original certificate on 16 June 2008 and re-certified on 16 June 2013 (Certificate number: F-DNV-60006, valid until 16 June 2018).

The re-assessment was announced on the MSC website 17th August 2017 followed by a supporting notice to stakeholders issued by the MSC on the same date. Direct email notification was also sent to the stakeholders previously identified for this fishery, inviting interested parties to contact the audit team.

The re-assessment audit was performed as an on-site audit in Oslo and Bergen, Norway. The re-assessment activities were carried out by DNV GL team leader and CoC expert Mrs. Sandhya Chaudhury and Independent MSC Fisheries experts Hans Lassen, Lucia Revenga and Geir Hønneland during 19 -20 September 2017. The assessment team gathered input from the various stakeholders, including the Norwegian Ministry of Trade, Industry and Fisheries, the Institute of Marine Research, the Directorate of Fisheries and the client fishery.

The re-assessment activities were carried out using the re-assessment audit methodology, as defined in the MSC Certification Requirements (CR) (version 2.1) and in the subsequent MSC Guidance for the Fisheries Certification Requirements (version 2.0). The default assessment tree as set out in the MSC CR v1.3 was used for this re-assessment. The fishery attained a score of 80 or more against each of the MSC Principles and did not score less than 60 against any of the individual MSC Criteria. Scope of certification is up to the point of landing and chain of custody commences from the point of sale.

The list of vessels covered by this assessment is shown in Appendix 7.

Table 1 Assessment team

Role	Name
Team leader and Chain of custody responsible:	Mrs. Sandhya Chaudhury
Principle 1 expert:	Hans Lassen
Principle 2 expert:	Lucia.Revenga Giertych
Principle 3 expert:	Geir Hønneland

Table 2 Assessment timeline

Event	Date
Announcement of initial assessment:	18 th August 2017
Site visit and stakeholder consultations:	19 th & 20 th September 2017
Publication of Public Certification Draft Report	06 th March 2018
Publication of Final Report	07 th May 2018
Publication of Public Certification Report	11 th June 2018
Eligibility date:	16 th June 2018

1.1 Main strengths and weaknesses of the client's operation

1.1.1 Main strengths

Principle	Performance Indicator	Comment
Principle 1		The stock is well assessed as an ICES Category 1 stock. There are detailed data from the fleet, the fishery and from abundance surveys; There is an agreed HCR deemed precautionary by ICES and the stock is managed according to principles consistent with MSC Principle 1
Principle 2	2.4.2, 2.4.3, 2.5.2 and 2.5.3	There is a broad range of information both in habitat types and ecosystem models. Besides, there is good management of habitats and ecosystem in Norwegian EEZ.
Principle 3		The fishery operates under a well-established and effective management system, with excellent consultation rights, extensive enforcement and a high degree of compliance.

1.1.2 Main weaknesses

Principle	Performance Indicator	Comment
Principle 1		None relevant
Principle 2	2.1.1	Danish seine, Hooks & Lines, Gillnets & Demersal trawls: Cod is one of the main retained species for these UoC'S with these gears. It has not been possible for the team to determine if the cod taken by the fleet is coastal cod or not. The coastal cod is under a Norwegian coastal cod Rebuilding Plan. The survey estimate in 2015 is close to the lowest value in the time-series and well below the rebuilding biomass set in the Rebuilding Plan.
	2.1.2	Danish seine, Hooks & Lines, Gillnets & Demersal trawls: All UoCs for the mentioned gears have cod (NEA cod and coastal cod) as one of the main retained species. The status of coastal cod requires specific management measures, some of which have been implemented for more than 10 years now. And although the coastal cod stock shows some signs of recovery over the years, these are sporadic and short lasting, and catches continue to be at the same levels as in 2004, exceeding ICES Advice.
	2.3.1	Hooks & Lines, Gillnets & Demersal trawls: Given that landings of redfish species are not detailed to the species level, it is not possible to stipulate that these gear types are highly unlikely to create unacceptable impacts on the golden redfish stock.
Principle 3		None relevant

1.2 Determination

The Norway North East Arctic saithe fishery achieved a score of 80 or more for each of the three MSC Principles, and did not score under 60 for any of the set MSC criteria.

Based on the evaluation of the fishery presented in this report the assessment team recommends the certification of the Norway North East Arctic saithe fishery including the bycatch of saithe in ICES sub-area I and II in the Norway blue whiting fishery for the client Norges Fiskarlag.

As the fishery achieved a score of below 80 against 3 scoring indicators, the assessment team has set 3 conditions (Table 3) and one recommendation (Table 4) for the continued certification that the client is required to address. The conditions are applicable to improve performance to at least the 80 level within the period set by the assessment team.

The Technical Reviewer at DNV GL adheres to the recommendation of the assessment team and approves the certification of the Norway North East Arctic saithe for the client Norges Fiskarlag.

Table 3 Conditions for certification (full text in Appendix 1.3)

Condition number	PI	Condition	Time-scale for compliance
1	2.1.1	Danish seine, Hooks & Lines, Gillnets & Demersal trawls: By the 4th surveillance audit client shall demonstrate that the NEA saithe fishery does not pose a risk of serious or irreversible harm to the coastal cod stock, and that it does not hinder its recovery.	4 years
2	2.1.2	Danish seine, Hooks & Lines, Gillnets & Demersal trawls: By the 4th surveillance audit the client shall demonstrate that there is some objective basis for confidence that the Norwegian coastal cod rebuilding plan will effectively contribute to the rebuilding of the coastal cod stock.	4 years
3	2.3.1	Hooks & Lines, Gillnets & Demersal trawls: By the 4th surveillance audit the client shall demonstrate that the direct effects of the NEA saithe fishery (specifically with the hooks and lines, gillnets and demersal trawl UoCs) are highly unlikely to create unacceptable impacts to ETP species such as golden redfish.	4 years

There is also one recommendation for the NEA saithe fishery:

Table 4 Recommendation

PI 2.3.3.b	<p>PI 2.3.3: Relevant information is collected to support the management of fishery impacts on ETP species, including:</p> <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. <p>b. Accurate and verifiable information is available on the magnitude of all impacts, mortalities and injuries and the consequences for the status of ETP species.</p>
Recommendation 1	Given the numerous interactions recorded by the reference fleet, it is recommended that all encounters with the different identified ETP species are comprehensively recorded in an electronic database by all vessels in the UoA.

2 AUTHORSHIP AND PEER REVIEWERS

2.1 Assessment team

Table 5 Assessment team

Role	Name	Qualifications
Team leader and Chain of custody responsible	Sandhya Chaudhury	<p>Sandhya Chaudhury is a Principal Specialist at DNV GL Business Assurance. She holds a B.Sc. in Biological sciences and a MBA. Sandhya Chaudhury has been the Lead Auditor/Team Leader for various MSC Pre- and Full Assessments since 2005. She has participated in various MSC workshops introducing certification methodology for MSC Fisheries and Chain of Custody to workshop participants. She is well-versed in project management with proven ability to lead cross-disciplinary teams. Sandhya has auditor experience with other quality management standards since 2002 and industry experience since 1991. Sandhya has been previously involved with the assessment of this fishery until 2013.</p> <p>Sandhya has no conflicts of interest in relation to the fishery under assessment. She meets the competence criteria in MSC Certification requirements v. 2.0, annex PC, in having appropriate skills related to Chain of Custody requirements. She also has the knowledge of the country, language and local fishery She is trained as a team leader, incl. traceability, according to v. 1.3 and 2.0.</p> <p>She has been traceability responsible for several MSC assessments and is a qualified MSC CoC auditor and technical reviewer and has also been responsible for both the Fisheries and CoC schemes.</p> <p>Sandhya`s qualifications meet the competence criteria defined in the MSC Certification requirements v.2.0, annex PC, for the Team-leader.</p> <p>Sandhya has no conflicts of interest in relation to the UoA under her responsibility.</p>
Principle 1 expert	Hans Lassen	<p>Hans Lassen is an independent consultant. He holds a cand. scient. (M.Sc.) from Copenhagen University (1969) and a HD (B.Sc.) from the Copenhagen Business School (1978). His background is in fish stock assessments, particularly in the application of computers and models. He joined the Danish Institute of Fisheries and Marine Research (DIFRES) in 1971.</p> <p>1988-1992 he worked in the Greenland Fisheries Research Institute as Deputy Director and Director and returned to DIFRES in 1992. Between 1998 and 2003 he was in charge of the Fisheries Group in the ICES Secretariat as Fisheries Adviser who serves as secretary to the ICES Advisory Committee on Fishery Management.</p> <p>After 2004 he was head of the ICES Advisory Programme within the ICES Secretariat. He retired from the ICES secretariat in 2010 and has since worked as a private consultant on projects within his expertise.</p> <p>He has been a member and Chairman of numerous ICES committees and groups, has within the Northwest Atlantic Fisheries Organization chaired STACFIS and the Scientific Council, been a member of STECF (EC, DG Fish), scientific adviser to Danish delegations to fisheries negotiations and chaired an internal EC expert group to provide input to the EC Multi-annual Guidance Program, within the Nordic Council of Ministers he chaired its Working Group on Fisheries and worked with the FAO/DANIDA project (1982-1998) on teaching fish stock assessment. In 2006 he was awarded the prestigious Swedish prize "Kungsfenan" for contributions to communication between science and the fishing industry. At his retirement from ICES he was awarded a Special Service Award. He is author and co-author of more than 30 peer reviewed papers in prime scientific journal and numerous papers for scientific symposia.</p> <p>He has been a member of MSC certification assessment teams for Westgreenland shrimp and lumpfish, and for Barents Sea Demersal trawl fisheries (Greenland).</p> <p>He has acted as reviewer for several MSC assessment reports including cod, haddock, shrimps, anchovy, sardine and vendace.</p> <p>Hans has no conflicts of interest in relation to the UoA under her responsibility.</p>

Principle 2 expert	Lucia Revenga Giertych	<p>Lucia Revenga is a marine scientist, specialized in Fisheries Biology who holds degrees in Marine Sciences and in Environmental Sciences. For 5 years she worked with TRAGSA for the Spanish General Marine Secretariat, conducting researches on the biology and stock status of different species, such as bluefin tunas, skipjack tunas, albacores, mackerels, sardines, eels, prawns, Norway lobsters, halibuts. She has also taken part in oceanographic surveys focused in the search of vulnerable marine ecosystems. From 2011 to 2015 she worked for IFAPA (Institute for Research and Training in Fisheries) as a Fisheries biology teacher for fishermen. She also conducts research in fishery local activities with the aim of increasing community awareness of the conservation of coastal ecosystems and encouraging sustainable fishing practices. Since then she works as an independent consultant. As a P2 expert she has been involved in the DS Nephrops assessment, the Olympic krill assessment, the AKER BioMarine Krill Fishery reassessment, and the Medfish project. She has been involved as a team leader in the IDW blueshell mussel reassessment. Lucia`s qualifications meet the competence criteria defined in the MSC Certification requirements v.2.0, annex PC, for the Team-leader.</p> <p>Lucia has no conflicts of interest in relation to the UoA under her responsibility.</p>
Principle 3 expert	Geir Hønneland	<p>Geir Hønneland is Research Director of the Fridtjof Nansen Institute in Oslo, Norway, and adjunct professor at the University of Tromsø, Norway. He holds a Ph.D in political science from the University of Oslo and has primarily studied international fisheries management (with a main emphasis on compliance issues), international environmental politics and international Arctic politics more widely. Among his recent books are Arctic Politics, the Law of the Sea and Russian Identity (Palgrave, 2014), Making Fishery Agreements Work (Edward Elgar, 2012), International Environmental Agreements (Routledge, 2011), Arctic Politics and International Cooperation (Routledge, 2007) and Law and Politics in Ocean Governance: The UN Fish Stocks Agreement and Regional Fisheries Management Regimes (Martinus Nijhoff, 2006). He worked in the Norwegian Coast Guard from 1988 to 1994, where he was certified as fisheries inspector. Geir also has a wide range of evaluation and consultancy experience, e.g. for the FAO and OECD, relating to responsible fisheries management. He has been involved in MSC assessments since 2009 (covering cod, haddock and herring fisheries in the Northeast Atlantic and krill in the Southern Ocean). He has also wide experience as peer reviewer, including for shrimp fisheries in the North-East Atlantic and for other Swedish fisheries. His qualifications meet the competence criteria defined in the MSC Certification requirements v.2.0, annex PC.</p> <p>Hønneland has no conflicts of interest in relation to the UoA under his responsibility.</p>



2.2 Peer reviewers

Based on experience with the relevant MSC Fishery programme and components of the Unit of Certification, the peer reviewers listed in Table 6 were selected in accordance with MSC Fishery Certification Requirements on qualifications and competencies.

The proposed Peer Reviewers was announced on the MSC website 3rd October 2017 and confirmed on 16th October 2017 followed by supporting notices to stakeholders issued by the MSC on the same dates. Direct email notifications were also sent to the stakeholders previously identified for this fishery.

Table 6 Peer reviewers

Peer reviewer	Name
Peer reviewer 1	John Nichols
Peer reviewer 2	Bert Keus

3 DESCRIPTION OF THE FISHERY

3.1 Unit(s) of Assessment (UoA) and scope of certification sought

The fishery is, to the knowledge of the assessment team, within the scope of the MSC Fisheries standard according to the following determinations:

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

3.1.1 UoA and Proposed Unit of Certification (UoC)

3.1.1.1 Unit of Assessment

The Unit of Assessment defines the full scope of what is being assessed, and includes the Unit of Certification and any other eligible fishers.

The Unit of Assessment includes the target stock (s) including the saithe bycatch in the blue whiting fishery in ICES subareas I and II (certified as a scope extension to the Norway Spring spawning herring fishery, certificate nr. MSC-F-61388 issued 09.01.2018), the fishing method or gear type/s, vessel type/s and/or practices, and the fishing fleets or groups of vessels, or individual fishing operators pursuing that stock, including any other eligible fishers that are outside the Unit of Certification.

The Unit of Assessment for this fishery assessment is specified in **Table 7**.

Table 7 Unit of Assessment (UoA)

Target stock(s)	North East Arctic saithe (<i>Pollacius virens</i>)
Location of the fishery	North East Arctic Ocean, Norwegian EEZ ICES Sub-Areas I and II / FAO statistical area 27
Fishing method or gear type(s), vessel type(s) and/or practices	Danish seine, Demersal trawl, Hooks and lines (not specified), Seine nets (purse), Gill Nets (not specified)
Management	The NEA saithe stock is managed by Norwegian Authorities
Client group	Norges Fiskarlag on behalf of the entire Norwegian fleet
The fishing fleets or groups of vessels, or individual fishing operators pursuing that stock, including any other eligible fishers that are outside the unit of certification	The entire Norwegian fleet. No other eligible fishers have been identified for the fishery.

3.1.1.2 Proposed Unit of Certification

The Unit of certification is the unit entitled to receive an MSC certificate.

The proposed Unit of Certification include the target stock (s), the fishing method or gear type/s, vessel type/s and/or practices, the fishing fleets or groups of vessels or individual fishing operators pursuing that stock including those client group members initially intended to be covered by the certificate.

The MSC FCR v2.0 specifies that the Unit of Certification is defined as "*The target stock or stocks (= biologically distinct unit/s) combined with the fishing method/gear and practice (including vessel type/s) pursuing that stock and any fleets, groups of vessels, or individual vessels of other fishing operators.*"

The proposed Unit of Certification is provided in Table 8 and includes the saithe bycatch in the blue whiting fishery in ICES subareas I and II (certified as a scope extension to the Norway Spring spawning herring fishery, certificate nr. MSC-F-61388 issued 09.01.2018).

Table 8 Proposed Unit(s) of Certification at the start of the certificate (prior to any certificate sharing)

Target stock(s)	North East Arctic saithe (<i>Pollacius virens</i>)
Location of the fishery	North East Arctic Ocean, Norwegian EEZ ICES Sub-Areas I and II / FAO statistical area 27
Fishing method or gear type(s), vessel type(s) and/or practices	Danish seine, Demersal trawl, Hooks and lines (not specified), Seine nets (purse), Gill Nets (not specified)
Management	The NEA saithe stock is managed by Norwegian Authorities
Client group	Norges Fiskarlag on behalf of the entire Norwegian fleet
The fishing fleets or groups of vessels, or individual fishing operators pursuing that stock, including any other eligible fishers that are outside the unit of certification	The entire Norwegian fleet. No other eligible fishers have been identified for the fishery.

3.1.1.3 Other eligible fishers at the start of the certificate (prior to any certificate sharing)

Other eligible fishers mean operators that have been evaluated as part of the Unit of Assessment, but who are not eligible to use the MSC Fishery certificate without a certificate sharing agreement with the client group.

There are no other eligible fishers identified for these fisheries. The certificate includes all Norwegian vessels targeting North Sea saithe, cod, haddock and hake in IV. Other fisheries that target the same stock operate under different management schemes and are hence not eligible.

3.1.2 Final UoC(s)

The Unit of Certification covered by the MSC Fishery certificate at the time of certification is described in Table 9.

Table 9 Unit(s) of Certification at the time of certification

Uoc	Assessment result	Target stock	Method of catch	Location of the fishery
1	Pass	North East Arctic saithe (<i>Pollacius virens</i>)	Danish seine	North East Arctic Ocean, Norwegian EEZ, ICES Sub-Areas I and II / FAO statistical area 27
2	Pass	North East Arctic saithe (<i>Pollacius virens</i>)	Demersal trawl	North East Arctic Ocean, Norwegian EEZ, ICES Sub-Areas I and II / FAO statistical area 27
3	Pass	North East Arctic saithe (<i>Pollacius virens</i>)	Hooks and lines (not specified)	North East Arctic Ocean, Norwegian EEZ, ICES Sub-Areas I and II / FAO statistical area 27
4	Pass	North East Arctic saithe (<i>Pollacius virens</i>)	Seine nets (purse)	North East Arctic Ocean, Norwegian EEZ, ICES Sub-Areas I and II / FAO statistical area 27
5	Pass	North East Arctic saithe (<i>Pollacius virens</i>)	Gill Nets (not specified)	North East Arctic Ocean, Norwegian EEZ, ICES Sub-Areas I and II / FAO statistical area 27
Management		The NEA saithe stock is managed by Norwegian Authorities		
Client group		Norges Fiskarlag on behalf of the entire Norwegian fleet		
Fishing fleet		The entire Norwegian fleet. No other eligible fishers have been identified for the fishery.		

3.1.2.1 Final other eligible fishers at the time of certification

Other eligible fishers mean operators that have been evaluated as part of the Unit of Assessment, but who are not eligible to use the MSC Fishery certificate without a certificate sharing agreement with the client group.

There are no other eligible fishers identified for these fisheries. The certificate includes all Norwegian vessels targeting North Sea saithe, cod, haddock and hake in IV. Other fisheries that target the same stock operate under different management schemes and are hence not eligible.

3.1.3 Total Allowable Catch (TAC) and Catch Data

Table 10 TAC and catch data for saithe (all gears)

TAC	Year 2016	140,000 t
UoC share of TAC	Year 2016	120,740 t
Total green weight catch by UoC	Year 2016	120,740 t
Total green weight catch by UoC	Year 2015	114,830 t

Table 11 Saithe in subareas 1+2. Catch distribution by gear in 2016 as estimated by ICES. Source ICES (2017) NEA Saithe advice Table 8

Catch 2016	Landings				Discards	Recreational catch
	Trawl	Purse seine	Gillnets	Other		
140,392	45%	20%	15%	19%	Discarding is considered to be negligible	Imprecisely known, but negligible (<1% of total catch)
	140,392					

3.1.4 Scope of Assessment in Relation to Enhanced Fisheries

The MSC Certification Requirements and Guidance v2.0 defines enhanced fisheries as: “Any activity aimed at supplementing or sustaining the recruitment, or improving the survival and growth of one or more aquatic organisms, or at raising the total production or the production of selected elements of the fishery beyond a level that is sustainable by natural processes. It may involve stocking, habitat modification, elimination of unwanted species, fertilisation or combinations of any of these practices”.

The fishery in the UoA is a wild capture fishery and does not meet the definition above. The saithe in ICES subareas I & II are therefore not considered to be enhanced.

3.1.5 Scope of Assessment in Relation to Introduced Species Based Fisheries (ISBF)

The MSC Certification Requirements v2 defines ISBF fisheries as any fishery which prosecutes a target fin or shellfish species that was intentionally or accidentally transported and released by human activity into an aquatic environment beyond its natural distribution range. This does not include species that are “introduced” into a location due to an expansion in their natural geographic range.

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

3.2 Overview of the fishery

3.2.1 Client name and contact information

Table 12 Client contact data

Client name:	Norges Fiskarlag
Contact person:	Tor Bjørkelund Larsen
Address:	Pirsenteret, 7462 Trondheim, Norway
Telephone:	+47 980 33 041
Email:	fiskarlaget@fiskarlaget.no / tor@fiskarlaget.no

3.2.2 Client information

Norges Fiskarlag (Norwegian Fishermen's Association / NFA) was established in 1926 as an interest group for the hitherto unorganized Norwegian fishermen. The main focus of the Association was better and effective control of the fish brought to shore as well as improved working conditions in the high-risk profession.

The NFA's most important objective is to organize all professional Norwegian fishermen, and the activities embrace the political, economic, social and cultural fields of interest to its members, as well as other matters, more or less, directly connected to their fishing activities. The organization is a politically independent, national organization based on voluntary membership of fishermen via their county associations and group organizations. The highest governing body of the NFA is its Congress, which consists of 69 delegates, elected by the seven county associations and two group organizations which together constitute the NFA. The Congress meets bi-annually. Intermediate authority is exercised by the National Committee that comprises of 14 members chosen from the member organizations and elected by the Congress.

The main office in Trondheim is staffed by approximately 20 people, including the General Secretary, Assistant General Secretary and sections for areas of specific interest including resource management. The NFA organizes both owners of fishing vessels and fishermen working on a share or percentage basis. The organization today represents about 25% of the registered Norwegian fishermen.

NFA coordinates the MSC Fisheries certification processes with DNV GL for the following fisheries on behalf of the entire Norwegian fleet:

- North East Arctic Cod
- North East Arctic Haddock
- North East Atlantic Mackerel
- North Sea and Skagerrak Herring
- Norwegian Spring Spawning Herring
- Norwegian Spring Spawning Herring scope extension for Blue whiting
- North Sea Saithe
- North East Arctic Cold Water Prawn
- Norway sandeel, pout and North Sea sprat
- Norway North Sea demersal fisheries

3.2.3 General overview of the fishery

The fishery occurs within the Norwegian EEZ in ICES subareas 1 and 2, Divisions 1.b and 2.a.2 at depths up to about 300m.

The fishery is executed with a range of gears, including trawl, purse seine, gillnets and longline, Table 11. Norway is taken the main share of the catch but about 15% of the total catch is taken by other non-Norwegian fleets, Table 13.

Landings of saithe fluctuated between 100,000 t – 250,000 t, dropping to a low level of 67,396 t in 1986. Since then, saithe landings have generally increased, reaching almost 200,000t in 2007 before declining to 131,827 t in 2013 followed by an increase.

Fishing takes place all year using demersal otter trawl of cod-end mesh size 130mm, purse seine, longline, gillnets and other gears including pots, Table 11. The gill net fishery is most intense during winter, purse seine in the summer months while the trawl fishery takes place more evenly all year around.

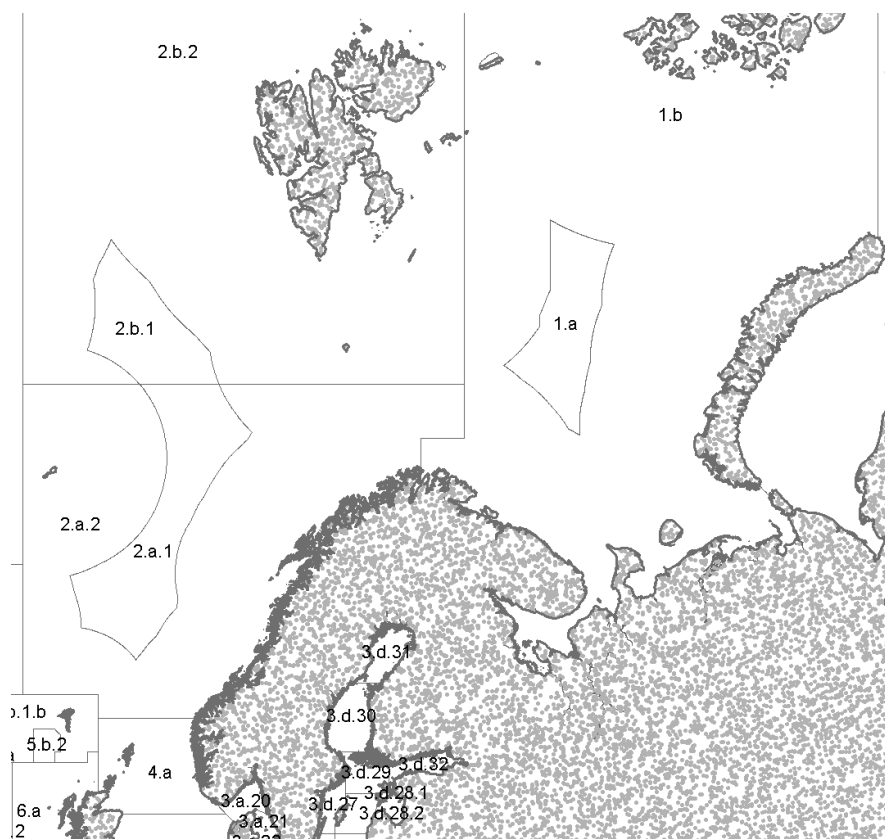


Figure 1 ICES areas referred to in the text. Source: ICES map facility, ICES.dk

The stock is managed by Norway through the Norwegian Fisheries Directorate facilitated by control and enforcement by the Norwegian Coastguard. Management is informed by ICES advice, supported nationally by the Institute of Marine Research (Norway).

The Units of Certification for the fishery detail the limits of the fishery scope in terms of stock, geographic range and fishing method are described in section 3.1.

Table 13 Catch (t) Saithe in ICES Subareas 1+2 by country and year. Source ICES (2017) Saithe Advice Table9

Year	Faroe Islands	France	Greenland	Germany	Iceland	Norway	Poland	Portugal	Russia	Spain	UK	Others (incl Estonia)	Total
2008	2314	1009	503	2263	113	165998	66	348	11577	33	506	10	184740
2009	1611	326	697	2021	69	144570	30	204	11899	2	379	45	161853
2010	1632	677	954	1592	109	174544	279	93	14664	8	283	2	194837
2011	112	367	445	1371	65	143314		46	10007	2	972	15	156716
2012	146	781	658	1371	126	143145		23	13607	4	1000	4	160865
2013	80	1901	972	1326	290	111962	2	17	14796	5	433	22	131806
2014	273	1674	407	259	659	115798	1	8	12396	12	518		132005
2015	576	514	393	424	249	114830	1154	10	13181	34	400		131765
2016	1139	526	613	952	301	120740	528	53	15203	26	301	10	140392

3.3 Principle One: Target Species Background

3.3.1 Background and biology

Saithe (*Pollachius virens*) is an active gregarious fish found only in the North Atlantic. In the north-eastern Atlantic, the saithe resource has been separated into six stocks - west of Ireland, west of Scotland, off Iceland and the Farnes, in the North Sea and along the coast of Norway north of 62°N, which is the stock of the UoC, ICES (2017) NEA saithe advice. The saithe fished by the UoC belong to the Northeast Arctic saithe stock in ICES subareas 1 & 2. The area of occurrence is shown in Figure 2.

After winter-spring spawning in the Barents Sea, in April-June, juvenile saithe begin to migrate from open sea areas to the coastal zone. In summer and autumn large numbers of juvenile saithe occupy the coastal zone. In summer (June-August), mature saithe from the Norwegian coastal banks spread far into the north-western and central Barents Sea, where they remain until spawning the next season. Juveniles start to resemble adults when they are 25-30 mm long. Once reaching 20 – 30 cm length, they settle in the littoral zone by the following autumn. After relatively rapid growth during the first years, growth gradually slows when the fish become mature, which may start as early as age four and by the age of nine, all fish are sexually mature.

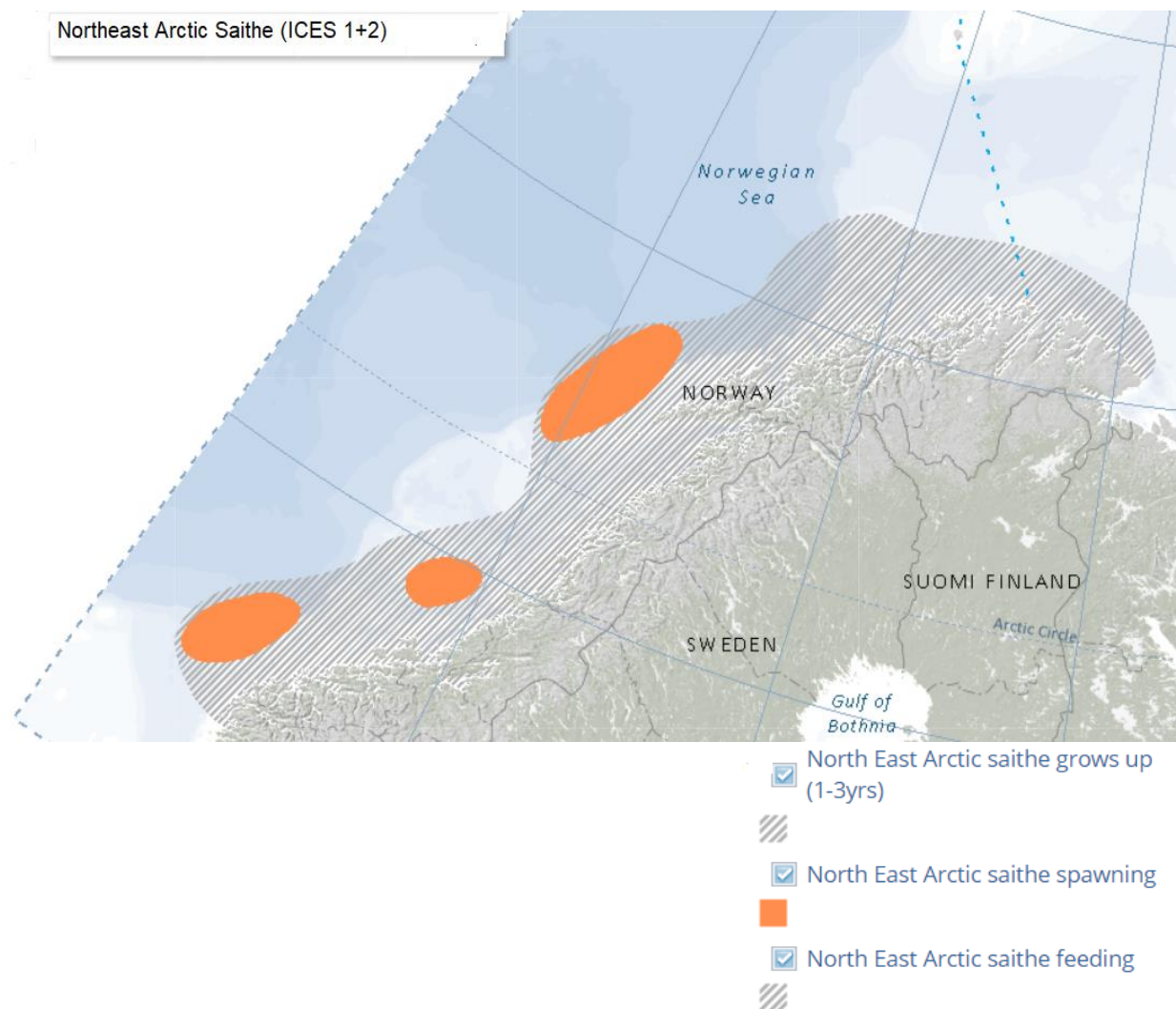


Figure 2 Northeast Arctic Saithe. Spawning, feeding and nursery (age 1-3) areas. Source: <http://geodata.npolar.no/barentsportal/?&extent=-1051920,6930390,2322054,9271428&layers=layer6:37>

Northeast Arctic saithe can grow to 20 kg and 130 cm and live for at least 30 years. The main prey items for young saithe are copepods, krill and other crustaceans, while older fish prey on capelin, herring, sprat, young haddock, Norway pout and blue whiting. The importance of fish in the diet is highest in the north (herring, haddock and blue whiting with cod occurring only sporadically), while further south the importance of crustacean species increases. During the fourth quarter of the year, krill is the single most important prey species, followed by Norway pout, herring, blue whiting and haddock.

3.3.2 Saithe as LTL species

The saithe is not on the list of species FCR 1.3, CB2.3.13 and box CB1. Furthermore, the saithe is not a key in the diet of predators in the Barents Sea ecosystem.

3.3.3 Stock Assessment

The saithe stock in subareas 1+2 are assessed annually by ICES through the Arctic Fisheries Working Group (AFWG). There is an extensive database available for the saithe assessment. There are detailed data on the commercial catches (international landings, ages and length frequencies from Norwegian, German, and Russian catch sampling); there is an annual abundance survey index (NOcoast-Aco-4Q, split in 2002). Discarding is considered negligible and an account of bycatch is included. On this dataset through ICES the stock is assessed annually applying an age-based analytical assessment (SAM; ICES, 2017) that uses landings in the model and in the forecast.

There are reference points available, Table 14. Concerning the precise definition of the reference points see ICES (2017) Advice Technical Guidelines section 12.4.3.1 ICES fisheries management reference points for category 1 and 2 stocks. (NEA Saithe is a category 1 stock). Blim is a PRI reference point¹

Table 14 Saithe in subareas 1 and 2. Reference points, values, and their technical basis. Source: ICES (2017) advice on NEA saithe Table 5

Framework	Reference point	Value	Technical basis	Reference
MSY approach	MSY $B_{trigger}$	Not defined		
	F_{MSY}	Not defined		
Precautionary approach	B_{lim}	136 000 t	Change point in R-SSB diagram; segmented regression	ICES (2005)
	B_{pa}	220 000 t	$B_{lim} \times \exp(1.645 \times \sigma)$, where $\sigma = 0.3$	ICES (2005)
	F_{lim}	0.58	F corresponding to an equilibrium stock = B_{lim}	ICES (2005)
	F_{pa}	0.35	$F_{lim} \times \exp(-1.645 \times \sigma)$, where $\sigma = 0.3$. This value is considered to have a 95% probability of avoiding the F_{lim}	ICES (2005)
Management plan	SSB_{MGT}	220 000 t	B_{pa} ; F is linearly reduced from F_{pa} at $SSB = B_{pa}$ to zero at $SSB = 0$	ICES (2011)
	F_{MP}	0.32	Average TAC for the coming three years based on F_{MP}	ICES (2011)

The assessment is subject to regular benchmark under the ICES umbrella, the most recent was undertaken in 2014 (ICES IBP NEA SAITHE; ICES, 2014).

¹ Blim :A deterministic biomass limit below which a stock is considered to have reduced reproductive capacity. Blim is estimated as the biomass below which recruitment reduces with spawning-stock biomass (SSB), e.g. the change point of a segmented regression in the R-SSB diagram

3.3.4 Stock Status

The results of the ICES assessment are summarised in Figure 3. The spawning-stock biomass (SSB) has been above B_{pa} since 1996, but declined considerably from 2007 to 2011, then increased again and is presently (2017) estimated to be well above B_{pa} . The fishing pressure (F) has been below F_{pa} since 1997, with the exception of 2010 and 2011. Recruitment (R) has been

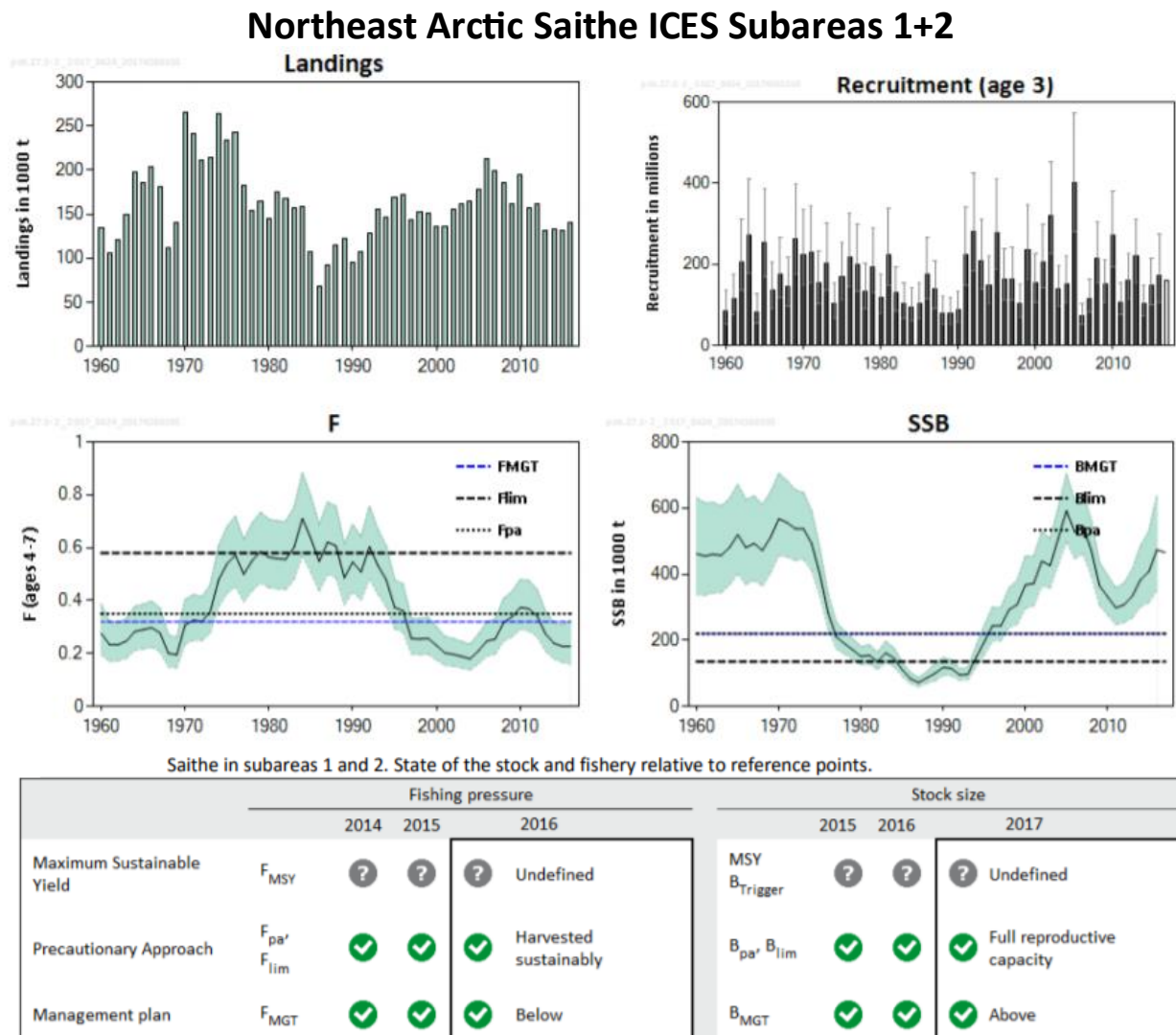


Figure 3: Northeast Arctic saithe. Stock development and stock status. Source: ICES (2017) NEA saithe advice Figure 1 and Table 1

close to the long-term geometric mean level since 2005.

3.3.5 Management and Management Plans

The stock is managed by Norway applying a management plan. This plan includes a Harvest Control Rule that is built on the precautionary reference points and includes provision for reducing the fishing mortality should the stock drop below B_{pa} . The Harvest Control rule contains the following elements:

- Estimate the average TAC level for the coming 3 years based on FMP = 0.32. TAC for the next year will be set to this level as a starting value for the 3-year period.
- 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 +/- 15% compared with the previous year's TAC.
- If the spawning-stock biomass (SSB) in the beginning of the year for which the quota is set (first year of prediction), is below Bpa, the procedure for establishing TAC should be based on a fishing mortality that is linearly reduced from FMP at SSB = Bpa to 0 at SSB equal to zero. 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.

The harvest control rule (HCR) was last evaluated by ICES in 2011 (ICES, 2011), with FMP = 0.35. The evaluation concluded that the HCR is precautionary. The FMP was lowered to the current value of 0.32 by Norwegian authorities in 2013. The inter-benchmark for this stock in 2014 did not result in significantly different estimates of stock dynamics and the former HCR evaluation is still considered valid.

3.4 Principle Two: Ecosystem Background

3.4.1 Retained species

According to data provided by the Directorate of Fisheries, the following species were landed in 2016 by the different gear types targeting NEA saithe. 2015 data was also provided and showed similar results both in species composition and in catch proportion.

Table 15: Landing records by the different UoC's in 2016

Catch 2016 (tonnes)	Danish seine	Danish seine % catch	Purse seine	Purse sein % catch	Hooks and lines	Hooks and lines % catch	Gillnets	Gillnet % catch	Demersal trawl	Demersal trawl % catch
Saithe	23.000	14,65	28.940	99,93	9.958	6,59	23.965	19,40	56.099	20,69
Cod	101.751	64,80	15	0,05	90.399	59,84	94.105	76,18	143.639	52,99
Haddock	32.105	20,45	6	0,02	47.114	31,19	3.873	3,14	64.004	23,61
Greenland Halibut	2	0,00	0	0	902	0,60	94	0,08	1.635	0,60
Tusk	14	0,01	0	0	1.801	1,19	241	0,20	58	0,02
Ling	75	0,05	0	0	457	0,30	890	0,72	288	0,11
Monkfish	11	0,01	0	0	11	0,01	93	0,08	4	0,00
Redfish	72	0,05	0	0	436	0,29	261	0,21	5.361	1,98
TOTAL	157.030	100	28.961	100	151.078	100	123.522	100	271.088	100

As shown above, Table 15 the purse seine fishery has a very clean catch where 99% of the catch is the targeted saithe. Minor retained species for the purse seine UoCs are cod and haddock. As regards all other UoCs, main retained species are cod and haddock (only cod for the gillnet UoC). Minor retained species are Greenland halibut, tusk, ling, monkfish and redfish. It is not possible to determine if the redfish refers to beaked redfish (*Sebastes mentella*), considered as a retained

species, or golden redfish (*Sebastes marinus*), considered also in the ETP section. On a precautionary approach, the team will consider both possibilities and assess both species.

ICES provides scientific advice for the following species:

- **Cod:**

The cod stock is classified as vulnerable by the IUCN red list. This list takes into account all cod populations in Northeast Atlantic waters, and may not reflect the reality of each one of these populations separately. ICES provides a different fishing advice for cod in offshore waters of the North East Atlantic region and for cod in Norwegian coastal waters.

ICES 2017 advice for cod in subareas I and II:

The spawning-stock biomass (SSB) has been above MSY Btrigger since 2002. The total stock biomass (TSB) reached a peak in 2013 and now shows a downward trend. Fishing mortality (F) was reduced from well above Flim in 1997 to below FMSY in 2008 and the most recent estimate is likely to be below FMSY. Discards are known to have taken place but cannot be quantified (assumed to be below 5% in recent years).

ICES advises that when the Joint Russian–Norwegian Fisheries Commission management plan is applied, catches in 2018 should be no more than 712 000 tonnes. Bycatch of coastal cod should be kept as low as possible.

Figure 4: Stock size (Spawning stock biomass) for cod in oceanic waters. (Source: ICES 2017 advice for oceanic cod in subareas I and II)

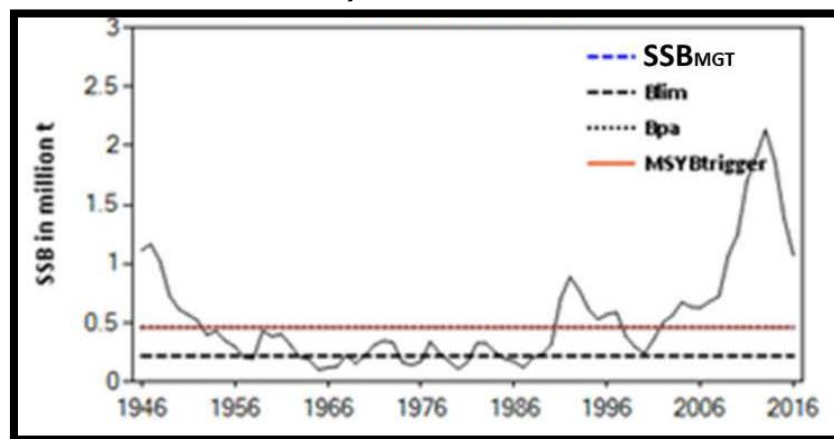


Figure 5: Fishing pressure (F) for cod in oceanic waters. (Source: ICES 2017 advice for oceanic cod in subareas I and II)

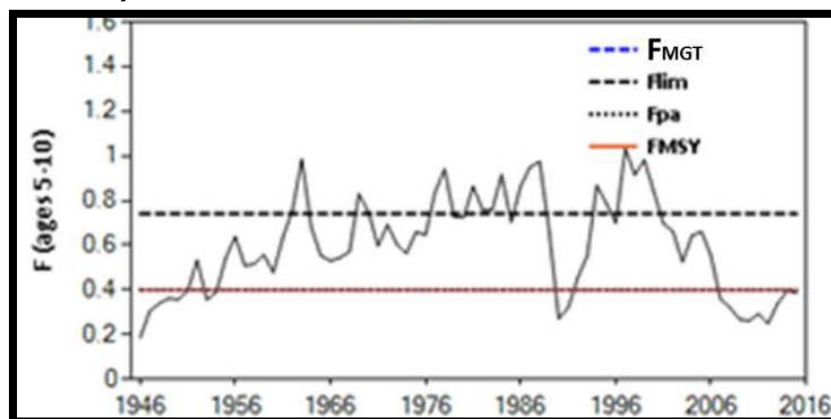


Table 16: State of the oceanic cod stock and fishery relative to reference points (Source: ICES 2017 advice for oceanic cod in subareas I and II)

		Fishing pressure			Stock size		
		2013	2014	2015	2014	2015	2016
Maximum sustainable yield	F_{MSY}	✓	✓	✓ Appropriate	MSY	✓	✓ Above trigger
Precautionary approach	F_{pa}, F_{lim}	✓	✓	✓ Harvested sustainably	B_{pa}, B_{lim}	✓	✓ Full reproductive capacity
Management plan	F_{MGT}	✓	✓	✓ Below	SSB_{MGT}	✓	✓ Above

ICES 2016 advice for coastal cod in subareas I and II (Norwegian coastal waters):

The survey estimate in 2015 is close to the lowest value in the time-series and well below the rebuilding biomass set in the Norwegian Rebuilding Plan. Recruitment has been stable overall in the last decade. Fishing pressure (F) appears variable without a clear trend since 2000. The aim of the Norwegian coastal cod rebuilding plan is "to rebuild the stock complex to full reproductive capacity, as well as to give sufficient protection to local stock components. Until a biologically founded rebuilding target is defined, the stock complex will only be regarded as restored when the survey index of spawning stock in two successive years is observed to be above 60 000 tons". Estimated catches in the recreational fishery represented about 35% of the total catch in 2009. However, total catches from the recreational fisheries have not been monitored since 2009. The assumption of constant removals from the recreational fisheries does not influence the information on the state of the stock but may influence the effectiveness of management actions.

Figure 6 Stock size: Spawning stock biomass of coastal cod in Norwegian coastal waters. (Source: ICES 2016 advice for coastal cod in subareas I and II (Norwegian coastal waters)).

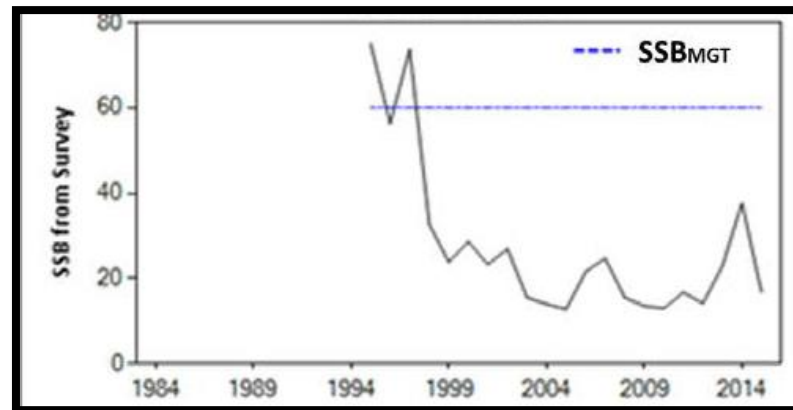


Figure 7 Fishing pressure for coastal cod in Norwegian coastal waters. (Source: ICES 2016 advice for coastal cod in subareas I and II (Norwegian coastal waters))

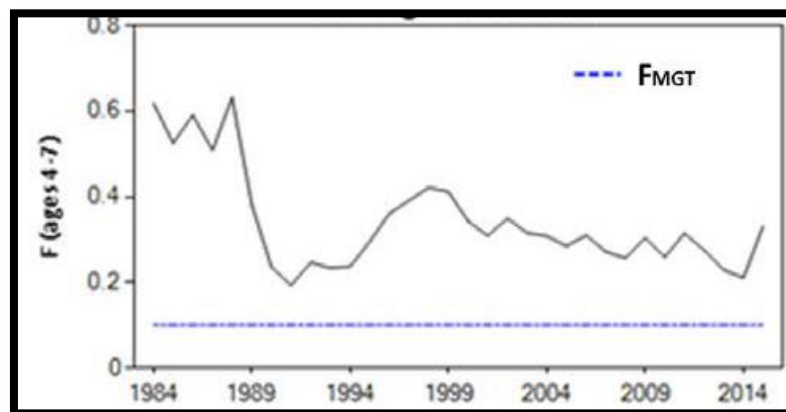


Table 17: State of the coastal cod stock and fishery relative to reference points. (Source: ICES 2017 advice for coastal cod in subareas I and II (Norwegian coastal waters))

Fishing pressure						Stock size				
		2014	2015	2016			2014	2015	2016	
Maximum Sustainable Yield	F_{MSY}	?	?	?	Undefined	$MSY B_{Trigger}$?	?	?	Undefined
Precautionary Approach	F_{pa}, F_{lim}	?	?	?	Undefined	B_{pa}, B_{lim}	?	?	?	Undefined
Management plan	F_{MGT}	?	?	?	Undefined	B_{MGT}	✗	✗	✗	Below
Qualitative evaluation	-	↘	↗	↗	Increasing	-	✗	✗	✗	Below possible reference points

The Norwegian Rebuilding Plan for coastal cod states de following (as from ICES 2017 advice):
"The overarching aim is to rebuild the stock complex to full reproductive capacity, as well as to give sufficient protection to local stock components. Until a biologically founded rebuilding target is defined, the stock complex will only be regarded as restored when the survey index of spawning stock in two successive years is observed to be above 60 000 tons. Importantly, this rebuilding target will be redefined on the basis of relevant scientific information. Such information could, for*

instance, include a reliable stock assessment, as well as an estimate of the spawning stock corresponding to full reproductive capacity.

Given that the survey index for SSB does not increase, the regulations will aim to reduce F^{**} by at least 15 per cent annually compared to the F estimated for 2009. If, however, the latest survey index of SSB is higher than the preceding one – or if the estimated F for the latest catch year is less than 0.1 – the regulations will be unchanged.

Special regulatory measures for local stock components will be viewed in the context of scientific advice. A system with stricter regulations inside fjords than outside fjords is currently in operation, and this particular system is likely to be continued in the future.

The management regime employed is aiming for improved ecosystem monitoring in order to understand and possibly enhance the survival of coastal cod. Potential predators are – among others – cormorants, seals and saithe.

When the rebuilding target is reached, a thorough management plan is essential. In this regard, the aim will be to keep full reproductive capacity and high long-term yield."

- **Haddock:**

According to ICES 2017 advice for haddock in subareas I and II, the spawning-stock biomass (SSB) has been above MSY Btrigger since 1989, increasing since 2000, and reaching the series maximum in 2015. However, the SSB in 2017 is declining. Fishing mortality (F) has been below F_{MSY} since 2008. Recruitment-at-age 3 in 2016 was slightly below average. ICES advises that when the Joint Russian–Norwegian Fisheries Commission management plan is applied, catches in 2018 should be no more than 202 305 tonnes.

Figure 8 Stock size: Spawning haddock stock biomass. (Source: ICES 2017 advice for haddock in sub-areas I and II)

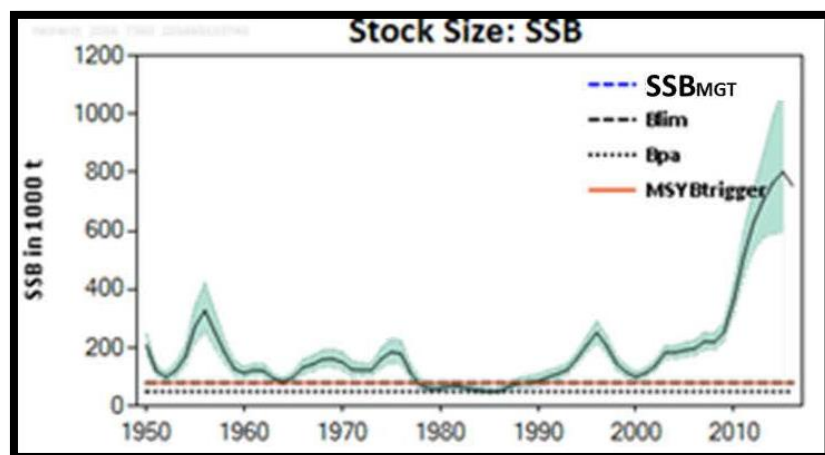


Figure 9 Fishing pressure for haddock in subareas I and II. (Source: ICES 2017 advice for haddock in [subareas I and II](#))

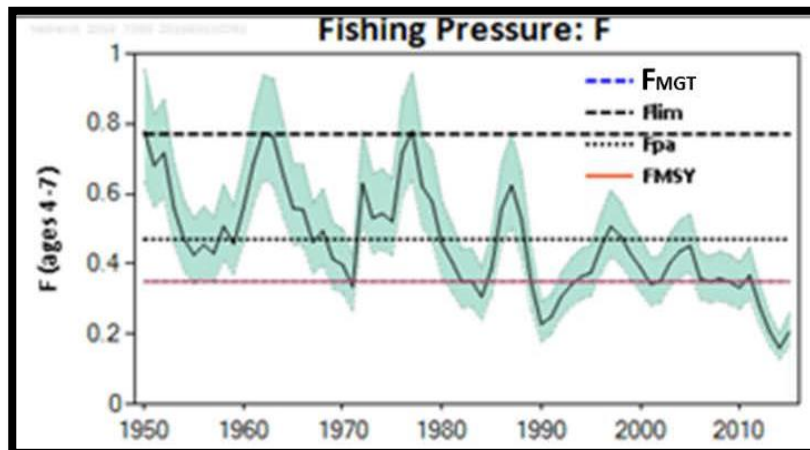


Table 18: State of the stock and fishery relative to reference points. (Source: ICES 2017 advice for haddock in subareas I and II)

		Fishing pressure			Stock size		
		2014	2015	2016	2015	2016	2017
Maximum Sustainable Yield	F_{MSY}	✓	✓	✓ Below	MSY	✓	✓ Above trigger
Precautionary Approach	F_{pa}	✓	✓	✓	B_{pa} B_{lim}	✓	✓
	F_{lim}	✓	✓	✓ Harvested sustainably		✓	✓ Full reproductive capacity
Management plan	F_{MGT}	✓	✓	✓ Below	B_{MGT}	✓	✓ Above

- Greenland halibut:

The fishable biomass (length ≥ 45 cm) has increased from 1992 to 2013, and has been stable since then. The harvest rate has been relatively stable since 1992 but has been increasing since a low value in 2009. ICES 2017 advice for Greenland halibut in subareas I and II states that when the precautionary approach is applied, catches should be no more than 23000 tonnes in each of the years 2018 and 2019. All catches are assumed to be landed. There are no reference points for the stock.

Figure 10: Fishable biomass (thousand tonnes), above Bpa. (ICES 2017 advice)

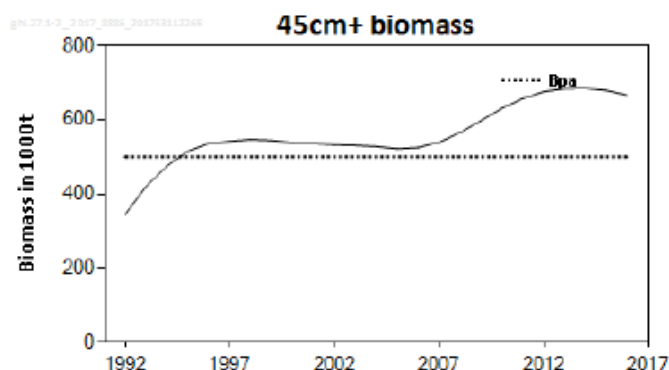


Table 19: State of the Greenland halibut stock and fishery relative to reference points. (Source: ICES 2017 advice for Greenland halibut in subareas I and II)

		Fishing pressure				Stock size				
		2014	2015	2016		2015		2016	2017	
Maximum sustainable yield	F_{MSY}	?	?	?	Undefined	$MSY B_{trigger}$?	?	?	Undefined
Precautionary approach	F_{pa}, F_{lim}	?	?	?	Undefined	B_{pa}, B_{lim}	✓	✓	✓	Undefined
Management plan	F_{MGT}	—	—	—	Not applicable	B_{MGT}	—	—	—	Not applicable

- Tusk:

According to ICES 2017 advice for tusk in subareas 1 and 2, the longline fishery is responsible for 90% of the landings. A standardized CPUE (Catch per Unit Effort) based on data from the Norwegian longline fleet shows a positive trend from 2004. Since 2013 there has been an increase in landings. Discarding is considered negligible.

There are no defined reference points for the stock. ICES advises that when the precautionary approach is applied, catches should be no more than 10 451 tonnes in each of the years 2018 and 2019.

Table 20: State of the tusk stock and fishery relative to reference points. (Source: ICES 2017 advice for tusk in subareas I and II)

		Fishing pressure					Stock size			
		2014	2015	2016			2014	2015	2016	
Maximum sustainable yield	F _{MSY}	?	?	?	Undefined	MSY B _{trigger}	?	?	?	Undefined
Precautionary approach	F _{pa} , F _{lim}	?	?	?	Undefined	B _{pa} , B _{lim}	?	?	?	Undefined
Management plan	F _{MGT}	—	—	—	Not applicable	B _{MGT}	—	—	—	Not applicable
Qualitative evaluation	-	?	?	?	Unknown	-	↗	↗	→	Stable

- Ling:

According to ICES 2017 advice for ling (*Molva molva*) in subareas 1 and 2, when the precautionary approach is applied, catches should be no more than 13 103 tonnes in each of the years 2018 and 2019. Landings have been relatively stable and discarding is considered negligible. The CPUE index (Catch per unit effort) is based on data from the Norwegian longline fleet, and shows a positive trend from 2004 to present.

Figure 11: Estimates of cpue (kg per 1000 hooks), based on official logbooks from the Norwegian longline fishery in Division 2.a. The horizontal line indicates the average cpue index of the respective year range used to calculate the advice.

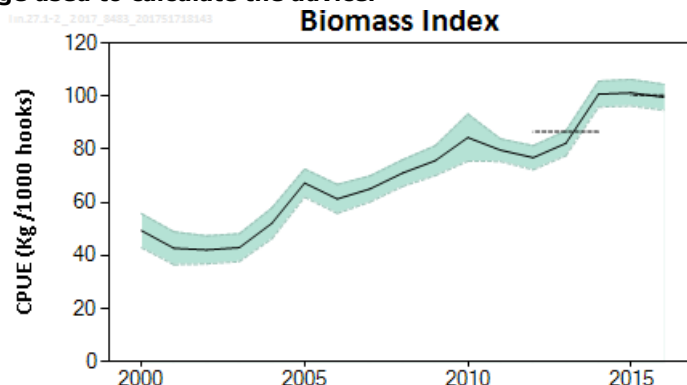
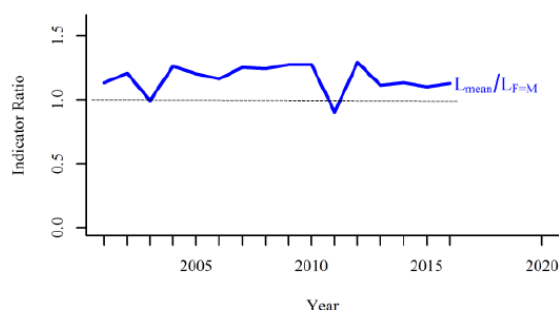


Table 21: State of the stock and fishery relative to reference points. The status evaluation is based on the reference point proxy for FMSY using the length-based indicator model (ICES, 2017).

		Fishing pressure				Stock size		
		2014	2015	2016		2014	2015	2016
Maximum sustainable yield	F_{MSY} proxy	✓	✓	✓ Below		MSY $B_{trigger}$?	?
Precautionary approach	F_{pa}, F_{lim}	✓	✓	✓ Below possible reference points		B_{pa}, B_{lim}	?	?
Management plan	F_{MGT}	—	—	— Not applicable		B_{MGT}	—	—
Qualitative evaluation	-	—	—	— Not applicable		-	↗	→
							→	→ Stable

Figure 12: Index ratio $L_{mean}/L_F = M$ from the length-based indicator method used for the evaluation of the exploitation status. The exploitation status is below the FMSY proxy when the index ratio value is higher than 1 (as for the ling stock).



The stock size relative to candidate reference points is unknown. The precautionary buffer was applied for the revised 2012 advice. As the stock indicator has increased over several years and fishing pressure is below FMSY proxy, the precautionary buffer was not applied this year. For the past years catches have been following ICES advice. Discarding is considered to be negligible. The longline fleet is responsible for 50% of the landings, the gillnet fleet of the 45% of the landings, and the resting 4% accounts for landings from trawlers.

- **Anglerfish/Monkfish:**

There is no ICES advice for anglerfish in subareas I and II nor a general advice for Northeast Atlantic waters. Information from IMR reveal that the Norwegian catches are almost exclusively white-bellied anglerfish (*Lophius piscatorius*), while only a few certain observations are made of the black-bellied anglerfish (*L. budegassa*).

ICES distinguish two different stocks of anglerfish, a southern stock including Portuguese, Spanish, French and some of the Irish waters, and one stock in the areas west of Scotland, the North Sea and Skagerrak. The anglerfish north of 62° N is probably more or less connected to the North Sea stock, but for the time being it is regarded as a separate stock.

Recent tagging experiments have shown that anglerfish are capable of performing extensive migrations, but the dynamics of spawning- and feeding migrations are still not well understood for this species. Some of the tagged individuals have migrated from the North Sea to Faroese, Icelandic and northern Norwegian waters. Some anglerfish tagged just north of 62° N have been recaptured in the North Sea and in northern Norway, but the majority of the recaptures are made close to the areas of release.

Since 2001 the Norwegian fisheries have expanded northwards, and the areas north of 64° N are now accounting for more than 50% of the Norwegian catch. This suggests that anglerfish has a more northerly distribution along the Norwegian coast than previously seen, which could be explained as a result of higher sea temperatures since these areas represent the northern boundaries of the distribution of this species.

- **Beaked redfish (*Sebastes mentella*):**

ICES 2017 advice states that when the precautionary approach is applied catches should be no more than 32658 tonnes in 2018. Spawning-stock biomass (SSB) increased steadily from 1992 to 2005 and stabilized thereafter. Following a period of low recruitment in 1998–2005, strong year classes have become evident from 2006. Since 1997 fishing mortality has been at a relatively low level and has been increasing in the last four years. All catches are assumed to be landed.

There are no reference points for the stock. There isn't either any international agreement on the sharing of TAC among countries and between national and international waters, and it is anticipated that the sum of the catches allocated to individual nations will exceed the recommended TAC. The measures currently in place to protect juveniles should be maintained.

Figure 13: SSB trend. ICES 2017 advice.

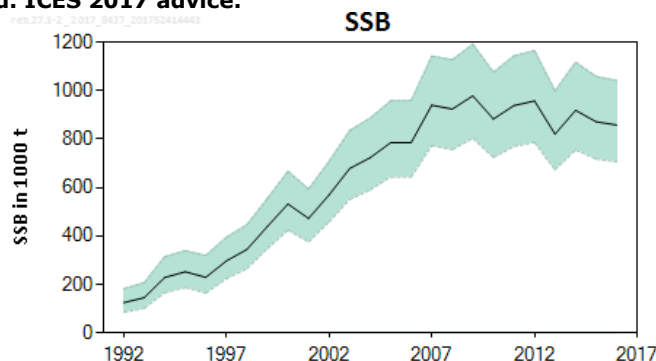


Figure 14 Trend of fishing mortality.

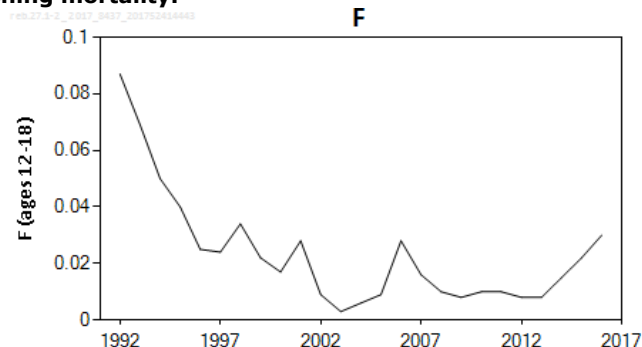


Table 22: State of the stock and fishery relative to reference points.

		Fishing pressure				Stock size				
		2014	2015	2016		2014	2015	2016		
Maximum sustainable yield	F_{MSY}	?	?	?	Undefined	$MSY B_{trigger}$?	?	?	Undefined
Precautionary approach	F_{pa}, F_{lim}	?	?	?	Undefined	B_{pa}, B_{lim}	?	?	?	Undefined
Management plan	F_{MGT}	—	—	—	Not applicable	B_{MGT}	—	—	—	Not applicable
Qualitative evaluation	-	↗	↗	↗	Increasing	Qualitative evaluation	→	→	→	Stable

3.4.2 Bycatch species

Since the implementation of the landing obligation in Norway in 1987, discarding is not permitted. In practice this means that all commercial species are landed and recorded on sales slips, but non-commercial species and small individuals of commercial species may still be discarded. Besides, Regulation J-250-2013, protecting basking sharks, spurdogs, porbeagles and silky sharks, obliges to the discarding of certain shark species as long as they are alive, in order to minimise their mortality. Unfortunately, there are no records by the commercial fleet about the identification or number of individuals released every year, so it is not possible to measure trends of these interactions. Non-fatal interactions with marine mammals or birds are not recorded either.

There is no formal observer programme, so there are no direct observations on the level of discarding or the species composition of discards from the Norwegian fleet. However, there is information available regarding the expected catch composition of the different fishing gears thanks to the research undertaken by the IMR reference fleet. Crew members in the reference fleet vessels record all interactions, including those with released individuals.

The data gathered through the reference fleet is sufficient to estimate which could be the main and minor bycatch species in the Norwegian North Sea demersal fisheries. Data collected in 2016 shows that there are no main bycatch species to consider for any UoC. Generally speaking, the proportion of minor species in the catch was very low, with the exception of skates, rays and sharks in the longline and gillnet fisheries, where the proportion could reach the 4% of the catch.

Minor bycatch species present in the catch composition of the reference fleet North of 62°North are:

- For the 5 vessels in the Danish seine reference fleet: 1 Thornback skate (*Raja clavata*), 1 spotted ray (*Raja montagui*), 315 tonnes coastal cod, 4 starry ray (*Amblyraja radiata*).
- For the 3 vessels in the purse seine reference fleet there are no bycatch species.
- For the 10 vessels in the hooks and lines reference fleet: 838 starry ray (*Amblyraja radiata*), 58 spinetail (*Bathyrāja spinicauda*), 736 velvet belly (*Etmopterus spinax*), 370 blackmouth dogfish (*Galeus melastomus*), 9 European herring gull (*Larus argentatus*), 2 great blackbacked gull (*Larus marinus*), 112 round ray (*Raja fyllae*), 19 Arctic skate (*Amblyraja hyperborea*), 2 sail ray (*Rajella lintea*), 300 unidentified skates, 1 small spotted catfish.
- For the 26 vessels in the gillnet reference fleet (21 coastal vessels and 5 offshore vessels): Bycatch interactions: 49 harbour porpoise (*Phocoena phocoena*), 7 starry skate (*Amblyraja radiata*), 2 European herring gull (*Larus argentatus*), 31 Northern gannet (*Morus bassanus*), 1 Black guillemot (*Cepphus grille*), 2 tope shark (*Galeorhinus galeus*), 2 spinetail (*Bathyrāja spinicauda*), 7 grey seal (***Halichoerus grypus***), 8 sail ray (*Rajella lintea*), 1100 blackmouth dogfish (*Galeus melastomus*), 2 Greenland shark (*Somniosus microcephalus*), 516 starry ray (*Amblyraja radiata*), 426 thornback skate (*Raja clavata*), 307 sandy ray (*Leucoraja circularis*), 2 cormorants (*Phalacrocoracidae spp.*), 217 small spotted catfish (*Scyliorhinus canicula*), 148 longnosed skate (*Dipturus oxyrinchus*), 16 common harbour seal (***Phoca vitulina***), 300 velvet belly (*Etmopterus spinax*), 4 eider ducks, 15 tonnes of golden redfish (*Sebastes marinus*) and 1300 tonnes of cod which was taken by the coastal gillnet reference fleet (vs 94000 tonnes landed by the gillnet UoC, which includes both inshore and offshore vessels).
- For the 5 vessels in the trawling reference fleet: 26 skates (unidentified).

There is limited information on the status or populations of all minor bycatch species, although certain research is undertaken and published by ICES. Due to the high number of minor bycatch species, the low proportion of each of them, and the limited information regarding their stock status, minor bycatch species have been grouped to facilitate their evaluation.

3.4.3 Endangered, threatened or protected species

Expected ETP species would include birds, sharks and marine mammals present in the area. According to MSC CR v1.3, the team shall define ETP species to consider either as those recognised by national ETP legislation or by international binding agreements to which Norway is a signatory country, such as CITES (Convention on International Trade in Endangered Species) and the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals). There is also a [Norwegian red list](#) of endangered species which demands the protection of these species in the Norwegian territory. The Norwegian Marine Resources Act, through the precautionary approach principle, ensure that management action is taken to avoid redlisting of species. Besides, Norwegian Regulation [J-250-2013](#) specifically protects basking sharks, spurdogs, portbeagle and silky sharks. The OSPAR list of threatened species in the Norwegian Sea and the IUCN Status are also consulted as a guidance of the status of the different species, although species in these lists do not necessarily fulfil the MSC requirements to be considered ETP species.

Boxes in bold highlight the reason for the species to be classified as ETP. The IUCN status is also given as a reference of the status of the mentioned stocks.

Table 23: ETP species present in the area.


ETP species	CITES Appendix I	Bonn Convention	Norwegian red list	OSPAR Region I	IUCN red list
Basking shark (<i>Cetorhinus maximus</i>)	No	Yes (Annex I and II)	Endangered	Yes	Endangered
Black-legged kittiwake (<i>Rissa tridactyla</i>)	No	No	Endangered	Yes	Least Concern
Blue whale (<i>Balaenoptera musculus</i>)	Yes	Yes (Annex I)	Vulnerable	Yes	Endangered
Bowhead whale (<i>Balaena mysticetus</i>)	Yes	Yes (Annex I)	Critically Endangered	Yes	Least Concern
Brunnich's guillemot (<i>Uria lomvia</i>)	No	No	Yes	Yes	Least Concern
Common guillemot (<i>Uria aalge</i>)	No	No	Critically Endangered	No	Least Concern
Common skate (<i>Dipturus batis</i>)	No	No	Critically Endangered	Yes	Critically Endangered
European eel (<i>Anguilla Anguilla</i>)	No	Yes (Annex II)	VU	Yes	Critically Endangered
Fin whale (<i>Balaenoptera physalus</i>)	Yes	Yes (Annex I)	Least Concern	N/A	Endangered
Fulmar (<i>Fulmarus glacialis</i>)	No	No	Endangered	No	Least Concern
Golden redfish (<i>Sebastes marinus</i>)	No	No	Endangered	N/A	N/A
Gray whale (<i>Eschrichtius robustus</i>)	Yes	No	N/A	N/A	Least Concern
Humpback whale (<i>Megaptera novaeangliae</i>)	Yes	Yes (Annex I)	Least Concern	N/A	Least Concern
Ivory gull (<i>Pagophila eburnea</i>)	No	No	Yes	Yes	Near threatened
Minke whale (<i>Balaenoptera acutorostrata</i>)	Yes	No	Least Concern	N/A	Least Concern
North Atlantic right whale (<i>Eubalaena glacialis</i>)	Yes	Yes (Annex I)	Regionally Extinct	Yes	Endangered
Northern bottlenose whale (<i>Hyperoodon ampullatus</i>)	Yes	Yes (Annex II)	Least Concern	N/A	Data Deficient
Porbeagle (<i>Lamna nasus</i>)	No	Yes (Annex II)	Vulnerable	Yes	Vulnerable
Puffin (<i>Fratercula arctica</i>)	No	No	Vulnerable	No	Vulnerable
Razorbill (<i>Alca torda</i>)	No	No	Endangered	No	Near Threatened
Silky shark (<i>Carcharhinus falciformis</i>)	No	Yes (Annex II)	N/A	No	Near Threatened
Sperm whale (<i>Physeter microcephalus</i>)	Yes	Yes (Annex I)	N/A	N/A	Vulnerable
Spurdog (<i>Squalus acanthias</i>)	No	Yes (Annex II)	Endangered	Yes	Vulnerable

Species in bold are specifically protected by Norwegian Regulation [1-250-2013](#). Source: DNV-GL

Direct interactions would be those caused by the gear getting in touch with the animal. This may result in casualties or injuries for the individual and damage for the nets. Landing records show no reports of interactions or landings of ETP species. As regards indirect effects, these would be those related to biomass removal by the fishery, affecting prey availability for ETP species.

ETP populations such as marine mammals are monitored by different programs through population estimates.

Marine mammal abundance is estimated through counting surveys by NAMMCO. The NAMMCO [NASS 2015](#) surveys cover the Northern part of the North Atlantic. These surveys include areal sightings and vessel observations. Marine mammals present in the Barents Sea are listed in the [NAMMCO](#) website (North Atlantic Marine Mammal Commission).



Monitoring of seabirds is carried out through monitoring of the breeding success of birds. Information on birds present in the Barents Sea can be found at the [Barents portal](#) website. As regards the Norwegian Sea, according to ICES 2017 Ecosystem overview on the Norwegian Sea, the total number of seabirds breeding in the Norwegian parts of the Norwegian Sea was recently estimated at 1 270 000 pairs, of which 870 000 pairs of 20 species were breeding along the mainland coast and 400 000 pairs of 15 species were on Jan Mayen. Most populations have decreased steeply over the last decade and many have decreased almost constantly since monitoring started three to five decades ago. No single factor explains all these trends; however, long-term breeding failures for species feeding in pelagic waters such as Atlantic puffin *Fratercula arctica*, black-legged kittiwake *Rissa tridactyla*, common guillemot *Uria aalge*, and Northern fulmar *Fulmarus glacialis* indicate that much of the problem along the mainland coast is related to drastic changes in the availability of 0-group fish (especially herring), and also linked to variations in ocean climate.

For 2016, the IMR reference fleet north 62°N, had interactions with the following ETP species:

- For the 5 vessels in the Danish seine reference fleet there were interactions with 1 spurdog (*Squalus acanthias*) and 0.2 tonnes of golden redfish (*Sebastes marinus*).
- For the 3 vessels in the purse seine reference fleet there were no interactions with any ETP species.
- For the 10 vessels in the hooks and lines reference fleet there were interactions with 1 portbeagle (*Lamna nasus*), 38 spurdogs (*Squalus acanthias*), 6 common skates (*dipturus batis*), 25 fulmars (*Fulmarus glacialis*) and 110 tonnes of golden redfish (*Sebastes marinus*).
- For the 21 coastal gillnets and 5 offshore gillnets in the reference fleet there were interactions with 14 porbeagles (*Lamna nasus*), 2250 spurdogs (*Squalus acanthias*), 1 *Raja batis*, 2 puffins (*Fratercula arctica*), 9 razorbill (*Alca torda*), 14 fulmars (*Fulmarus glacialis*), 1 black-legged kittiwake, 31 common guillemot (*Uria aalge*) and 15 tonnes of golden redfish (*Sebastes marinus*).
- For the 5 demersal trawlers in the reference fleet there were interactions with 250 tonnes of golden redfish (*Sebastes marinus*).

As reported on recorded landings (see Table 15) fatal interactions with ETP species were limited to catches of redfish taken by Danish seines, hooks and lines, gillnets and demersal trawlers. It is not possible to determine of those redfish individuals were beaked redfish or golden redfish. The stock of Golden redfish is protected by the Norwegian red list, as its status in the ICES areas I and II is weak.

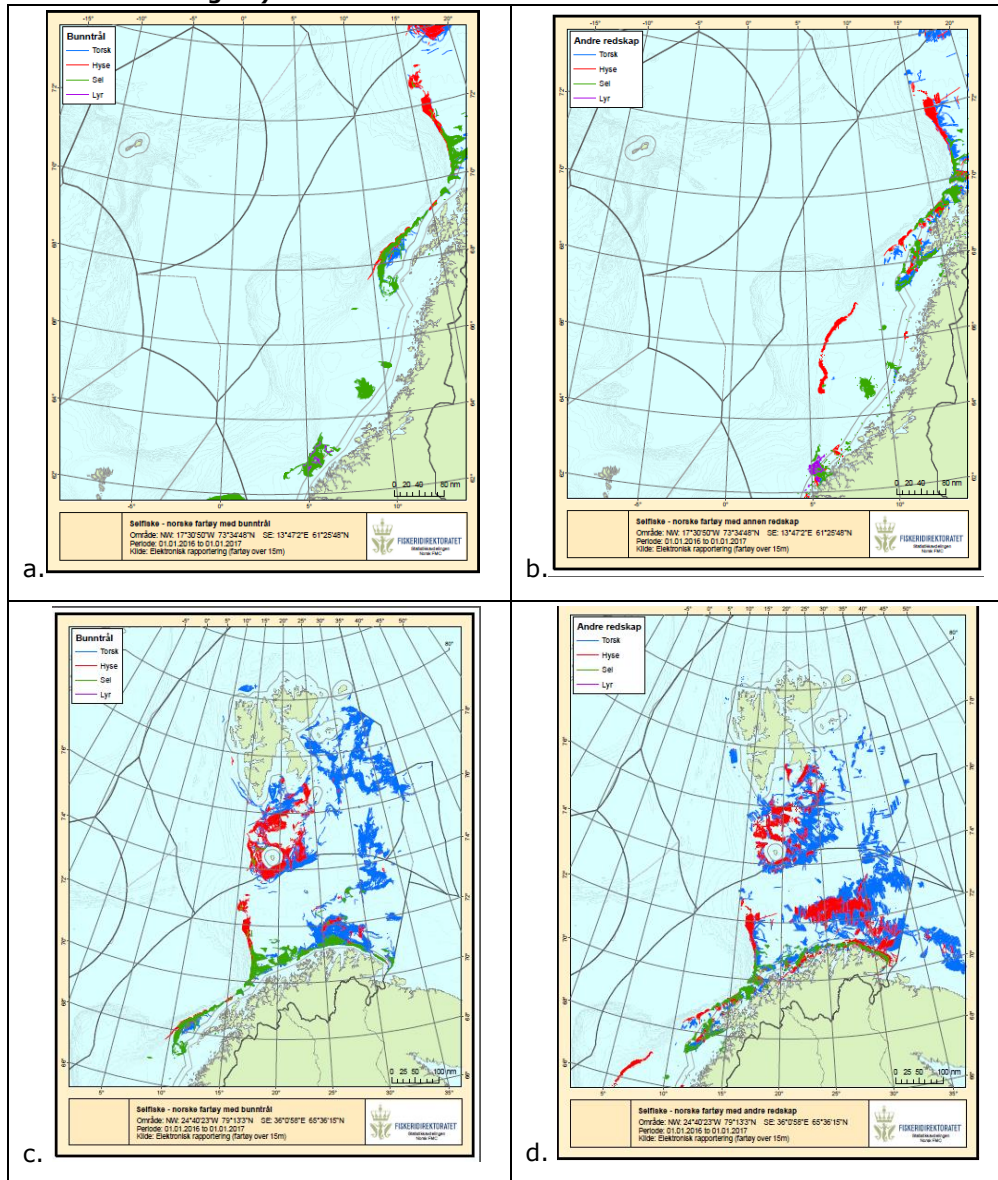
Certain gear types have implemented mitigation devices to avoid interactions with ETP species, although these are not mandatory in the Norwegian fleet. The coastal gillnet fleet has pingers to prevent interactions with seals and other marine mammals while longlines have streamers and rotating hooks to prevent interactions with seabirds.

As regards the collection of information of interactions with ETP species, electronic logbooks have a dedicated box to record any interaction with such species, although records so far just show either negligible interactions or no recordings of such.

3.4.4 Habitats

According to the VMS maps provided by the Directorate of Fisheries, the NEA saithe fishery is very coastal, and takes place all along the Norwegian coast, with different gears that impact the seafloor in different manners. Figure 15 below shows the fishing grounds of the NEA saithe fishery.

Figure 15: 2016 VMS maps for the different gear types targeting NEA saithe (in green) in the different regions (A. Demersal trawlers in the Norwegian Sea ecoregion; B. Other gear types in the Norwegian Sea ecoregion; C. Demersal trawlers in the Barents Sea ecoregion; D. Other gear types in the Barents Sea ecoregion).



The substrates within the coastal Norwegian EEZ have been mapped by the MAREANO project. The mapping is confined mostly to the Norwegian continental shelf and slope. The majority of the shelf, both in the Norwegian Sea and the Barents Sea, where the NEA saithe fishery takes place, consists of fine muds and sandy muds, with some coarser sediments on the shelf slope (see Figure 16 and Figure 17 below).

Figure 16: Major substrates in the Norwegian Sea ecoregion (compiled by EMODNET seabed habitats; www.emodnet-seabedhabitats.eu).

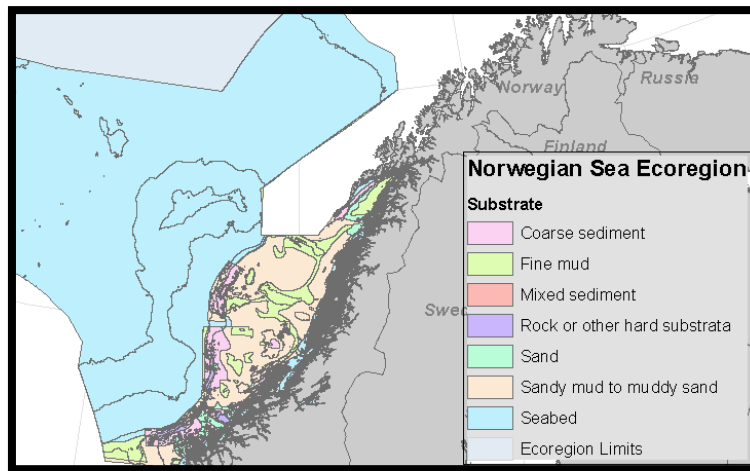
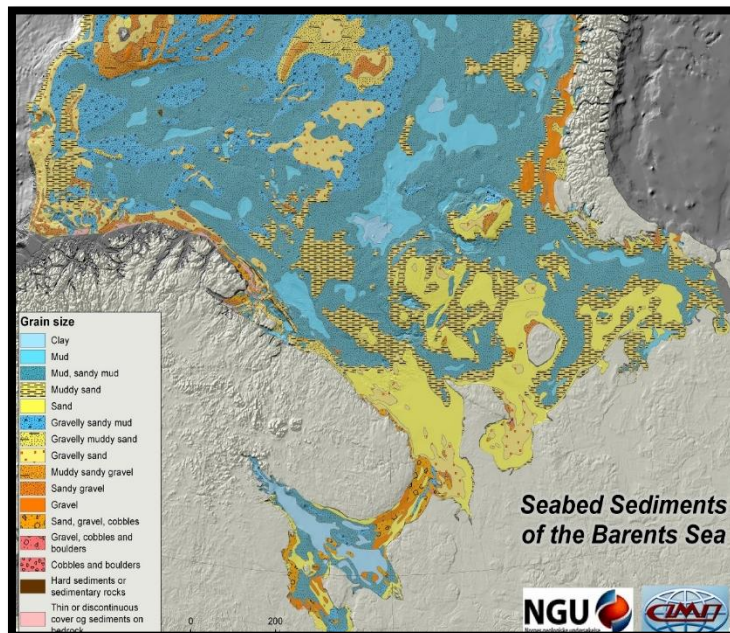


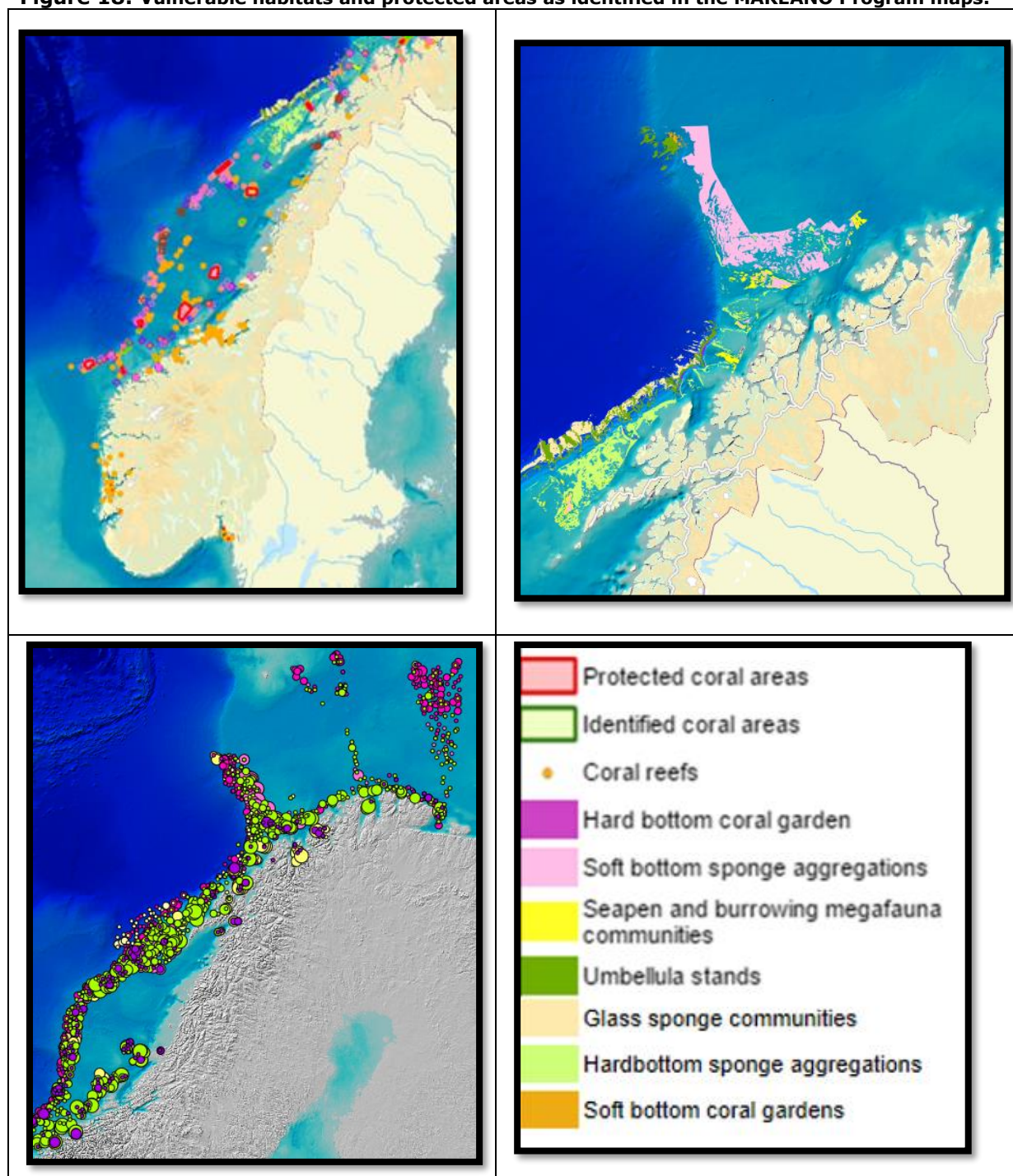
Figure 17: Seabed sediments of the Barents Sea. Source: Lepland Aivo, Rybalko Aleksandr & Lepland Aave, 2014. Seabed Sediments of the Barents Sea. Geological Survey of Norway (Trondheim) and SEVMORGEO (St. Petersburg).



The MAREANO program is a comprehensive research program which aims to map Norwegian EEZ seafloor. The program was first launched in 2005 and since then has increased the area covered year by year. Much information about vulnerable habitat types can be found on its website. So far the program has focused on mapping the seabed along the coast of Norwegian Mainland (where most of the saithe NEA fishery takes place). The identification of certain vulnerable habitats such as coral reefs in the mainland coastline led in 2016 to the establishment of Regulation J-48-2016, ratified in order to protect coral reefs from degradation as a result of fishing activity, and which designates different areas for the protection of benthic habitats.

Figure 18 below shows the location of coral reefs (orange), soft sponge aggregations (pink), seapens (yellow) and other vulnerable habitats. There is however still limited information as regards deep-water areas. Red boxes below shows protected areas, intended for the protection of corals. The Directorate of Fisheries also offers maps of protected areas, but most of these areas are located in coastal areas within the fjords (<https://kart.fiskeridir.no/fiskeri>).

Figure 18: Vulnerable habitats and protected areas as identified in the MAREANO Program maps.



Source: www.mareano.no

Besides, in the Barents Sea ecoregion, there is an established collaboration between research institutions such as IMR and PINRO (Knipovich Polar Research Institute of Marine Fisheries and

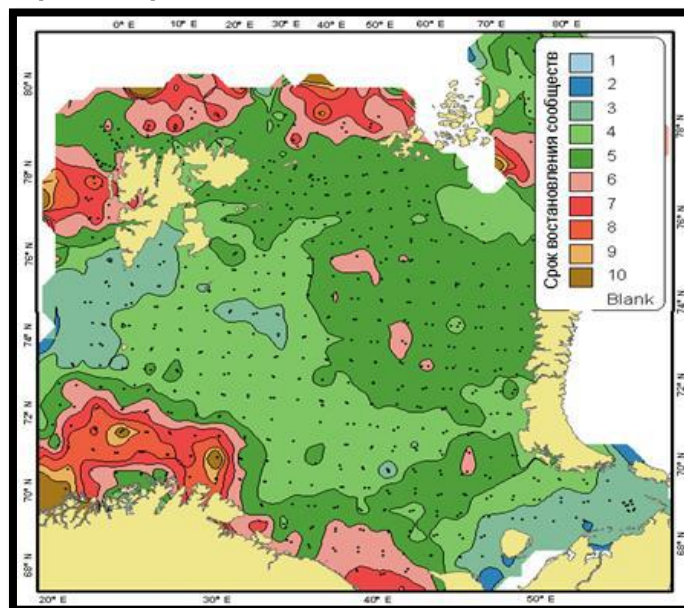
Oceanography). First investigations on Barents Sea benthic species were made more than 200 years ago (Jakobsen T., Ozhigin V., 2011). Since then, both PINRO and IMR have undertaken research in the Barents Sea through different means. Since 2003, both institutions participate in an annual Joint Russian-Norwegian ecosystem survey using five research vessels and bottom trawlers. These surveys serve to gather information regarding the abundance of different fish species but also information on hydrographic conditions, endangered species or planktonic or benthic species.

Jakobsen and Ozhigin (2011) agree that large aggregations of sponges (e.g. *Geodia* spp.) can be found along the continental slope from Tromsøflaket while porifera appears to dominate the communities in terms of biomass north of the Finnmark coast.

According to Kaiser et al. (2006), bottom trawling does not irreversibly affect soft bottoms such as sandy and muddy grounds. However, there is still a clear and negative relation between fisheries-intensity and density of mega benthos (Jakobsen T., Ozhigin V., 2011). Jørgensen et al. (2015) studied data collected in 2011 by bottom trawlers to assess the vulnerability of benthic species in the Barents Sea to trawling, based on the risk of being caught or damaged by a bottom trawl. Besides, other authors have tried to estimate the recovery time for different species after trawling (Buhl-Mortensen et al., 2015). Benthic infauna communities might take at least 18 months to recover (Tuck et al. 1998). Macrobenthic invertebrates (molluscs, crustaceans, annelids and echinoderms) may take 1-3 years to recover (Desprez, 2000). Large sessile fauna takes from years to decades to recover. Indirect evidence (Pitcher 2000, and Sainsbury et al. 1997) suggests that large sponges probably take more than 15 years to recover.

However, some regions have already been trawled for more than a century, which has led to a loss of biodiversity in the modified areas where vulnerable species are less abundant. Trawling impacts have also been accompanied by natural spatial and temporal variations in water temperature and ocean currents. Full recovery of vulnerable species in those habitats is not expected to take place in a short-time frame, but avoiding future damage in unexplored areas should be easier to control. In any case, trawl-modified habitats continue to offer nutrients for ecosystem needs, regardless showing lower biodiversity.

Figure 19: Map of the minimum recovery time (years) in the Barents Sea. Different colours show the community recovery time in years.



Source: Lubin 2013 (from Denisenko S.G. and Zgurovsky, K.A. 2013. Impact of trawl fishery on benthic ecosystems of the Barents Sea and opportunities to reduce negative consequences. Murmansk. WWF. 2013. 55pp.)

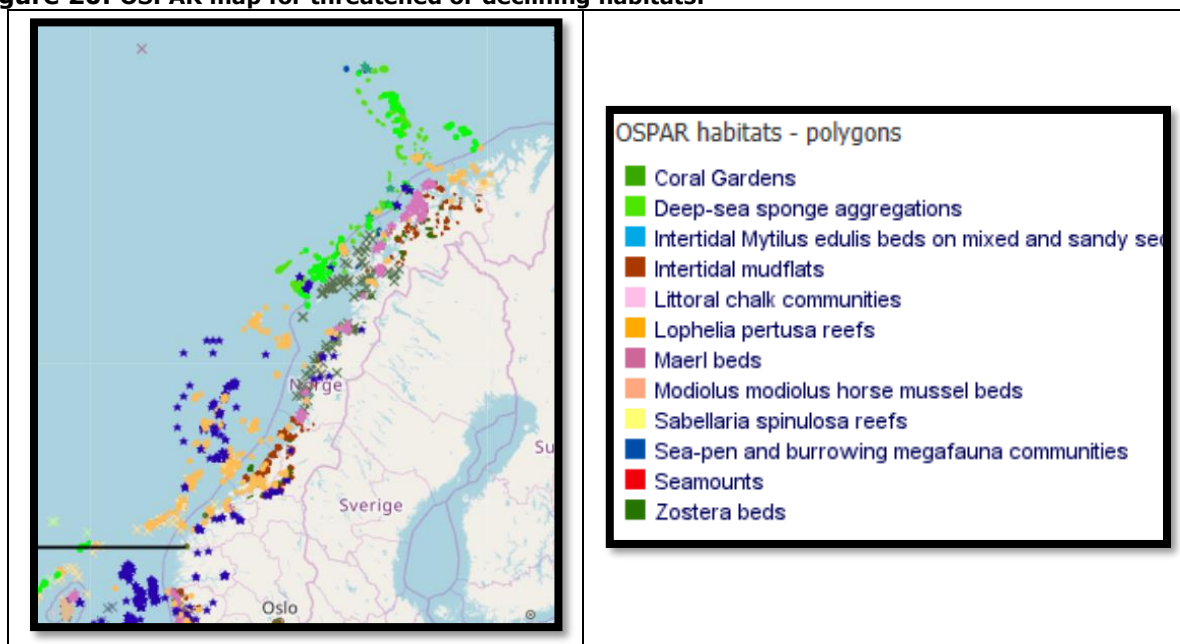
Norway is, among other countries, part of the [CoralFish project](#), which is focused on the research on interactions between cold water corals, fish and fisheries, in order to develop monitoring and predictive modelling tools for ecosystem based management. Among other areas, the CoralFish project studies the Region 1: Northern Norway- eastern Norwegian Sea, and has identified the following issues:

- There is a wide range of benthic habitats and environmental conditions: fjords, open coast, continental shelf, shelf break and deep ocean floor. Substrates vary from bedrock near the coast and in the fjords, to morainic and soft clay deposits on the shelf, to gravel and sand near the shelf break.
- *Lophelia pertusa* forms thousands of large and well developed cold water coral reefs in the mid Norwegian shelf, but many reefs in the area have been damaged by bottom trawling. As a result, three offshore coral reefs have been designated MPAs.
- Fisheries include all-year or seasonal trawling, long-lining and gillnetting, the latter two targeting coral reefs for redfish (*Sebastes* spp.), tusk (*Brosme brosme*), and ling (*Molva molva*).

The OSPAR Commission website lists (as for November 2017) the following [declining habitats](#) in OSPAR Region 1 (this is, the OSPAR maritime area north of latitude 62°N, but also including Iceland and the Faroes):

- Coral gardens in all NEA regions
- Deep Sea sponge aggregations
- Intertidal mudflats
- *Lophelia pertusa* reefs
- *Modioulus modiolus* beds in all regions
- Seamounts
- Zostera beds

Figure 20: OSPAR map for threatened or declining habitats.



Source: OSPAR Commission

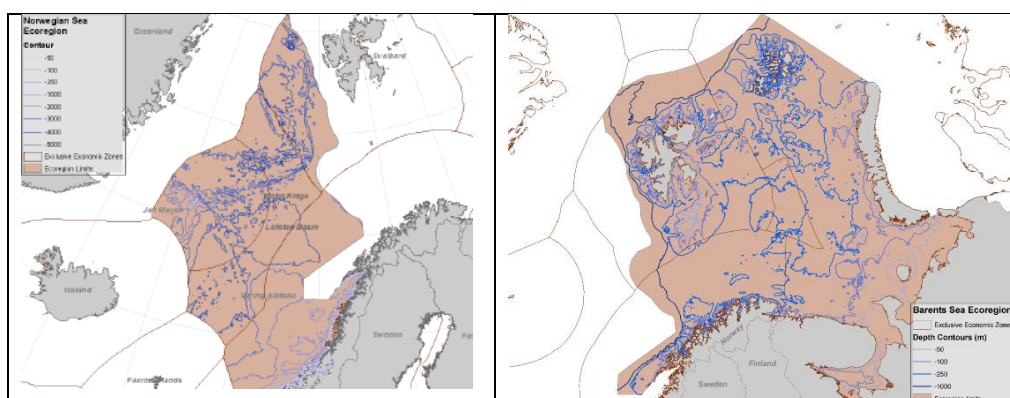
There are certain management measures implemented in order to protect vulnerable habitats in Norwegian waters. Some of these measures are:

- Trawling is generally forbidden within the 12 nautical miles outside the baseline (however this limit is sometimes set at 6 nautical miles inside the fjords)
- Trawling is generally forbidden at depths exceeding 1000 m.
- Regulation J- 187-2008 prohibits trawling near coral reefs, and establishes Marine Protected Areas to protect them.
- Regulation J-40-2016, which affects all the Norwegian EEZ, sets a move on rule for the protection of coral and sponges. This said, when a trawl vessel catches more than 30 kg corals or 400 kg sponges in a single haul the vessel shall stop fishing and move position at least 2 nautical miles in order to avoid such catches. The incident must be reported to the Directorate of Fisheries.
- When fishing in a new area, vessels must have a special permit from the Directorate of Fisheries. Such special permission may only be granted if the vessel has submitted to the Directorate for approval:
 - A detailed protocol for trial fishing which includes a fishing plan for fishing gear, fish stocks, by-catches, time and areas.
 - A plan to avoid damage to sensitive marine ecosystems.
 - A plan for journal entry and reporting.
 - And a plan for collecting data on vulnerable soil habitats

3.4.5 Ecosystem

The fishing activity by the different UoCs takes place in coastal waters of the Norwegian EEZ, this is, both in the Norwegian and the Barents Sea eco-regions.

Figure 21: Norwegian Sea and Barents Sea eco-regions.



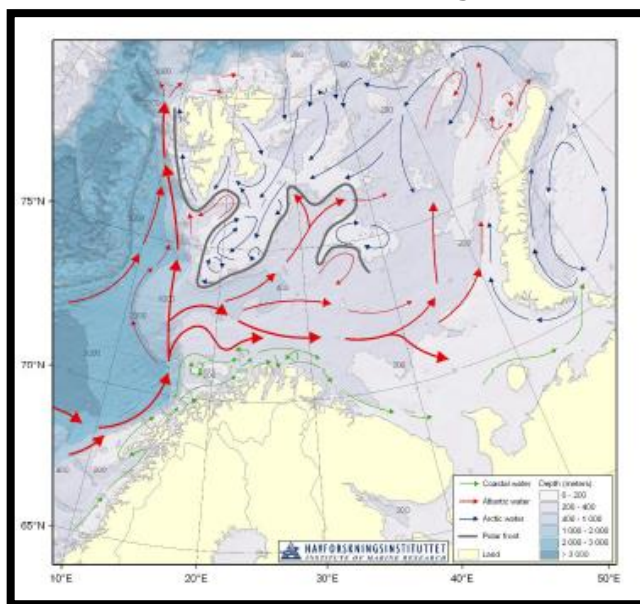
Source: ICES Norwegian Sea and Barents Sea ecosystem overviews.

The Norwegian Sea, together with the Greenland Sea and the Iceland Sea, comprise the Nordic seas, which are separated from the rest of the North Atlantic by the Greenland–Scotland Ridge. The Norwegian Sea covers more than 1.1 million km², consisting of two deep basins (between 3000 and 4000 m deep), the Norwegian Basin and the Lofoten Basin, separated by the Vøring plateau (between 1000 and 3000 m deep).

The Barents Sea is one of the shelf seas surrounding the Polar basin. It connects with the deeper Norwegian Sea to the west, the Arctic Ocean to the north, and the Kara Sea to the east, and borders the Norwegian and Russian coasts to the south. It covers an area of approximately 1 600 000 km² (Carmack et al. 2006, although this estimation includes the surface of the different islands in the area (Terziev 1990)), has an average depth of ca. 230 m, and a maximum depth of about 500 m at the western end of Bear Island Trough (ICES 2016 AFWG Report). Its topography is characterized by troughs and basins, separated by shallow bank areas. The three largest banks are Central Bank, Great Bank, and Spitsbergen Bank.

The Norwegian and Barents seas are transition zones for warm and saline waters on their way from the Atlantic to the Arctic Ocean. The major current, the Norwegian Atlantic Current (NwAC), is a poleward extension of the Gulf Stream and the North Atlantic Current that acts as a conduit for warm and saline Atlantic water from the North Atlantic to the Barents Sea and Arctic Ocean.

Figure 22: Water circulation in the Norwegian and Barents Seas.



Source: ICES AFWG REPORT 2016

Climate variability has been noticed in these waters, with surface water suffering both increasing or decreasing trends in different years. Ice cover also has a strong seasonal and inter-annual variation, ranging from almost ice-free conditions to covering more than half the sea. In the last 40 years, there has been a general decreasing trend in ice coverage in the Barents Sea. Distribution of phytoplankton, zooplankton and fish species have moved North as these waters get warmer. Changes in water temperature affect the different species in the ecosystem and favours the appearance of other non-indigenous species which may cause trophic competition.

The fisheries in the Norwegian Sea ecoregion are managed by Norway and by coastal states, with some fisheries managed by the North East Atlantic Fisheries Commission (NEAFC). Pelagic fishing by multinational fleets is the major activity in the ecoregion, targeting mainly NSS herring, blue whiting and mackerel. The number of fishing vessels is declining while the sizes of the vessels are increasing. The Norwegian commercial fleet has the highest fishing activity in the shelf area, particularly along the coast of Norway and along the continental shelf edge. Environmental issues in the Norwegian EEZ of the Norwegian Sea are managed by Norwegian agencies and through OSPAR, with advice being provided by Norwegian agencies, OSPAR, and ICES.

As regards fishing activity in the Barents Sea, vessels from different nationalities target different species using different gears. The largest commercially exploited fish stocks (cod, capelin and haddock) are now harvested at fishing mortalities close to those in the management plan and have full reproductive capacity. Some of the smaller stocks (golden redfish *Sebastes marinus* and coastal cod in Norway) are overfished. Other species subject to targeted fisheries include Greenland halibut, Atlantic halibut, beaked redfish, deep-water shrimps, red king crabs, and snow crabs (both crab species are well established in the region, despite being invasive species). Fisheries in the Barents Sea are managed by Norway and Russia in their respective EEZ. Each year the Joint Russian-Norwegian Commission meets in order to share information on the Barents Sea resources and management measures. NEAFC manages the Barents Sea international waters of the Loop Hole.

As regards research activities, marine research institutions such as IMR and PINRO undertake different scientific surveys in the Barents Sea to monitor both physical and chemical parameters as well as sample the status of the stock of different species. Table 24 below summarizes the different scientific surveys regularly taken by these institutions.

Table 24: Overview of conducted monitoring surveys by IMR and PINRO in the Barents Sea, with observed parameters and species. Climate and phytoplankton parameters are: T-temperature, S-Salinity, N-nutrients, chl-a-chlorophyll.

SURVEY	INSTITUTION	PERIOD	CLIMATE	PHYTO - PLANKTON	ZOO- PLANKTON	JUVENILE FISH	TARGET FISH STOCKS	MAMMALS	BENTHOS
Winter survey	Joint	Feb-Mar	T, S	N, chl a	Intermittent	All commercial species and some additional	Cod, Haddock	-	-
Lofoten survey	IMR	Mar-Apr	T, S	-	-	-	Cod, haddock, saithe	-	-
Ecosystem survey	Joint IMR - PINRO	Aug-Oct	T, S	N, chl a	Yes	All commercial species and some additional	All commercial species and some additional	Yes	Yes
Norwegian coastal surveys	IMR	Oct-Nov	T, S	N, chl a	Yes	Herring, sprat, demersal species	Saithe, coastal cod	-	-
Russian Autumn-winter trawl-acoustic survey	PINRO	Oct-Dec	T, S	-	Yes	Demersal species	Demersal species	-	-
Norwegian Greenland halibut survey	IMR	Aug, biennial	-	-	-	-	Greenland halibut, redfish	-	-
Russian young herring survey	PINRO	May	T, S	-	Yes		Herring	-	-

Interspecies trophic relations are also studied both in the Norwegian and the Barents Seas through different multispecies and ecosystem models, which identify the most important inter-species/

functional group links and sensitivity of the ecosystem to changes, and serves to give scientific based management advice to the different fleets. Specifically, the trophic relationships of saithe (trophic level 4.3 +/- 0.35) with prey species on the North East Atlantic have been studied through different models, such as Ecopath with Ecosim for the North Sea, the Faroese waters (Zeller and Freire, 2001; Zeller and Reinert 2004) and other models for the Norwegian Sea (Hjollo et al, 2012; Utne et al, 2012) and [Norwecom.e2e](#), which takes into account processes such as movement, migration, feeding, growth and mortality. Besides, Table 25 below gives a summary of different multispecies and ecosystem models for the Barents Sea.

According to Plagányi (2007), there are different approaches to modelling the ecosystem:

- Whole ecosystem models: models that attempt to take into account all trophic levels in the ecosystem
- Minimum Realistic Models (MRM): takes into account a limited number of species which are most likely to have important interactions with a target species of interest
- Dynamic System Models (Biophysical): represent both bottom-up (physical) and top-down (biological) forces interacting in an ecosystem
- Extensions of single-species assessment models (ESAM): They expand current single-species assessment models taking only a few additional inter-specific interactions into account.

Table 25: Classification of the multispecies/ecosystem models for the Barents Sea.

MODEL	NAME	STATUS (for the Barents Sea)
Whole ecosystem models (End to End models)		
EwE and ECOSPACE	Ecopath with Ecosim	Potentially useful
ATLANTIS	ATLANTIS	Operational
Minimum realistic models (Multispecies models)		
Bifrost	Boreal integrated fish resource optimization and simulation tool.	Operational
STOCOBAR	Stock of cod in the Barents Sea	Operational
GADGET	Globally applicable Area Disaggregated General Ecosystem Toolbox	Operational
DSF	Dynamic Stochastic Food web	In development
BORMICON	Boreal Migration and consumption model	Precursor to GADGET
MULTISPEC	Multi-species model for the Barents Sea: Simplified version is AGGMULT which is also connected to a ECONMULT - a model describing the economies of the fishing fleet.	Retired
MSVPA and MSFOR (and derivatives)	Multi-species Virtual Population Analysis; Multi-species Forecasting Model.	Potentially useful
IBM	Individual-Based Models	Operational
Dynamic system models		
NORWECOM.E2E	Formulation is moving towards whole ecosystem model	In development
SYMBIOSES	SYMBIOSES	First version functional, under further development.
Extension of single species assessment models		
ESAM	Extended Single-Species Models e.g. Livingston and Methot 1998; Hollowed <i>et al.</i> , 2000; Tjelmeland and Lindstrøm 2005.	Limited application
SEASTAR	Stock Estimation with Adjustable Survey observation model and TAg-Return data	Limited application
EcoCod	Ecosystem and Cod	In development

Source: ICES AFWG REPORT 2016

3.5 Principle Three: Management System Background

3.5.1 Jurisdiction

The fishery is managed by Norway and takes place in the Norwegian Economic Zone.

3.5.2 Legal basis and management set-up

Norway has a well-established system for fisheries management, which has evolved over more than a century and is now codified in the 2008 Marine Resources Act and secondary legislation. The Act applies to all catch and use of marine resources and their genetic material and covers issues such as bioprospecting, catch levels and quotas, catch and use of marine resources, arrangements on the fishing fields, liability for damage and local regulations and monitoring, enforcement, sanctions and criminal liability.

The Marine Resources Act is a framework law, which mainly authorizes the Government to issue specific regulations within designated fields. The most important rules are found in the Regulation on the Execution of Marine Fisheries, which is updated annually. The Regulation contains rules for mesh size, selection and limitations on the use of specific catch gear, seasonal restrictions, bycatch, minimal fish size, discard ban, restrictions on the use of trawl in specific areas, protection of coral reefs, documentation on hold volumes, marking of vessels and gear, loss of gear and fish welfare. Other important legal instruments are the 1999 Act on the Right to Participate in Fisheries, the 2015 Act on First-Hand Sales of Wild Catch of Marine Resources, the 2016 Regulation on Participation in Fisheries, the 2016 Regulation on Licencing and the 2016 Regulation on Landing and Sales Notes. All Regulations are subject to running modifications and additions through so-called J-orders, which are distributed to the fishing fleet electronically. This includes dedicated and regularly updated annual regulations for the fishery of each specific species, including separate regulations for saithe.


The executive body at governmental level is the Ministry of Trade, Industry and Fisheries, while the practical regulation of fisheries is delegated to the Directorate of Fisheries. Enforcement at sea is taken care of by the Coast Guard, which is part of the Royal Norwegian Navy, but performs tasks on behalf of several ministries, including the Ministry of Trade, Industry and Fisheries. Scientific research is performed by the Institute of Marine Research. Fisheries management authorities coordinate their regulatory work with that of other bodies of governance, for instance the Ministry of Climate and Environment and the Norwegian Environmental Agency, which are responsible for the implementation of the integrated management plans for different marine areas.

3.5.3 Objectives

The 2008 Marine Resources Act requires that Norwegian fisheries management be guided by the precautionary approach, in line with international treaties and guidelines, and by an ecosystem approach that takes into account habitats and biodiversity. The same objectives are found in the most relevant policy documents, such as the integrated management plans for the Barents and Norwegian Seas, and for the North Sea and Skagerrak.

3.5.4 Stakeholders and consultation processes

Norway has a long tradition of including non-governmental organizations in fisheries management, with continuous consultation and close cooperation between governmental agencies and user-group organizations, in particular the Norwegian Fishermen's Association, but also the more specialized organizations such as the fishermen's sales organizations. As these organizations have regional branches, whose representatives are actively involved in policy-making, ensuring that




local knowledge is also taken into consideration in the management process. So-called Regulatory Meetings are organized twice a year and are open to all; user-group organizations and NGOs attend on a regular basis. In addition there is day-to-day contact by telephone and email between authorities, user groups and other interested parties. Distribution of the national quota between different gear and fishing fleets has in practice been delegated to the Norwegian Association of Fishermen, which includes all fishermen from the smallest coastal vessels to ocean-going trawlers. Hence, the inherent conflict of interest between different vessel types is handled at the level of the Fishermen's Association, and the outcome is formalized by the Ministry or Directorate after agreement has been reached within the Association. Technical regulation measures are to a large extent decided upon in direct consultations 'over the table' between authorities and user groups at the Regulatory Meetings. The Sami Parliament is formally consulted in the management of fisheries that are of historical importance to the indigenous Sami population.

In addition to formal and informal consultation on the running regulation of the fisheries, user-group organizations and authorities work together – e.g. in designated working groups – to tackle new and emerging challenges to the fishery, such as conflicts with the petroleum sector, marine litter, ghost fishing and other threats to the marine environment. User groups such as the Norwegian Fishermen's Association also participate in the annual negotiations conducted between Norway and other countries. Norwegian management authorities actively seek advice from user groups in preparation for all international consultations and negotiations, and user groups are included in the Norwegian delegation.

3.5.5 Enforcement and compliance

The Marine Resources Act places the overall responsibility for monitoring, control and surveillance in Norwegian fisheries with the Directorate of Fisheries. The 1997 Coast Guard Act provides the Coast Guard with the authority to conduct inspections in waters under Norwegian jurisdiction, within the fields covered by the Marine Resources Act and secondary legislation given with statutory authority in that Act. Hence, MCS in Norwegian fisheries is taken care of through shared responsibility and close collaboration between the Directorate of Fisheries, the Coast Guard and the regional sales organizations. The Directorate of Fisheries keeps track of how much fish is taken of the quotas of individual vessels, different vessel groups and other states at any given time, based on reports from the fishing fleet. Norwegian vessels are required to have electronic logbooks, or more specifically Electronic Reporting Systems (ERS). This implies that real-time data are forwarded to the Directorate of Fisheries, with the possibility to make corrections of data submitted each day within 12 hours into the next day. Norway has agreements in place with a number of other countries about exchange of ERS data, including the EU. The self-reported catch data can be checked at sales operations through the sales organizations, which have monopoly on first-hand sale of fish in Norway, and through physical checks performed by the sales organizations, the Directorate of Fisheries and the Coast Guard. The sales organizations are required to record all landings of fish in Norway and keep track of how much remains of a vessel's quota at any given time, on the basis of the landings data. This information is compared to the figures provided by the vessels to the Directorate of Fisheries through the electronic logbook. The value of any catch delivered above a vessel's quota is retained by the sales organization and used for control purposes. The sales organizations have their own inspectors who carry out physical controls of landings. They check, among other things, weighing equipment, quantity and size distribution of the catch, the quality of the fish and documentation. The Directorate has seven regional offices along the coast, staffed with inspectors that carry out independent physical control of the fish at the point of landing, including total volume, species and fish size. All landings have to be reported six hours in advance in order to give the inspectors the possibility to check the landed catch. The landed volumes are compared to the volumes reported to the Directorate through the logbooks. Both landing and at-sea control is conducted using a risk-based framework aimed at utilizing resources to optimize compliance at any given moment.

There is an extensive exchange of information (e.g. inspection data) among the North East Atlantic states, bilaterally and multilaterally through the NEAFC control and enforcement scheme. As follows, there are a number of possibilities for enforcement authorities to physically check whether the data provided by fishers through self-reporting are correct. In addition, VMS data enables control of whether area restrictions are observed, among other things.



As mentioned above, the Coast Guard performs tasks on behalf of several ministries, but its most important field of work in practice is fishery inspections. Coast Guard inspectors board fishing vessels and control the catch (e.g. catch composition and fish size) and fishing gear (e.g. mesh size) on deck and the volume of fish in the holds. Using the established conversion factors for the relevant fish product, the inspectors calculate the volume of the fish in round weight and compare this with the catches reported to the Directorate through the logbooks. Hence, there are a number of possibilities for enforcement authorities to physically check whether the data provided by fishers through self-reporting are indeed correct. In addition, VMS data enables control of whether area restrictions are observed, among other things.

Intentional or negligent violations are punished with fines or prison up to one year, while infringements committed with gross intent or negligence may be punished with prison up to six years. In the judgment of the seriousness of the infringement, the economic gain of the violation, among other things, is to be taken into consideration. Alternatively, catch, gear, vessels or other properties can be confiscated. The Norwegian enforcement agencies use a graduated sanctioning system, with sanctions ranging from oral warnings, written warnings and administrative fines to formal prosecution. If the fishers do not accept the fines issued by the enforcement or prosecution authority, the case goes to court. The decision of a lower-level court can then be appealed to higher-level courts.

Enforcement authorities report the level of compliance in the fishery to be high. In 2016, the Coast Guard carried out 1599 inspections at sea. 74 inspections (4.6 %) resulted in a fine or prosecution. The Directorate of Fisheries performed 2549 inspections in 2016. Infringements leading up to a fine or prosecution were found in 407 inspections (16 %).

As follows from the above, the fishery has in place a comprehensive system for monitoring, control and surveillance, including physical checks of fishing operations, catch and gear, as well as a fine-meshed sanctioning system. In addition to these coercive compliance mechanisms, various forms of norm-, legitimacy- and communication-related mechanisms have also proved effective to deliver compliance in Norwegian fisheries. First, there is a degree of social control in the small coastal communities from which the fishery takes place, and the high level of user-group involvement (see SI section 3.5.4) may provide regulations with a degree of legitimacy that increases fishermen's inclination to comply with them. The same applies to the relationship between fishermen and enforcement officers, which is reported to be good. Inspectors are trained to approach the fishermen in as forthcoming a manner as possible and perceive themselves as having a guidance-providing and not only a policing role towards the fishing fleet.

3.5.6 Review of the management system

There are mechanisms in place to evaluate key parts of the management system. At the Regulatory Meetings that take place twice a year, management authorities receive feedback on management practices from the industry and other interested stakeholders, including NGOs. The scientific research component of the fisheries management system is reviewed in ICES reports and advice. The enforcement component is subject to continuous evaluation at meetings between the various bodies involved in enforcement activities, where priorities are hammered out on the basis of risk-based monitoring of past experience. The international side to Norwegian fisheries management system is reviewed by the Parliament upon submission by the Government (through the Ministry of Trade, Industry and Fisheries) of annual reports on the agreements concluded with other states within the fisheries sector. The Office of the Auditor General conducts annual reviews of the financial performance of the fishery management system.

The Office of the Auditor General regularly carries out holistic reviews of different sectors of the Norwegian bureaucracy (so-called 'management audits', as opposed to the more traditional financial audits). Such a review of the fisheries management system was undertaken in 2003–2004. At the initiative of the Russian Auditor General, a parallel audit of the Norwegian and Russian management systems for the Barents Sea fisheries was carried out in 2006–2007 and updated in 2011.

4 EVALUATION PROCEDURE

4.1 Harmonised Fishery Assessment

4.1.1 Overlapping fisheries

The fishery overlaps with a number of other MSC certified fisheries, in terms of the target species (P1), habitats (P2) and the fisheries management framework (P3).

The assessment team therefore carried out harmonisation with the MSC fisheries listed in Table 26

Table 26 Overlapping fisheries

Fishery	Gear	Geographical area	Assessment status
Arkhangelsk Trawl fleet Norwegian and Barents Seas saithe	Demersal trawl	FAO 27, ICES Ia, Ib, IIa, IIb	Certified January 2016 Expedited P1 assessment started 11 January 2017
Barents Sea cod, haddock, saithe (Ocean Trawlers)	Demersal otter trawl	FAO 27, ICES I & II	Re-certified September 2016
Faroe Islands and Iceland North East Arctic cod, haddock and saithe	Demersal rock-hopper trawl	FAO 27, ICES I & II	Re-certified August 2017
Greenland cod, haddock and saithe trawl	Demersal trawl	FAO 27, ICES I & II	Certified May 2015, In re-assessment
UK Fisheries/DFFU/Dogger Bank Northeast Arctic cod, haddock, saithe	Bottom trawl	FAO 27, ICES I & IIa & b	Re-certified Nov 2017
UK Fisheries Ltd, DFFU, Doggerbank saithe Fishery		FAO 27, ICES I & IIa & b	April 2016

4.1.2 Harmonisation activities

A comparison of the scores between the assessment and the overlapping fisheries is provided in Table 27.

Conclusion P1 and P3: This fishery harmonised with the fisheries listed in Table 26. The comparison indicates that despite small differences in scoring, these all occur within the SG80 – 100 range, indicating no material difference in outcomes. This is in line with the following MSC guidance on harmonisation: scores also need not be exactly the same between different teams, so long as any conditions are generated by the same scoring issues and scoring elements within harmonised PIs, and the same outcome (pass/fail) is achieved. (from MSC Interpretations Log, extracted 3rd April 2017).

Conclusion P2: The factors mentioned during the March 2016 harmonisation discussion would appear to account for most differences. Results of this harmonisation discussion are presented in APPENDIX 3 HARMONISATION. It was concluded that different fisheries may have different outcomes for the scoring of the habitat PIs (2.4) based on various factors:

- Differences in target species (saithe fished further south, cod and haddock intermediate latitudes and prawn furthest north)
- Differences in information on habitats available about the 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 and type of vessels in the fleet (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 – whether they continuously fish over the same areas vs. widely dispersed.

The assessment team attempted to harmonise with pre-existing scores as much possible, taking into account the management regimes, fleet sizes, fishing footprints and different ranges of management measures implemented at company level.

Table 27 Harmonisation of scores

Component	PI No.	Performance Indicator (PI)	Norway NEA saithe	UK Fisheries Nov 17	Faroe Islands 2017	Barents sea 2016	UK Doggerbank April 16	Arkhangelsk 2016	Greenland 2015
Outcome	1.1.1	Stock status	100	100	100	90	100	100	90
	1.1.2	Reference points	100	90	100	90	90	90	90
	1.1.3	Stock rebuilding							
Management	1.2.1	Harvest strategy	100	100	100	85	100	100	95
	1.2.2	Harvest control rules & tools	90	80	100	80	90	90	100
	1.2.3	Information & monitoring	100	90	90	90	90	90	90
	1.2.4	Assessment of stock status	100	95	95	95	95	95	90
Retained species	2.1.1	Outcome	75	90	80	85	80	80	85
	2.1.2	Management	75	90	100	95	80	90	90
	2.1.3	Information	90	90	95	80	90	80	90
Bycatch species	2.2.1	Outcome	80	80	80	80	80	80	85
	2.2.2	Management	95	85	95	95	90	80	90
	2.2.3	Information	85	80	80	80	80	80	90
ETP species	2.3.1	Outcome	75	85	80	95	95	75	85
	2.3.2	Management	85	75	80	80	80	75	85
	2.3.3	Information	85	65	80	85	80	75	80
Habitats	2.4.1	Outcome	80	70	80	80	80	80	80
	2.4.2	Management	90	60	80	85	80	60	80
	2.4.3	Information	85	75	80	90	80	75	75
Ecosystem	2.5.1	Outcome	80	90	100	90	100	90	100
	2.5.2	Management	100	100	90	80	95	85	90
	2.5.3	Information	95	96	100	85	100	85	95
Governance and policy	3.1.1	Legal & customary framework	100	85	100	100	95	100	95
	3.1.2	Consultation, roles & responsibilities	100	85	100	100	95	100	85
	3.1.3	Long term objectives	100	100	100	100	100	100	90
	3.1.4	Incentives for sustainable fishing	100	80	100	90	90	90	80
Fishery specific management system	3.2.1	Fishery specific objectives	100	90	90	90	90	90	90
	3.2.2	Decision making processes	100	85	85	85	85	85	85
	3.2.3	Compliance & enforcement	100	100	100	100	100	100	100
	3.2.4	Research plan	80	90	80	90	80	90	90
	3.2.5	Management performance evaluation	80	90	80	80	90	90	90

4.1.3 Harmonisation outcomes

The low scores on retained species are due to the catch of coastal cod and the assessment team expects that only Norwegian coastal vessels catch Norwegian coastal cod. Coastal cod only affects Norwegian coastal vessels scores, data from IMR reference fleet gave high number of interactions with ETP species, habitats are generally well managed in Norway's EEZ, plus OSPAR does not consider seapens to be vulnerable North of 62°N. Ecosystem and bycatch scores are more or less similar.

As regards ETP species, the low scores are based on the detailed information provided by IMR Norwegian reference fleet, which gave higher numbers of interactions than expected. The assessment team gave lower scores than 80 to those gears either catching many different ETP species (gillnets and hooks and lines) or catching redfish (demersal trawlers). Management on ETP species depend on each country and also if the UoA covers one single country or different countries and regulations.

As regards habitats, generally speaking they are very well known (2.4.3) and managed (2.4.2). UK has many MPA without designated management measures, plus many seapens considered vulnerable (by OSPAR) in areas south 62°N but which apparently are in a healthier status northern of 62°North. For fisheries in the Barents Sea these generally include the NEAFC international waters of the loophole, where management measures are poorer.

4.2 Previous assessments

4.2.1 Full Assessment

The North East Arctic saithe fishery was first assessed and certified in June 2008. The full assessment was based on an assessment tree defined by the responsible CAB and had 3 conditions. All conditions from the full assessment were fully met (Table 28)

Table 28 Summary of previous assessment conditions

Condition	Year closed	Justification
Condition 1: uncertainties in assessment relating to estimation of recruitment and the effect of migration in and out of the stock	2010	
Condition 2: need for more detailed data on the by-catch of all species and a need for sampling programmes to estimate consequences on the stock and ecosystem	CLOSED	Norwegian legislation now requires that all fish species caught are recorded and landed, and all bird and mammal interactions should also be recorded. Although the system is not yet fully operational, it will contribute to meeting the aims of this condition. Also, IMR observers embarked on reference-fleet vessels record any occurrence of marine mammal (ETP) by-catch and henceforth will also record bird (ETP) by-catch. No specific problems relating to retained or by-catch species have been identified. The client is on schedule to meet the obligations of this condition
Condition 3: promotion of rebuilding of the North Sea cod stock through separate recordings of all catches of cod in saithe-directed fisheries, and evaluation in terms of its contribution to effects on cod stocks	CLOSED	Given that Norwegian North Sea cod by-catch are included within the TACs for the saithe stock, and hence included within the assessment and management process, adherence with the overall TACs set should lead to a recovery of the stock. Thus, the client fleet is meeting the requirements of this condition through compliance with current legislation and regulations and supporting IMR data-gathering initiatives.

Condition	Year closed	Justification
Condition 4: an assessment of potential effect of saithe directed fishing within the coral protection areas and identification and implementation of appropriate management measures to prevent adverse effects if found to be significant	CLOSED	DoF and IMR (pers. comm.) acknowledge the support that NFVOA is giving to support the MAREANO programme and its efforts to safeguard coral reefs and other sensitive marine habitats. The client is complying fully with the terms of Condition 4.

4.2.2 First Re-assessment

The first re-assessment for the North East Arctic saithe fishery was announced on 18th July 2012. Site visits were performed by the certification body (here DNV GL) and the assessment team and consultations were done with interested stakeholders in September 2012. The performance indicators and the pertaining scoring systems were evaluated, and it was judged that the fishery continued to meet the requirements for MSC certification. The assessment team used the default assessment tree as defined in the MSC Certification Requirements v1.2 without any modifications. The principle level scores from the first re-assessment are given in Table 29. The fishery achieved a score of below 80 against 1 scoring indicator for the North Sea saithe harvested by jiggers & longliners. The assessment team set a condition for continuing certification.

Table 29 Principle Level Scores -First re-assessment

Principle	Danish seine	Trawl	Purse seine	Jigging & Longline	Others
Principle 1 – Target Species	91,3	91,3	91,3	91,3	91,3
Principle 2 – Ecosystem	90	88,7	93	90,7	90
Principle 3 – Management System	98	98	98	98	98

The condition from the first re-assessment was fully met (Table 30)

Table 30 Summary of assessment conditions for the First Re- Assessment

Condition	PI(s)	Year closed	Justification
1. The client should develop a sampling programme to deliver sufficient 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 ling (Molva molva).	2.1.3	2016	This condition has essentially been fulfilled. With the revision to the CPUE database for the longline fleet over 2015, progress on this new standardized CPUE and large improvements in the ICES InterCatch database, as the last surveillance states “there is an effective strategy in place to manage ling and tusk”. It is now considered that SG 80 b (Information is sufficient to estimate outcome status with respect to biologically based limits) for ling and tusk is now met and the condition should be closed.

4.3 Assessment Methodologies

Table 31 Assessment methodologies

Standard	MSC Fishery Certification Requirements and Guidance version 2.0.
Report template	MSC Full Assessment Reporting Template v2.0
Assessment tree	Default assessment tree v1.3

4.3.1 The MSC fisheries standard

The MSC fisheries standard sets out requirements that a fishery must meet to enable it to claim that its fish come from a well-managed and sustainable source. The MSC standard applies to wild-capture fisheries that meet the scope requirements as confirmed in section 3.1.

The MSC fisheries standard comprises three core principles:

Principle 1: Sustainable target fish stocks

A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery.

Principle 2: Environmental impact of fishing

Fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends.

Principle 3: Effective management

The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable.

4.3.2 The assessment tree structure

The default tree structure is divided into four main levels for the purposes of scoring, as summarised below and illustrated in Figure 23:

- Principle: The Principles represent the overarching basis for the assessment tree
- Component: A high level sub-division of the Principle
- Performance Indicator (PI): A further sub-division of the Principle
- Scoring Issue (SI): A sub-division of the PI into related but different topics. Each PI has one or more scoring issues against which the fishery is assessed at the SG 60, 80, and 100 levels.

The detailed assessment tree used in this assessment is included in Appendix 1.

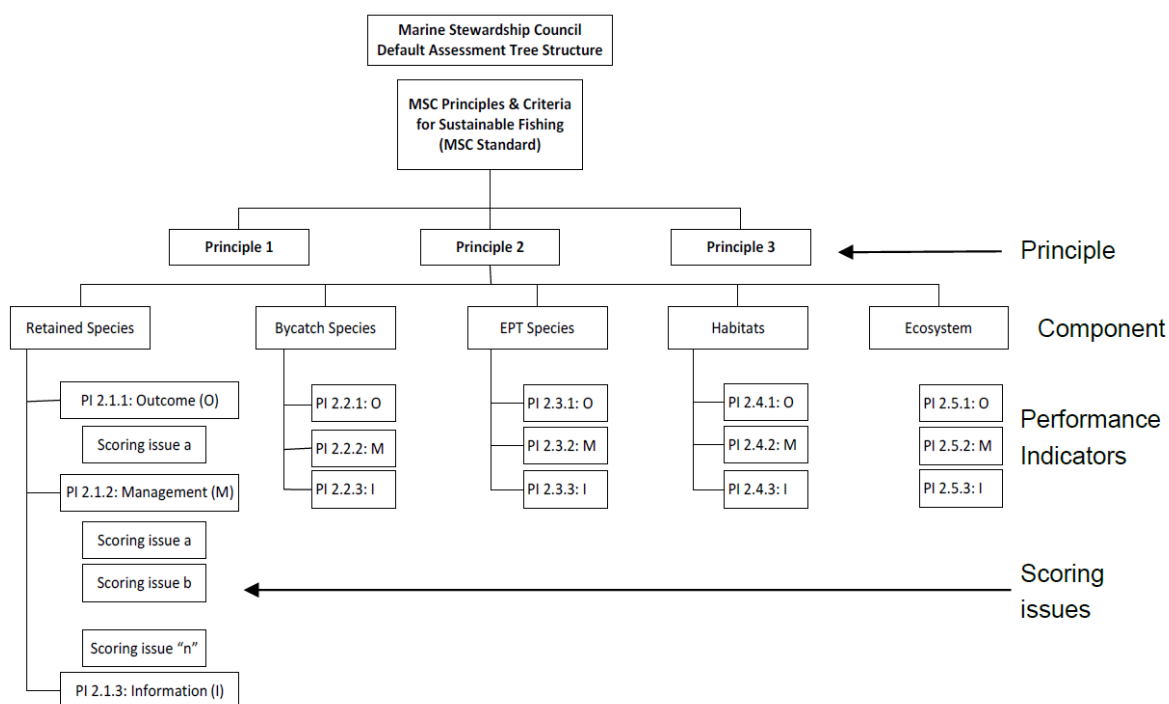


Figure 23 The assessment tree structure

4.4 Evaluation Processes and Techniques

The site visits for the second re-assessment of the North East Arctic saithe fishery were performed by the CAB, DNV GL, and the assessment team and consultations were done with interested stakeholders. The performance indicators and the pertaining scoring systems were evaluated, and it was judged if the fishery meets the requirements for MSC certification.

In order to fulfil the requirements for certification the following minimum scores are required:

- The fishery must obtain a score of 80 or more for each of the three MSC Principles, based on the weighted aggregate scores for all Performance Indicators under each Criterion in each Principle.
- The fishery must obtain a score of 60 or more for each Performance Indicator under each Criterion in each Principle.

Even though a fishery fulfils the criteria for certification, there may still be some important potential risks to future sustainability that are revealed during assessment. These are performance indicators that score less than 80, but more than 60. In order to be granted a MSC fishery certificate the client must agree to further improvements to raise the score to 80. DNV GL and the assessment team has set a timescale for the fishery to improve the relevant areas, so that the certification process can continue.

Default performance indicators and the scorings allocated in the evaluation are enclosed in the section 6.2.

4.4.1 Site Visits

Relevant stakeholders were visited in September 2017 as outlined in Table 32. The aim of the site visit was to gather information about the different fisheries by the same client.

These were:

1. **Norway NEA saithe fishery:** 4th Surveillance and **Re-assessment**
2. Norway NEA cod fishery: 2nd Surveillance assessment
3. Norway NEA haddock fishery. 2nd Surveillance assessment
4. Norway North Sea saithe fishery: 4th Surveillance and Re-assessment (with additional species cod, haddock and hake; are IIIa and gear pots.

Information gathered is presented in this report and in the enclosed scoring tables. Apart from the site visit meetings, no other field activities, such as visits to vessels, landing sites or processing plants, were undertaken.

Table 32 Itinerary of field activities

Date	Main activities and locations inspected	Names of individuals contacted during field inspections
19.09.2017	<p>DOF, Bergen: Function, role and responsibility, Harvest strategy for the fisheries, including regulations limiting fishing effort and harvest control rules, short-term and long-term management objectives for the fisheries, consultation and decision-making process, mechanisms for resolution of legal disputes, regulations for the fisheries in the relevant geographical area, control, surveillance and monitoring routines/regulations applied to the fisheries in the relevant geographical area, strategy for minimising or eliminating ETP by-catch, strategy and plans for protection of sensitive habitats, fishermen's compliance with laws and regulations, significant discrepancies found at landing control for the fisheries in the last year and VMS data for the fisheries.</p> <p>IMR, Bergen: Sampling programmes/level of sampling and surveys including observer programmes, integration of national data collection programmes and stock assessments with ICES assessments, stock status, stock structure and recruitment, catch data for the most recent fishing season, monitoring programmes for bycatch, discard and ETP species, level of slipping/ discards, impact of the fishery on marine habitats and the ecosystem and research strategy or programmes for the fishery.</p>	<p>Directorate of Fisheries, Bergen</p> <p>-Modulf Overvik</p> <p>-Gunnstein Bakke</p> <p>Institute of Marine Research</p> <p>-Bjarte Bogstad</p> <p>- Arvid Staby</p> <p>Client Representatives</p> <p>-Tor B Larsen</p>

20.09.2017	Ministry of Trade, Industry and Fisheries, Oslo: Function, role and responsibility, harvest strategy for the fisheries, including regulations limiting fishing effort and harvest control rules, short-term and long-term management objectives for the fisheries, consultation and decision-making process for the stocks of the fisheries, mechanisms for resolution of legal disputes, regulations for fisheries in the relevant geographical area, control, surveillance and monitoring routines/ regulations applied to the fisheries in the relevant geographical area, level of slipping/discards, strategy for minimising or eliminating ETP by-catch, strategy and plans for protection of sensitive habitats, fishermen's compliance with laws and regulations, significant discrepancies found at landing control for the fisheries in the last year, catch data for the most recent fishing season, observed fishing pattern (gear used, fishing area, number of boats, fishing season), VMS data for the fisheries and research strategy or programmes for the fisheries	Ministry of Trade, Industry and Fisheries - Geir Ervik - Mari Didriksen - Rune Dragset
20.09.2017	DNV GL office at Høvik, Oslo: Basic info about the company, ownership or organizational structure, roles and responsibilities in the MSC Fishery certification process, vessel/certificate member list, fishing operations, fishing season, allocation of fishing days, fishing areas and gear used, catch and effort data, impact on ecosystem, by-catch of fish species, by-catch of marine mammals, birds, ETP species, bycatch of fish and shellfish species, marine mammals, ETP species and birds, discarding practices, overlap of the fishery with sensitive habitats and closed areas, compliance with rules and regulations, control, surveillance and monitoring routines, disputes, sanctions and penalties, traceability system on board and at landing, labelling of products/changes in labelling of products, landing sites, first point of landing, first point of sale, main products/change in product range, main markets and of progress against conditions and recommendations	Client: Norges Fiskarlag - Vidar Naalsund, SUROFI - August Fjeldskår, Fisherman - Tor B. Larsen

4.4.2 Consultations

The assessment team met with relevant stakeholders as outlined in Table 32 Information gathered is presented in this report and in the scoring tables.

4.4.2.1 Site visit consultations

The assessment team met with relevant stakeholders as outlined in Table 32 Information gathered is presented in this report and in the enclosed scoring tables.

4.4.2.2 Process consultations

Several stakeholders have been identified and contacted during the assessment of the Norges Fiskarlag Norway North East Arctic saithe fishery. Relevant stakeholders were interviewed in September 2017 as outlined in Table 33.

Table 33 Process announcements and consultations

Consultation subject	Consultation date	Consultation channels
Announcement of 2 nd re-assessment	17.08.2017	https://www.msc.org
Confirmation of assessment team	03.10.2017	https://www.msc.org
Notification of assessment timeline	17.08.2017	https://www.msc.org
Announcement of assessment tree	17.08.2017	https://www.msc.org
Advertisement of certification and Invitation to contribute to assessment process	20.08.2017	Email distribution
Stakeholder notification: Site visit scheduled	20.08.2017	Email distribution

Stakeholder visits	19-20 September 2017	
Proposed peer reviewers	03.10.2017	https://www.msc.org
Peer review confirmation	16.10.2017	https://www.msc.org
Public comment draft report	06.03.2018	https://www.msc.org
Final report	07.05.2018	https://www.msc.org
Public certification report	11.06.2018	https://www.msc.org

4.4.3 Evaluation Techniques

4.4.3.1 Announcements

The assessment was announced at MSC.org to reach international stakeholders and e-mails were used to reach local stakeholders. At the beginning of the re-assessment, the CAB compiled a stakeholder list based on a guidance from the client and existing stakeholder list from the earlier assessments and subsequent surveillances.

The list covered 70 stakeholders and has been updated and used at every stage of the consultation process undertaken for this fishery.

4.4.3.2 Methodology used

The assessment team decided to use the default assessment tree as defined in the MSC Certification Requirements v1.3 without any modifications. The MSC Full Assessment Reporting Template v2.0 is used for this report.

4.4.3.3 Scoring process

After all relevant information, collected during the site visits of 19th and 20th September 2017, was compiled and analysed, the assessment team scored the Unit of Assessment against the Performance Indicator Scoring Guideposts (PISGs) in the assessment tree. The team discussed evidence on the 21st and 22nd September 2017 at the DNV GL offices in Oslo, and weighed up the balance of evidence and used their judgement to agree on a score following MSC FCR processes and based on consensus. Some information was received from the relevant stakeholders during the scoring meeting and some after the meeting. The team evaluated all the information and agreed on the final scores through email communication.

Individual Performance indicators are scored. Scores for individual PIs are assigned in increments of five points. Any divisions of less than five points are justified. Scores for each of the three Principles are reported to the nearest one decimal.

- If one or more of the scoring issues fails to meet the scoring guidepost at the 60 level, the UoA fails and no further scoring is provided for the Performance indicator.
- Where all of the SG60 scoring issues are met, the PI achieves at least a 60 score, and the team assesses each of the scoring issues at the SG80 level.
- Where one or more of the SG80 scoring issues is not met, the PI is given an intermediate score reflecting the overall performance against the different SG80 scoring issues, and one or more condition(s) are assigned to the PI.
- Where all of the 60 scoring issues and all of the 80 issues are met, the PI achieves at least an 80 score, and the team assesses each of the scoring issues at the SG100 level.

- Where one or more of the SG100 scoring issues is not met, the PI is given an intermediate score reflecting the overall performance against the different SG100 scoring issues.
- Where all of the SG60, SG80 and SG100 scoring issues are met, the PI achieves a 100 score.

In Principle 1 and 2 the scoring may include PI with multiple scoring elements. Scoring is then applied to the individual scoring elements and the overall score for the PI is determined based on the score of the different scoring elements. Scoring elements considered in this assessment are listed in Table 34.

In order to fulfil the requirements for certification the following minimum scores are required:

- The fishery must obtain a score of 80 or more for each of the three MSC Principles, based on the weighted aggregate scores for all Performance Indicators under each Principle.
- The fishery must obtain a score of 60 or more for each individual scoring issue under each Performance Indicator in each Principle.

The final scores are based on group consensus within the assessment team. The assessment team will recommend certification where the weighted average score is 80 or more for all the three Principles, and where all individual scoring issues are met at the SG60 level.

Conditions are set where the fishery fails to achieve a score of 80 to any Performance Indicators. Conditions with milestones are set to result in improved performance to at least the 80 level within a period set by the assessment team. The client is required to provide a client action plan to be accepted by the assessment team. The client action plan shall detail:

- how conditions and milestones will be addressed
- who will address the conditions
- the specified time period within which the conditions and milestones will be addressed
- how the action(s) is expected to improve the performance of the UoA
- how the CAB will assess outcomes and milestones in each subsequent surveillance or assessment
- how progress to meeting conditions will be shown to CABs.

Table 34 Scoring elements

Component	Scoring elements	Main / not main	Justification for main/not main [primary and secondary species]	Data-deficient or not
Retained	Cod	Main	More than 5% of the catch composition	No
Retained	Haddock	Main	More than 5% of the catch composition	No
Retained	Greenland halibut	Not main	Less than 5% of the catch composition	No
Retained	Tusk	Not main	Less than 5% of the catch composition	No
Retained	Ling	Not main	Less than 5% of the catch composition	No
Retained	Monkfish	Not main	Less than 5% of the catch composition	No
Retained	Beaked redfish	Not main	Less than 5% of the catch composition	No
ETP	Golden redfish	N/A	N/A	No



4.4.3.4 Risk Based Framework

The RBF methodology has not been used in this re-assessment.

5 TRACEABILITY

5.1 Eligibility Date

Products from the certified fishery eligible to be sold as MSC certified or bear the MSC ecolabel from 16th June 2018.

The eligibility date is the date of the re-certification of the fishery.

5.2 Traceability within the Fishery

As described in section 3.5, monitoring, control and surveillance is the shared responsibility and is done with close collaboration between the Directorate of Fisheries, the Coast Guard, the regional sales organizations and the EU counterparts. Norwegian Coast Guard and EU inspectors board fishing vessels and control the catch (e.g. catch composition and fish size) and fishing gear (e.g. mesh size) on deck and the volume of fish in the holds. Norwegian vessels are required to have electronic logbooks, where real-time catch data are forwarded to the Directorate of Fisheries.

All vessels are monitored by the Directorate of Fisheries through VMS data. The client has access to tracking data, and organizational and peer pressure in addition to official control contributes to minimizing the possibility of fishing outside the unit of certification.

The Directorate of Fisheries keeps track of how much fish is taken of the quotas of different vessels, vessel groups or other states at any given time, based on reports from the fishing fleet. The self-reported catch data can be checked at sales operations through the sales organizations, which have monopoly on first-hand sale of fish in Norway, the Danish auction places, and through physical checks performed by the sales organizations, the Directorate of Fisheries and the Coast Guard.

Catches are recorded using an “app” on smartphones, which also provide fishing location in a similar way to VMS on the larger vessels. The implementation of this is in compliance with the new regulation introduced in 2015. Smaller vessels continue to provide notification of landing location and landing company, two hours prior to landing and also provide sales notes following landing. Catches are landed in mainly in Norway the main market being producers and traders in Norway.

The sales organizations are required to record all landings of fish in Norway. This information is compared to the figures provided by the vessels to the Directorate of Fisheries through the electronic logbook. Physical controls of landings are carried out both by inspectors from the sales organizations and the Directorate of Fisheries. The sales organizations in the scope of these certifications are:

- Norges Råfisklag,
- Surofi,
- Vest-Norges Fiskesalgsag
- Rogaland Fiskesalgsag
- Skagerrakfisk

Catch certificate is mandatory for export to EU. The catch certificate accompanies the delivery note from the vessel. Buyers can access and extract catch certificates electronically. Fish is mainly sold through auctions. All transactions are done through the client, logged and publicly available. All relevant information on catch is provided to the client on a pre-delivery note. Vessels complete the pre-filled delivery note and set correct quantity and size distribution in accordance with requirements from DoF. After landing, the delivery note is signed electronically and sent to the

client for invoicing and settlement to fishermen. Purchaser name is included on the delivery note. The MSC Fishery certificate number is provided on invoices, and invoices are issued through the sales organizations. The fish changes ownership from vessel to processing plant, most often at the landing sites.

As regards the bycatch of saithe in the blue whiting fishery in ICES sub area I, II and IV:

-There is a 100 % overlap between "saithe industry trawl bycatch UoC" and the saithe certification UoC. According to Norges Sildelaget all saithe bycatch landed for consumption is from ICES sub-areas IIA1, IIA2, IVA and IVB. This is the area of operations where the targeted bycatch fishery takes place, so the risk of other fish entering chain of custody is negligible – see Table 35 & Table 36 below.

-The sales organization always have catch area as one of the variables for putting "MSC eligible" on the sales notes in their computer systems. Therefore; should there be saithe landed from the other UOC area for the blue whiting fishery e.g. ICES XI, it would never be identified as MSC eligible raw material in any sales documents.

Table 35 Bycatch of saithe in trawler vessels:

ICES sub areas	Quantity in kg.
IIa1	2.205
IIa2	25.535
IIIa	0
IVa	62.860
IVb	324
Vb1b	0
Vb2	0
VIa	0
VIb1	0
VIb2	0
VIIc1	0
VIIc2	0
VIIk1	0
VIIk2	0

Table 36 By catch of saithe only in trawler vessels with industry trawl licenses:

ICES sub areas	Quantity in kg.
IIa1	2.205
IIa2	22.047
IIIa	0
IVa	62.867
IVb	314
Vb1b	0
Vb2	0
VIa	0
VIb1	0
VIb2	0
VIIc1	0
VIIc2	0

VIIk1	0
VIIk2	0

At sea processing and trans-shipping

There is no trans-shipping in the Norway North East Arctic saithe fisheries. At-sea processing varies and is dependent on vessel. Certified products produced on-board vessels are: Live, fresh, frozen, salted and dried fish; filets and by-products (bellyflaps, heads, roe, liver and trimmings).

Traceability of product that goes into the production of fish oil and fishmeal cannot be met through the fishery certificate. Therefore, separate CoC certification is needed for those vessels that produce fish oil and fishmeal and wish to sell this as MSC certified products.

Points of landing

Landing sites are mainly in Norway, with inspections by DoF and sales organization as described above.

For products landed outside Norway, landing information is transmitted to Norwegian Authorities who cooperate with national control bodies at points of landing to ensure correct information.

5.2.1 Traceability risk factors

Table 37 Traceability risk 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	Low risk. The certificate covers the entire Norwegian fleet fishing for these species within the UoC.
Potential for vessels from the UoC to fish outside the UoC or in different geographical areas (on the same trips or different trips)	Low risk. The fishing grounds where the fishery takes place is Norwegian EEZ in ICES subareas 1 and 2. All Norwegian vessels are obliged to carry VMS on board and to log in the electronic logbook when the fishing operation begins. This data is monitored by the Directorate of Fisheries, who can distinguish not only where the vessels are but also if the vessels are fishing or not.
Potential for vessels outside of the UoC or client group fishing the same stock	High risk. The saithe stocks in the UoA are targeted by different fleets but within the agreed quotas. Therefore, the risk for vessels outside the client group fishing the same stock is high.
Risks of mixing between certified and non-certified catch during storage, transport, or handling activities (including transport at sea and on land, points of landing, and sales at auction)	Low risk. All fishing vessels are required to keep logbooks for the recording of fishing by species, gear and area. Sampling is done at the landing ports once the fish is landed. Landing ports of the fishery are mainly in Norway. Robustness of enforcement systems is expected to be high. The risk of mixing between certified and non-certified catch during storage, transport and handling activities is low.

Risks of mixing between certified and non-certified catch during processing activities (at-sea and/or before subsequent Chain of Custody)	Low risk. All Norwegian vessels targeting saithe pump the catch on-board into reception tanks. The risk of mixing with non-certified catch is non-existing at that moment as the certificate covers all Norwegian vessels fishing in the UoA. Mixture with non-certified catch would only occur if the vessel decided to travel outside the UoA waters but this is recorded in the logbooks/VMS and the catch must be stored and reported as non-certified.
Risks of mixing between certified and non-certified catch during transshipment	Low risk. Transshipment does not take place in this fishery This is monitored by the Directorate of Fisheries through the VMS.
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	None identified.

5.3 Eligibility to Enter Further Chains of Custody

The resulting products of on-board processing, landed by Norwegian vessels involved in these fisheries, recorded by the Directorate of Fisheries and the sales organizations, and sold through or by approval from the sales organizations are eligible to enter further Chain of Custody. This includes the saithe bycatch in the blue whiting fishery in ICES subareas I and II (certified as a scope extension to the Norway Spring spawning herring fishery, certificate nr. MSC-F-61388 issued 09.01.2018). The list of vessels is updated at every assessment and is given in appendix 7 to this report. The scope of the MSC Fishery certification is up to the point of landing and Chain of Custody commences from the point of landing and sale.

The products included in the scope of certification are produced on-board the vessels and are: live, fresh, frozen, salted and dried fish; filets and by-products (bellyflaps, heads, tongues, cheeks, roe, liver and trimmings).

Traceability of product that goes into the production of fish oil and fishmeal cannot be met through the fishery certificate. Therefore, separate CoC certification is needed for those vessels that produce fish oil and fishmeal and wish to sell this into further chains of custody as MSC.

Table 38 Eligibility to enter further chains of custody

Conclusion and determination	The products included in the scope of certification are produced on-board the vessels and are: live, fresh, frozen, salted and dried fish; filets and by-products (bellyflaps, heads, tongues, cheeks, roe, liver and trimmings)
List of parties, or category of parties, eligible to use the fishery certificate and sell product as MSC certified	Norwegian vessels with valid licenses to fish saithe in Norwegian EEZ in ICES subareas 1 and 2. Annex 6 shows the list of vessels as of September 2017. An update of the list of vessels is available at the Directorate of Fisheries upon request.
Point of intended change of ownership of product	Landing ports or fish auctions (sales organizations) where registration of landings is carried out and weights registered.

List of eligible landing points (if relevant)	Landing points and fish auctions (sales organizations)
Point from which subsequent Chain of Custody is required	The scope of the MSC Fishery certification is up to the point of landing and Chain of Custody commences from the point of landing and sale.

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

Inseparable or practically inseparable stock is not involved in this assessment.

6 EVALUATION RESULTS

6.1 Principle Level Scores

Table 39 Final Principle scores for [species] [per gear if multiple gears]

Principle	Danish seine	Purse seine	Hooks & Lines	Gillnets	Demersal trawls
Principle 1 – Target Species	98.8	98.8	98.8	98.8	98.8
Principle 2 – Ecosystem	87.3	93.7	87.3	87.3	85
Principle 3 – Management System	96	96	96	96	96

6.2 Summary of PI Level Scores

Fishery Assessment Scoring Worksheet version 1 - effective November 14, 2011									
Norway North East Arctic saithe fishery Re-assessment 2017 (Assessment tree V1.3)									
Prin-ciple	Component	PI No.	Performance Indicator (PI)	Danish Seine	Purse seine	Hooks & Lines	Gillnets	Demersal Trawlers	
One	Outcome	1.1.1	Stock status	100					
		1.1.2	Reference points	100					
		1.1.3	Stock rebuilding	Not scored					
	Management	1.2.1	Harvest strategy	100					
		1.2.2	Harvest control rules & tools	90					
		1.2.3	Information & monitoring	100					
		1.2.4	Assessment of stock status	100					
Two	Retained species	2.1.1	Outcome	75	100	75			
		2.1.2	Management	75	100	75			
		2.1.3	Information	90	100	90			
	Bycatch species	2.2.1	Outcome	80					
		2.2.2	Management	95					
		2.2.3	Information	85					
	ETP species	2.3.1	Outcome	85		75			
		2.3.2	Management	90		85			
		2.3.3	Information	85					
	Habitats	2.4.1	Outcome	80	100			80	
		2.4.2	Management	90	95			90	
		2.4.3	Information	85	95			85	
	Ecosystem	2.5.1	Outcome	100		80			
		2.5.2	Management	100					
		2.5.3	Information	95					
Three	Governance and policy	3.1.1	Legal & customary framework	100					
		3.1.2	Consultation, roles & responsibilities	100					
		3.1.3	Long term objectives	100					
		3.1.4	Incentives for sustainable fishing	100					
	Fishery specific management system	3.2.1	Fishery specific objectives	100					
		3.2.2	Decision making processes	100					
		3.2.3	Compliance & enforcement	100					
		3.2.4	Research plan	80					
		3.2.5	Management performance evaluation	80					
		Overall weighted Principle-level scores							
		Principle 1 - Target species			98,8				
		Principle 2 - Ecosystem			87,3	93,7	87,3	87,3	85
		Principle 3 - Management			96				

6.3 Summary of Conditions

Table 40 Summary of Conditions

Condition number	Condition	Performance indicator	Related to previously raised condition?
1	By the 4 th surveillance audit client shall demonstrate that the NEA saithe fishery does not pose a risk of serious or irreversible harm to the coastal cod stock, and that it does not hinder its recovery.	2.1.1	N
2	By the 4 th surveillance audit the client shall demonstrate that there is some objective basis for confidence that the Norwegian coastal cod rebuilding plan will effectively contribute to the rebuilding of the coastal cod stock. (this condition relates to previous condition 3 (on the 1st assessment for saithe), which was related to the recovery of coastal cod. Coastal cod is subject to a rebuilding management plan since 2008, and, although by 2014 the stock appeared to have more or less recovered, the biomass of coastal cod decreased again in 2015 and the following years, that's why the condition was closed and why it is now set again.)	2.1.2	Y
3	By the 4 th surveillance audit the client shall demonstrate that the direct effects of the NEA saithe fishery (specifically with the hooks and lines, gillnets and demersal trawl UoCs) are highly unlikely to create unacceptable impacts to ETP species such as golden redfish.	2.3.1	N

There is also one recommendation for the NEA saithe fishery:

Table 41 Recommendation

PI 2.3.3.b	<p>PI 2.3.3: Relevant information is collected to support the management of fishery impacts on ETP species, including:</p> <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. <p>b. Accurate and verifiable information is available on the magnitude of all impacts, mortalities and injuries and the consequences for the status of ETP species.</p>
Recommendation 1	<p>Given the numerous interactions recorded by the reference fleet, it is recommended that all encounters with the different identified ETP species are comprehensively recorded in an electronic database by all vessels in the UoA.</p>



6.4 Determination, Formal Conclusion and Agreement

The Norway North East Arctic saithe fishery achieved a score of 80 or more for each of the three MSC Principles, and did not score under 60 for any of the set MSC criteria.

Based on the evaluation of the fishery presented in this report the assessment team recommends the certification of the Norway North East Arctic saithe fishery including the bycatch of saithe in ICES sub-area I and II in the Norway blue whiting fishery for the client Norges Fiskarlag.

As the fishery achieved a score of below 80 against 3 scoring indicators, the assessment team has set 3 conditions and 1 recommendation for the continued certification that the client is required to address. The conditions are applicable to improve performance to at least the 80 level within the period set by the assessment team.

FORMAL STATEMENT by the decision making entity:

The Technical Reviewer at DNV GL adheres to the recommendation of the assessment team and approves the certification of the Norway North East Arctic saithe for the client Norges Fiskarlag.

REFERENCES

- [Act 17 December 1976](#) relating to the establishment of the Economic zone of Norway.
- [Arctic Agreement](#)
- [Barents portal](#) website.
- Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals).
- Buhl-Mortensen, L., Ellingsen, K. E., Buhl-Mortensen, P., Skaar, K. L., and Gonzalez-Mirelis, G. Trawling disturbance on megabenthos and sediment in the Barents Sea: chronic effects on density, diversity, and composition. ICES Journal of Marine Science, doi:10.1093/icesjms/fsv200.
- Carmack, E., Barber, D., Christensen, J., Macdonald, R., Rudels, B. and Sakshaug, E. 2006. Climate variability and physical forcing of the food webs and the carbon budget on panarctic shelves. Progress in Oceanography, 71 (2-4): 145-181.
- CITES (Convention on International Trade in Endangered Species). Appendix I.
- [CoralFish project](#).
- Desprez, M. 2000. Physical and biological impact of marine aggregate extraction along the French coast of the Eastern English Channel: short and long-term post-dredging restoration. ICES Journal of Marine Science, 57: 1428-1438.
- Fangel, K., Aas, Ø., Bærum, K. M., Anker-Nilssen, T. & Christensen- Dalsgaard, S. 2015. Utilsiktet bifangst av sjøfugl i norske kystfiskerier med garn og line. - NINA Temahefte 64. 20 s.
- Gordon, Donald C. Jr., Ellen L.R. Kenchington, Kent D. Gilkinson, Gordon B.J. Fader, Gordon B.J. Fader, Cynthia Bourbonnais-Boyce, Kevin G. MacIsaac, David L. McKeown, Lea-Anne Henry and W. Peter Vass. Summary of the Western Bank otter trawling experiment (1997-1999): Effects on benthic habitat and communities. Can. Tech. Rep. Fish. Aquat. Sci. 2822: vii + 70 p. <http://www.dfo-mpo.gc.ca/Library/336797.pdf>
- Gullestad P., Blom G., Bakke G., and Bogstad, B. (2015). The "Discard Ban Package": Experiences in efforts to improve the exploitation patterns in Norwegian fisheries. Marine Policy 54 (2015) 1–9.
- Hiddink J.G., Jennings S., and Kaiser M.J (2006). Indicators of the Ecological Impact of Bottom-Trawl Disturbance on Seabed Communities. Ecosystems (2006) 9: 1190– 1199. <https://link.springer.com/content/pdf/10.1007%2Fs10021-005-0164-9.pdf>
- Hjøllø, S.S., Husea, G., Skogena, M.D., and Mellea, W. 2012. Modelling secondary production in the Norwegian Sea with a fully coupled physical/primary production/individual-based *Calanus finmarchicus* model system. Marine Biology Research April 2012; Volume 8 (5-6): Pages 508-526 <http://dx.doi.org/10.1080/17451000.2011.642805>.
- <https://kart.fiskeridir.no/fiskeri>
- <https://artsdatabanken.no/Rodliste>
- <http://www.ecolex.org/details/legislation/act-no-37-of-2008-relating-to-the-management-and-conservation-of-living-marine-resources-marine-living-resources-act-lex-faoc082017/>
- <http://www.ecolex.org/details/legislation/regulation-no-1475-on-the-ban-from-catch-of-sharks-in-2012-lex-faoc115522/>
- <http://www.fisheries.no/> (with fishing regulations)
- <http://www.fiskeridir.no/> (with management measures)
- <http://www.fiskeridir.no/English/Fisheries/Real-Time-Closure-RTC>
- <http://www.fiskeridir.no/Yrkesfiske/Dokumenter/Hoeringer/Hoering-om-fjordlinjer-og-redskapsbegrensninger>
- <http://www.ices.dk/community/groups/Pages/WGFTFB.aspx>
- <http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2010/Special%20Requests/Norway%20NCC%20plan.pdf>
- <http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/byc.eu.pdf>
- http://www.mareano.no/en/about_mareano/activities
- <https://www.sildelaget.no/> (with allocated quotas)
- https://www.researchgate.net/publication/259979122_Impact_of_bottom_trawling_on_benthic_communities_a_review
- ICES Advisory Committee on Ecosystems (ACE)
- ICES. 2005. Report of the Arctic Fisheries Working Group (AFWG), 19–28 April 2005, Murmansk, Russia. ICES CM 2005/ACFM:20. 564 pp.
- ICES. 2011. Report of the Arctic Fisheries Working Group (AFWG), 28 April–4 May 2011, Hamburg, Germany. ICES CM 2011/ACOM:05. 659 pp.

- ICES. 2014. 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. 2016. Advice basis. In Report of the ICES Advisory Committee, 2016. ICES Advice 2016, Book 1, Section 1.2.
- ICES 2016 Report of the Arctic Fisheries Working Group (AFWG). Section 1: General description of the Barents Sea Ecosystem.
- ICES 2016 Report from the WG on Integrated Assessment in the Barents Sea.
- ICES 2016 Report from the WG for Regional Ecosystem Description.
- ICES (2017) Advice Technical Guidelines
- ICES 2017 advice for anglerfish in subareas I and II
- ICES 2017 advice for beaked redfish in subareas I and II
- ICES 2017 advice for coastal cod in subareas I and II
- ICES 2017 advice for NEA cod in subareas I and II
- ICES 2017 advice for Greenland halibut in subareas I and II
- ICES 2017 advice for haddock in subareas I and II
- ICES 2017 advice for ling in subareas I and II
- ICES advice for spurdog in NEA.
<http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2016/2016/dgs-nea.pdf>
- ICES 2017 advice for tusk in subareas I and II
- ICES 2017 Ecosystem overview on the Barents Sea
- ICES 2017 Ecosystem overview on the Norwegian Sea
- ICES. 2017. Report of the Arctic Fisheries Working Group (AFWG), 19 April–25 April 2017, ICES HQ, Copenhagen. ICES CM 2017/ACOM:06. 486 pp.
- ICES. 2017. Saithe (*Pollachius virens*) in subareas 1 and 2 (Northeast Arctic). Advice on fishing opportunities, catch, and effort Arctic Ocean, Barents Sea, Faroes, Greenland Sea, Iceland Sea and Norwegian Sea Ecoregions ICES Advice June 2017/pok.27.1-2
- [IMR](#) Institute for Marine Research
- IMR reference fleet data north 62°N
- IMR: The Norwegian Sea ecosystem programme
http://www.imr.no/forskning/programmer/okosystem_norskehavet/en
- IMR: The Barents Sea ecosystem programme
http://www.imr.no/forskning/programmer/okosystem_barentshavet/en
- IUCN red list of endangered species
- Jakobsen T. and Ozhigin V.K. (2011) The Barents Sea: Ecosystem, resources, management: Half a century of Russian-Norwegian cooperation. Tapir academic Press
- Jørgensen, L. L., Planque, B., Thangstad, T. H., and Certain, G. 2015. Vulnerability of megabenthic species to trawling in the Barents Sea. – ICES Journal of Marine Science, doi: 10.1093/icesjms/fsv107.
- Kaiser, M. J., Clarke, K. R., Hinz, H., Austen, M. C. V., Somerfield, P. J., and Karakassis, I. 2006. Global analysis of response and recovery of benthic biota to fishing. Marine Ecology Progress Series, 311: 1 –14.
- Landing records.
- Lepland Aivo, Rybalko Aleksandr & Lepland Aave, 2014. Seabed Sediments of the Barents Sea. Geological Survey of Norway (Trondheim) and SEVMORGE (St. Petersburg).
- Lubin 2013 (from Denisenko S.G. and Zgurovsky, K.A. 2013. Impact of trawl fishery on benthic ecosystems of the Barents Sea and opportunities to reduce negative consequences. Murmansk. WWF. 2013. 55pp.)
- Mandelman, J.W., and M.A. Farrington. 2007a. The estimated short-term discard mortality of a trawled elasmobranch, the spiny dogfish (*Squalus acanthias*). Fisheries Research 83 (2007). 238–245.
- [MAREANO](#) Programme
- Meenakumari, B., Bhagirathan, U. and Pravin, P. Impact of Bottom Trawling on Benthic Communities: A Review. Fishery Technology 2008, Vol. 45(1) pp: 1 – 22.
- MSC FCR v1.3.
- NAMMCO [NASS 2015](#) surveys
- [NAMMCO](#) website (North Atlantic Marine Mammal Commission).
- Northridge, S. 1988. Marine mammals and fisheries: A study of conflicts with fishing gear in British waters. A report commissioned by Wildlife Link's Seals Group. 140 pp.

- Norwegian Ministry of the Environment 2009. Integrated management of the marine environment of the Norwegian Sea. Report No. 37 (2008-2009) to the Storting.
- [Norwecom.E2E](#) project.
- Norwegian Marine Resources Act
- [Norwegian red list](#) of endangered species
- Olsen, E., Gjøsæter, H., Røttingen, I., Dommasnes, A., Fossum, P., and Sandberg, P. 2007. The Norwegian ecosystem-based management plan for the Barents Sea. – ICES Journal of Marine Science, 64: 599–602.
- OSPAR Commission (www.ospar.org)
- Pitcher, C. R., Poiner, I. R., Hill, B. J., and Burridge, C. Y. 2000. Implications of the effects of trawling on sessile megazoobenthos on a tropical shelf in northeastern Australia. ICES Journal of Marine Research, 57: 1359–1368.
- Plagányi, É.E. 2007. Models for an Ecosystem Approach to Fisheries. FAO Fisheries Technical Paper No. 477. Rome, FAO. 2007. 108p. ISBN 978-92-5-105734-6.
- Regulation J- 187-2008: Regulation on the establishment of Marine Protected Areas around certain coral reefs areas.
- Regulation J-209-2011
- Regulation J-250-2013: Regulation on the protection of basking sharks, spurdogs, porbeagles and silky sharks
- [Regulation J-48-2016](#): Regulation on the protection of coral reefs.
- [Regulation J-267-2016](#): Utøvelsesforskriften (most recent per 24.01.2017 – contains main technical regulations for all fisheries). <http://www.fiskeridir.no/Yrkesfiske/Regelverk-og-reguleringer/J-meldinger/Gjeldende-J-meldinger/J-267-2016>
- Sainsbury, K. J., Campbell, R., Lindholm, R., and Whitelaw, A. W. 1997. Experimental management of an Australian multispecies fishery: Examining the possibility of trawl-induced habitat modification. In Global Trends: Fisheries Management, pp. 107–112. Ed. By E. K. Pikitch, D. D. Huppert, and M. P. Sissenwine. American Fisheries Society, Bethesda, MD.
- Skjoldal Hein Rune (2004) The Norwegian sea Ecosystem, Tapir academic Press
- Terziev, F.S. (Ed.). 1990. The Barents Sea. Hydrometeorology and Hydrochemistry of the Seas of the USSR. Vol. 1. No. 1. Meteorological and Hydrographic Conditions. Gydrometeoizdat Press, Leningrad. 280 pp. (In Russian).
- Tuck I, Hall S, Roberston M, Armstrong E, Basford D (1998) Effects of physical trawling disturbance in a previously unfished sheltered Scottish sea loch. Mar Ecol Prog Ser 162:227–242.
- Utne, K. R., S. S. Hjøllo, G. Huse, and M. Skogen (2012). Estimating the consumption of *Calanus finmarchicus* by planktivorous fish in the Norwegian Sea using a fully coupled 3D model system. Marine Biology Research 8 (5-6), 527–547.
- VMS maps
- www.emodnet-seabedhabitats.eu
- www.mareano.no
- www.ospar.org
- Zeller, D. and Freire, K. 2001. [A North East Atlantic marine ecosystem model for the Faroe Islands \(ICES Area Vb\)](#)
- Zeller, D. and Reinert, J. 2004. [Modelling Spatial Closures and Fishing Effort Restrictions in the Faroe Islands Marine Ecosystem](#). [Ecological Modelling](#) 172(2):403-420.

APPENDIX 1 SCORING AND RATIONALES

Appendix 1.1 Performance Indicator Scores and Rationale

Principle 1

Evaluation Table for PI 1.1.1

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	It is likely that the stock is above the point where recruitment would be impaired.	It is highly likely that the stock is above the point where recruitment would be impaired.	There is a high degree of certainty that the stock is above the point where recruitment would be impaired.
	Met?	(Y)	(Y)	(Y)
	Justification	The stock is at a high level, Figure 3: Northeast Arctic saithe. Stock development and stock status. Source: ICES (2017) NEA saithe advice Figure 1 and Table 1. This Figure also shows the confidence limits around the estimated SSB and Fishing mortality.SSB is well above B _{lim} . SG60 is met. The Correlation of variation is around 15%.The wer confidence limit of SSB is well above B _{lim} . SG80 and SG100 are met.		
b	Guidepost		The stock is at or fluctuating around its target reference point.	There is a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years.
	Met?		(Y)	(Y)
	Justification	The MSY level is not defined. As a proxy B _{pa} is used and the stock has fluctuated at a level well above this level since 1998. SG80 is met. The stock has with a high degree of certainty – lower confidence limit well above B _{pa} – been above its target reference point. SG 100 is met.		
References		ICES (2017) NEA Saithe Advice ICES (2017) AFWG		
Stock Status relative to Reference Points				
	Type of reference point	Value of reference point	Current stock status relative to reference point	
Target reference point	B _{pa} F _{pa}	220,000 t 0.35 per year	SSB (2018) = 454,042 t CV = 15% F (2017) = 0.24 per year	
Limit reference point	B _{lim} F _{lim}	136,000 t 0.58 per year		
OVERALL PERFORMANCE INDICATOR SCORE:				100
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 1.1.2

PI 1.1.2		Limit and target reference points are appropriate for the stock		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Generic limit and target reference points are based on justifiable and reasonable practice appropriate for the species category.	Reference points are appropriate for the stock and can be estimated.	
	Met?	(Y)	(Y)	
	Justification	Reference points are defined for the stock, Table 14, SG60 is met. These are found to be appropriate for the stock at ICES assessments and reviewed at benchmarks, SG80 is met		
b	Guidepost		The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.	The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity following consideration of precautionary issues.
	Met?		(Y)	(Y)
	Justification	The limit reference points are defined according to ICES standard procedures and are set above the level at which there is an appreciable risk of impairing reproductive capacity. SG80 and SG100 is met		
c	Guidepost		The target reference point is such that the stock is maintained at a level consistent with B_{MSY} or some measure or surrogate with similar intent or outcome.	The target reference point is such that the stock is maintained at a level consistent with B_{MSY} or some measure or surrogate with similar intent or outcome, or a higher level, and takes into account relevant precautionary issues such as the ecological role of the stock with a high degree of certainty.
	Met?		(Y)	(Y)
	Justification	The target reference points B_{pa} and F_{pa} is defined such that the stock is maintained at a level at or above the proxy for B_{MSY} (B_{pa}). SG80 is met. The ecological role is considered in relation to the definition of the reference points and on the basis of extensive studies of the Barents Sea and Norwegian Sea ecosystems. SG100 is met.		

PI 1.1.2		Limit and target reference points are appropriate for the stock		
d	Guidepost		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 key LTL species.		
References		ICES (2005) ICES (2011) ICES (2017)		
OVERALL PERFORMANCE INDICATOR SCORE:				100
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 1.1.3 (NOT RELEVANT- STOCK NOT DEPLETED)

Evaluation Table for PI 1.2.1

PI 1.2.1		There is a robust and precautionary harvest strategy in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The harvest strategy is expected to achieve stock management objectives reflected in the target and limit reference points.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points.	The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points.
	Met?	(Y)	(Y)	(Y)
	Justification	The harvest strategy is based on the Norwegian fishing law and aim at maintaining the Norwegian fish resources at sustainable levels. SG60 is met, The harvest strategy is based on annual assessments of the stock status and a management plan that takes this information into account. The management plan embeds precautionary and limit reference points. SG80 is met. The harvest strategy is designed to be responsive to the state of the stock through the harvest control rule, see section 3.3.5, and is through the embedded reference points designed to achieve stock management objectives reflected in the target and limit reference points. SG100 is met		
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	The harvest strategy has worked well for more than a decade and maintained the stock at or above target levels. SG60 is met. The stock development for more than a decade provide evidence that the strategy achieves its objectives. SG80 is met. The Harvest strategy has been fully tested both through simulation studies and by experience. SG100 is met.		
c	Guidepost	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	(Y)		
	Justification	There is an extensive monitoring programme established to support the annual assessment and hence the scientific advice, see section 3.3.3. SG60 is met		

PI 1.2.1		There is a robust and precautionary harvest strategy in place		
d	Guidepost			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			(Y)
	Justification	The harvest strategy is reviewed through the Norwegian system and through the ICES system. The Norwegian system reviews the fishing laws at regular meetings and ICES reviews the harvest control rule and the assessment including the reference points through its benchmark programme. SG100 is met		
e	Guidepost	It is likely that shark finning is not taking place.	It is highly likely that shark finning is not taking place.	There is a high degree of certainty that shark finning is not taking place.
	Met?	(Not relevant)	(Not relevant)	(Not relevant)
	Justification	Saithe is not a shark		
References		ICES (2005) ICES (2011) ICES (2017) Information collected at the onsite visit at Fiskeridirektoratet		
OVERALL PERFORMANCE INDICATOR SCORE:				100
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 1.2.2

PI 1.2.2		There are well defined and effective harvest control rules in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Generally understood harvest rules are in place that are consistent with the harvest strategy and which act to reduce the exploitation rate as limit reference points are approached.	Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.	
	Met?	(Y)	(Y)	
	Justification	The HCR is summarised in section 3.3.5. This is a well-defined HCR. SG60 is met There is a well-defined HCR for the NEA saithe fishery. This HCR has been evaluated by ICES and found to be precautionary. The plan includes a reduction of the fishing mortality should the stock fall below Bpa. SG80 is met.		
b	Guidepost		The selection of the harvest control rules takes into account the main uncertainties.	The design of the harvest control rules takes into account a wide range of uncertainties.
	Met?		(Y)	(N)
	Justification	The main uncertainties include survey uncertainties and concerns of the accuracy of the sample data for catches. These are considered at formulating the advice. However, the design of the HCR is based on the considerations of the saithe population dynamics and this is not considered by the assessment team as a 'wide range of uncertainties'. SG100 is not met.		
c	Guidepost	There is some evidence that tools used to implement harvest control rules are appropriate and effective in controlling exploitation.	Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.	Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the harvest control rules.
	Met?	(Y)	(Y)	(Y)
	Justification	The tools that are implemented include the standard package of TAC (based on the HCR), minimum mesh size in the trawl, control of the capacity (licenses) closed areas, move-on rules related to catch of undersized saithe. The TAC is complied with and the fishing mortality is maintained below target ($F_{target}=0.32$, $F(2017) = 0.28$). Hence there is evidence that the tools used are appropriate and effective. SG80 is met. The evidence available from the stock status, Feil! Fant ikke referansekinden. Figure 3, demonstrates that that the tools in use are effective in achieving the exploitation levels required under the harvest control rules. SG100 is met.		
References		Management plan, section 3.3.5		



PI 1.2.2	There are well defined and effective harvest control rules in place	
	ICES (2017) NEA Saithe advice Information collected at the on-site visit	
OVERALL PERFORMANCE INDICATOR SCORE:		90
CONDITION NUMBER (if relevant):		

Evaluation Table for PI 1.2.3

PI 1.2.3		Relevant information is collected to support the harvest strategy		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.	Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.	A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly related to the current harvest strategy, is available.
	Met?	(Y)	(Y)	(Y)
	Justification	The population dynamics of NEA saithe is well documented, see f.ex. Jakobsen and Ozhigin (2011) SG60 is met The fleet structure is well documented The information is sufficient to support the harvest strategy. SG 80 is met. The information is comprehensive including studies of the saithe role in the Norwegian Sea and Barents Sea ecosystems. There are significant studies ongoing on the environmental and ecosystem structure which is outside the direct needs of the saithe management.SG100 is met.		
b	Guidepost	Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.	Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.	All information required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.
	Met?	(Y)	(Y)	(Y)
	Justification	The fisheries statistic systems are well developed and all removals are well documented. There are annual abundance survey indicators available. SG60 is met. The data collected are consistent with the needs defined by the harvest control rule. SG80 is met. The fisheries statistics and the abundance surveys meets 'best available scientific practise' standards. The robustness of the assessment is tested through the ICES benchmarks the most recent is from 2014. Management has demonstrated that it can handle the decrease observed around 2013. SG100 is met.		
c	Guidepost		There is good information on all other fishery removals from the stock.	
	Met?		(Y)	

PI 1.2.3		Relevant information is collected to support the harvest strategy	
	Justification	The fisheries statistics programme covers all fleets that fish NEA saithe. SG80 is met.	
References		Skjoldal Hein Rune (2004) The Norwegian sea Ecosystem, Tapir academic Press Jakobsen T. and Ozhigin V.K. (2011) The Barents Sea: Ecosystem, resources, management: Half a century of Russian-Norwegian cooperation. Tapir academic Press	
OVERALL PERFORMANCE INDICATOR SCORE:			100
CONDITION NUMBER (if relevant):			

Evaluation Table for PI 1.2.4

PI 1.2.4		There is an adequate assessment of the stock status		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost		The assessment is appropriate for the stock and for the harvest control rule.	The assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery.
	Met?		(Y)	(Y)
	Justification	The assessment is based on the SAM methodology, a state-space framework that is an age-based analytical assessment (ICES, 2017) that uses landings in the model and in the forecast. The stock assessment was benchmarked latest in 2014 and the assessment approach was found to be 'best scientific practise' and is appropriate for the HCR. The SAM framework provides estimates including confidence limits of these estimates. SG80 is met. The assessment takes into account the major features of the stock dynamics and biology, in particular the stock delineation. The assessment is based a good understanding of the fishery. SG100 is met.		
b	Guidepost	The assessment estimates stock status relative to reference points.		
	Met?	(Y)		
	Justification	There are reference points available for this stock, see Table 14, The advice is provided relative to these reference points. The HCR are built on the same reference points. SG60 is met.		
c	Guidepost	The assessment identifies major sources of uncertainty.	The assessment takes uncertainty into account.	The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way.
	Met?	(Y)	(Y)	(Y)
	Justification	The assessment defines the major sources of uncertainty, ICES (2017) on quality of the assessment and further in AFWG (2017). SG60 is met. The assessment takes these factors into account through the SAM model. SG80 is met. The output of the SAM model includes confidence limits for the estimates. SG100 is met.		
d	Guidepost			The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.
	Met?			(Y)

PI 1.2.4		There is an adequate assessment of the stock status		
	Justification	The assessment has been through ICES benchmarks latest in 2014. SG100 is met.		
e	Guidepost		The assessment of stock status is subject to peer review.	The assessment has been internally and externally peer reviewed.
	Met?		(Y)	(Y)
	Justification	The assessment passes the ICES WG (AFWG) which includes a peer review. SG80 is met. The assessment is further checked through the ICES ACOM machinery and finally through the ICES benchmark including external experts. SG100 is met.		
References		ICES (2014) ICES(2017) NEA saithe advice		
OVERALL PERFORMANCE INDICATOR SCORE:				100
CONDITION NUMBER (if relevant):				

Principle 2

Evaluation Table for PI 2.1.1

PI 2.1.1		The fishery does not pose a risk of serious or irreversible harm to the retained species and does not hinder recovery of depleted retained species		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Main retained species are likely to be within biologically based limits (if not, go to scoring issue c below).	Main retained species are highly likely to be within biologically based limits (if not, go to scoring issue c below).	There is a high degree of certainty that retained species are within biologically based limits and fluctuating around their target reference points.
	Danish seine	N (because of coastal cod)	N (because of coastal cod)	N
	Purse seine	Y	Y	Y
	Hooks and lines	N (because of coastal cod)	N (because of coastal cod)	N
	Gillnets	N (because of coastal cod)	N (because of coastal cod)	N
	Demersal trawlers	N (because of coastal cod)	N (because of coastal cod)	N

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																																					
b	Justification	<p>The team considers that there are are no main not minor retained species to consider for the purse seine UoC, as 99.93% of the catch is the targeted saithe. SG100 is met for the purse seine UoC.</p> <p>As regards all other UoCs, main retained species to consider are cod and haddock. It has not been possible for the team to determine if the cod taken by the fleet is coastal cod or not. Therefore, both stocks will be considered in the assessment. Minor retained species to consider for all other UoCs are Greenland halibut, tusk, ling, monkfish and beaked redfish.</p> <p>Main retained species:</p> <p><u>Cod</u>: The spawning-stock biomass (SSB) has been above MSY Btrigger since 2002, and reaches values that double BMSY. SG100 is met for cod.</p> <p><u>Coastal cod</u>: The survey estimate in 2015 is close to the lowest value in the time-series and well below the rebuilding biomass set in the Norwegian Rebuilding Plan. SSB is below (nearly half) of the estimated BMSY. Fishing mortality is above FMSY. SG60 and SG80 are not met. Go to SIc.</p> <p><u>Haddock</u>: SSB has been above MSY Btrigger since 1989, and is at present well above BMSY. Fishing mortality (F) has been below FMSY since 2008. SG100 is met for haddock.</p> <p>Minor retained species:</p> <p><u>Greenland halibut</u>: There are no reference points for the stock. However, the fishable biomass (above 45 cm) is above Bpa. SG100 is met.</p> <p><u>Tusk</u>: There are no reference points for the stock and information is limited. SG100 is not met.</p> <p><u>Ling</u>: There are no biological reference points. The Index ratio is above 1, showing that Fishing mortality is below FMSY. SG100 is met.</p> <p><u>Monkfish</u>: There are no reference points for the stock. Information is limited. SG100 is not met.</p> <p><u>Beaked redfish</u>: There are no reference points for the stock. SSB increased from 1995 to 2005 and has been stable since then. Fishing mortality is low. SG100 is met.</p>																																					
		<table><tr><th>Scoring element</th><th>SG60</th><th>SG80</th><th>SG100</th></tr><tr><td>Cod</td><td>Y</td><td>Y</td><td>Y</td></tr><tr><td>Coastal cod</td><td>N</td><td>N</td><td>N</td></tr><tr><td>Haddock</td><td>Y</td><td>Y</td><td>Y</td></tr><tr><td>Ling</td><td>N/A</td><td>N/A</td><td>Y</td></tr><tr><td>Greenland halibut</td><td>N/A</td><td>N/A</td><td>N</td></tr><tr><td>Tusk</td><td>N/A</td><td>N/A</td><td>N</td></tr><tr><td>Monkfish</td><td>N/A</td><td>N/A</td><td>N</td></tr><tr><td>Beaked redfish</td><td>N/A</td><td>N/A</td><td>N</td></tr></table>		Scoring element	SG60	SG80	SG100	Cod	Y	Y	Y	Coastal cod	N	N	N	Haddock	Y	Y	Y	Ling	N/A	N/A	Y	Greenland halibut	N/A	N/A	N	Tusk	N/A	N/A	N	Monkfish	N/A	N/A	N	Beaked redfish	N/A	N/A	N
		Scoring element	SG60	SG80	SG100																																		
		Cod	Y	Y	Y																																		
		Coastal cod	N	N	N																																		
		Haddock	Y	Y	Y																																		
		Ling	N/A	N/A	Y																																		
		Greenland halibut	N/A	N/A	N																																		
		Tusk	N/A	N/A	N																																		
		Monkfish	N/A	N/A	N																																		
Beaked redfish	N/A	N/A	N																																				
<p>As Coastal cod is a main retained species for all UoC, SG60 is not met for any UoC apart from the purse seine UoC, which has no associated retained species and reaches SG100.</p>																																							
Guidepost		Target reference points are defined for retained species.																																					
Danish seine		N																																					
Purse seine		N/A (Y)																																					
Hooks and lines		N																																					

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		
	Gillnets			N
	Demersal trawlers			N
	Justification	<p>There are no retained species for the purse seine UoCs. SG100 is met for this UoC.</p> <p>As for the retained species is other UoCs:</p> <p><u>Cod</u>: Target reference points are defined for the stock. SG100 is met.</p> <p><u>Coastal cod</u>: Target reference points are not defined for the stock. SG100 is not met.</p> <p><u>Haddock</u>: Target reference points are defined for the stock. SG100 is met.</p> <p><u>Greenland halibut</u>: Target reference points are not defined for the stock. SG100 is not met.</p> <p><u>Tusk</u>: Target reference points are not defined for the stock. SG100 is not met.</p> <p><u>Ling</u>: Target reference points are not defined for the stock. SG100 is not met.</p> <p><u>Monkfish</u>: Target reference points are not defined for the stock. SG100 is not met.</p> <p><u>Beaked redfish</u>: Target reference points are not defined for the stock. SG100 is not met.</p> <p>SG100 is not met for the Danish seine, hooks and lines, gillnets and demersal trawls UoC, as the target reference points are not defined for the different retained species.</p>		
c	Guidepost	If main retained species are outside the limits there are measures in place that are expected to ensure that the fishery does not hinder recovery and rebuilding of the depleted species.	If main retained species are outside the limits there is a partial strategy of demonstrably effective management measures in place such that the fishery does not hinder recovery and rebuilding.	
	Danish seine	Y	N	
	Purse seine	N/A	N/A	
	Hooks and lines	Y	N	
	Gillnets	Y	N	
	Demersal trawlers	Y	N	

PI 2.1.1		The fishery does not pose a risk of serious or irreversible harm to the retained species and does not hinder recovery of depleted retained species		
	Justification	<p><u>Cod</u>: N/A</p> <p><u>Coastal cod</u>: The coastal cod stock is under a Norwegian coastal cod Rebuilding Plan, intended "to rebuild the stock complex to full reproductive capacity, as well as to give sufficient protection to local stock components. Until a biologically founded rebuilding target is defined, the stock complex will only be regarded as restored when the survey index of spawning stock in two successive years is observed to be above 60 000 tons". Although the Rebuilding Plan can be considered as a strategy for the rebuilding of the coastal cod stock, the fact that it was implemented in 2009 with limited results yet rests confidence in its effectiveness. Besides, a Recovery Plan was first set in 2004. At present catches are higher than the ICES advice. SG80 is not met.</p> <p><u>Haddock</u>: N/A</p> <p>SG60 is met for the different UoCs as it is expected that the Coastal cod rebuilding plan will later or sooner succeed in bringing the stock back to safer status, as it did with the North Sea cod stock, which was in a similar situation in the recent past. Besides, ICES evaluated the Norwegian Sea coastal cod rebuilding plan in 2010 and considered it to be consistent with the precautionary approach. SG60 is met for coastal cod.</p>		
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.		
	Danish seine	N/A (Y)		
	Purse seine	N/A		
	Hooks and lines	N/A (Y)		
	Gillnets	N/A (Y)		
	Demersal trawlers	N/A (Y)		
	Justification	The status of main retained species is known. SG60 is not applicable.		
References		<p>ICES 2017 advice for cod in subareas I and II</p> <p>ICES 2017 advice for coastal cod in subareas I and II</p> <p>ICES 2017 advice for haddock in subareas I and II</p> <p>ICES 2017 advice for Greenland halibut in subareas I and II</p> <p>ICES 2017 advice for tusk in subareas I and II</p> <p>ICES 2017 advice for ling in subareas I and II</p> <p>ICES 2017 advice for anglerfish in subareas I and II</p> <p>ICES 2017 advice for beaked redfish in subareas I and II</p>		

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 elements:				
Scoring element		SG60	SG80	SG100
Cod		Y	Y	Y
Coastal cod		Y	N	N
Haddock		Y	Y	Y
Ling		N/A	N/A	N
Greenland halibut		N/A	N/A	N
Tusk		N/A	N/A	N
Monkfish		N/A	N/A	N
Beaked redfish		N/A	N/A	N
OVERALL PERFORMANCE INDICATOR SCORE: Danish seine UoC				75
OVERALL PERFORMANCE INDICATOR SCORE: Purse seine UoC				100
OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines UoC				75
OVERALL PERFORMANCE INDICATOR SCORE: Gillnets UoC				75
OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawls UoC				75
CONDITION NUMBER (if relevant): For all UoC with the exception of purse seine UoCs				COND 1

Evaluation Table for PI 2.1.2

PI 2.1.2		There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are measures in place, if necessary, that are expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a partial strategy in place, if necessary, that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a strategy in place for managing retained species.
	Danish seine	Y	Y	Y
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	Y
		<p>Both the Norwegian Marine Resources Act and the European Common Fisheries Policy are established strategies which should address all main impacts of the fishery on the ecosystem. Both strategies base their measures on data gathered through different research institutions, including ICES advice on fish stocks. Besides, Norway has developed a suite of regional seas management plans (for the Barents Sea, the Norwegian Sea, and the North Sea and Skagerrak Sea) that are aimed at monitoring and safeguarding the status of the marine environment. Main retained species for most UoCs are cod, coastal cod and haddock. The good stock status for the NEA cod and haddock stocks (as described in PI 2.1.1.a) makes it unnecessary to have specific management measures for these stocks. However, the poor condition of the coastal cod status has led to the implementation of management measures which affect to both cod stocks. Coastal cod is fished throughout the year and within nearly the entire distribution area inside the 12 nm zone in the Norwegian EZ. The main fishery takes place in the first half of the year and the main fishing areas are the coast from Varangerfjord in the north and southwards to Lofoten. The TAC for Norwegian cod is a combined TAC for both the stock of NEA cod and the stock of coastal cod. There are no separated quotas for the coastal cod, and the catches of coastal cod are therefore not effectively restricted by quotas. Coastal cod is mostly fished in a mixed fishery together with NEA cod, and the aim of the regulatory measures for coastal cod are moving parts of the traditional coastal fishery from the catching of coastal cod in the outer parts of the fjords and the inshore areas, to a cod fishery outside these areas, where the proportions of northeast Arctic cod is higher and coastal cod is lower. Most regulatory measures for NEA cod also applies for coastal cod; such as minimum catch size, minimum mesh size, maximum bycatch of undersized fish, closure of areas having high densities of undersized fish and in addition some seasonal and other area restrictions. The use of sorting grid is mandatory for all trawl fisheries.</p>		

PI 2.1.2		There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species		
	Justification	<p>Since 2004 there are different management measures in place directed to the protection of coastal cod.</p> <p>In 2004:</p> <ul style="list-style-type: none"> - fjord lines are drawn along the coast to close to the fjords for direct cod fishing. The Danish seine is banned within the lines, however there is an exemption for vessels smaller than 15 m. - trawling becomes banned inside the 6 nautical miles line, with a dispensation between the 4-6mile line in certain areas. - a box closed to all fishing gears in outside Henningsvær, Lofoten area <p>In 2007:</p> <ul style="list-style-type: none"> - Pelagic gillnets get banned inside the fjord lines. - The permitted bycatch of cod is reduced from 25 to 5% inside the fjord lines, and from 25 to 20% outside the fjord lines. <p>In 2009:</p> <ul style="list-style-type: none"> - The most important spawning area in the southern part (Borgundfjorden near Ålesund) is closed for all gears, except for hand line and fishing rods. <p>In 2010:</p> <ul style="list-style-type: none"> - 7000 tonnes of the Norwegian cod quota are set aside to cover catches in recreational /tourist fisheries. <p>In 2011:</p> <ul style="list-style-type: none"> - Trawling becomes banned inside the 6 nm line in all areas. - Recreational fisheries get restricted by: - the maximum gillnet length per person gets reduced from 210 m to 165 m - the allowance for selling cod per person gets reduced from 2000 kg to 1000 kg per year. A minimum landing size for cod (44 cm) is implemented to recreational and tourist fishing. <p>In 2012:</p> <ul style="list-style-type: none"> - Vessels under 11 m length are now allowed inside the closed area of Henningsvær-Svolvær - Recreational gillnets mesh size gets regulated by a minimum mesh size (126 mm full mesh). <p>In 2013:</p> <ul style="list-style-type: none"> - Vessels above 15 m get banned from fishing inside the fjord lines. <p>The team considers that there is a strategy directed to the protection of coastal cod. SG80 is met by coastal cod (and therefore by all UoCs).</p> <p>There are also minor retained species to consider. These are: Greenland halibut, tusk, ling, monkfish and beaked redfish. There are specific directed measures to avoid juvenile bycatch of redfish.</p> <p>The team considers that the specific and generic implemented measures, such as gear and mesh size regulations, along with the allocation of quotas, the establishment of fishing seasons, move on rules, seasonal area closures and protected areas are sufficient to be considered as a strategy for managing all retained species. SG100 is met for all UoCs.</p>		
b	Guidepost	The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).	There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or species involved.	Testing supports high confidence that the strategy will work, based on information directly about the fishery and/or species involved.
	Danish seine	Y	N	N

PI 2.1.2		There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species		
	Purse seine	Y	Y	Y
	Hooks and lines	Y	N	N
	Gillnets	Y	N	N
	Demersal trawls	Y	N	N
	Justification	<p>Direct information about the purse seine fishery (showing a clean catch composition where all landings are the targeted species) confirms that the fishing strategy itself can be considered as a tested strategy that ensures that the purse seine fishery does not pose a risk of serious harm to retained species. SG100 is met by the purse seine UoC.</p> <p>All other gears have cod (NEA cod and coastal cod) and haddock as main retained species. The status of coastal cod requires of specific management measures, some of which have been implemented for more than 10 years now. And although the coastal cod stock shows some signs of recovery over the years, these are sporadic and short lasting, and catches continue to be at the same levels as in 2004, exceeding ICES Advice. SG80 is not met for coastal cod and all UoCs catching coastal cod.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>SSB (trend)</p> </div> <div style="text-align: center;"> <p>Catches (trend)</p> </div> </div> <p>The records on landings, the monitoring of the different species and the scientific advice given for the different stocks serve to give confidence that the measures are likely to work, at least for the other retained species. As regards coastal cod, the success of the cod recovery in the North Sea after the implementation of the Cod Management Plan provide sufficient confidence that the Rebuilding Plan is likely to work. SG60 is met for coastal cod and for all UoCs catching coastal cod.</p>		
c	Guidepost		There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	Danish seine		Y	Y
	Purse seine		Y	Y
	Hooks and lines		Y	Y
	Gillnets		Y	Y
	Demersal trawls		Y	Y

PI 2.1.2		There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species		
	Justification	There is clear evidence that the strategy is successfully implemented, as confirmed by conversations with the Norwegian Ministry of Fisheries. There are control measures covering fleet effort, gear types and sizes, landings, quotas and permanent and temporary area closures. All UoCs meet SG100.		
d	Guidepost			There is some evidence that the strategy is achieving its overall objective.
	Danish seine			N
	Purse seine			Y
	Hooks and lines			N
	Gillnets			N
	Demersal trawls			N
	Justification	There is evidence that the strategy has been implemented, however after more than 10 years the coastal cod stock continues to be in a poor status. SG100 is not met for UoCs catching cod. As regards the purse seine UoC, the lack of retained species other than the targeted saithe, serves to grant SG100, as there is evidence that the fishing strategy is not hindering the recovery of any other species. SG100 is met for the purse seine UoC.		
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.
	All UoCs	Not relevant	Not relevant	Not relevant
	Justification	No retained species are sharks.		
References		Directorate of Fisheries personal comments. Landing records. http://www.fiskeridir.no/ (with management measures) https://www.sildelaget.no/ (with allocated quotas) http://www.fisheries.no/ (with fishing regulations) http://www.fiskeridir.no/English/Fisheries/Real-Time-Closure-RTC http://www.fiskeridir.no/Yrkesfiske/Dokumenter/Hoeringer/Hoering-om-fjordlinjer-og-redskapsbegrensninger http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2010/Special%20Requests/Norway%20NCC%20plan.pdf		



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	
	OVERALL PERFORMANCE INDICATOR SCORE: Danish seine UoC	75
	OVERALL PERFORMANCE INDICATOR SCORE: Purse seine UoC	100
	OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines UoC	75
	OVERALL PERFORMANCE INDICATOR SCORE: Gillnets UoC	75
	OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawl UoC	75
	CONDITION NUMBER (if relevant): Condition on coastal cod for all UoC (Not for purse seine UoCs).	COND 2

Evaluation Table for PI 2.1.3

PI 2.1.3		Information on the nature and extent of retained species is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage retained species		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Qualitative information is available on the amount of main retained species taken by the fishery.	Qualitative information and some quantitative information are available on the amount of main retained species taken by the fishery.	Accurate and verifiable information is available on the catch of all retained species and the consequences for the status of affected populations.
	Danish seine	Y	Y	N
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	N
	Gillnets	Y	Y	N
	Demersal trawls	Y	Y	N
	Justification	<p>The landing obligation, which was implemented in 1987, serves to provide quantitative information on the impacts of the fishery in all affected species. Removals by other countries in the area are also known by the relevant management institutions. The impact of the fishery with respect to stock status can be easily evaluated for those species that are evaluated by ICES on an annual basis (such as NEA cod, coastal cod, haddock, Greenland halibut, tusk, ling and beaked redfish).</p> <p>There is limited information as regards if the cod taken by the fleet is NEA cod or coastal cod and the redfish taken by the fleet is beaked or golden redfish. Besides, there is no advice for the monkfish stock, and some species for which there is ICES advice haven't got defined reference points (such as Greenland halibut, tusk, ling, and beaked redfish).</p> <p>The team considers that there is sufficient qualitative and quantitative information on the amount of main retained species taken by the fishery, however this information is not accurate enough to estimate the consequences for the status of all affected populations. SG80 is met by all UoCs.</p> <p>The purse seine fleet benefits from very clean catch composition with no retained species to consider. Therefore, the consequences of the purse seine fishery on other retained species can be estimated to be nil. SG100 is met for the purse seine UoCs.</p>		
b	Guidepost	Information is adequate to qualitatively assess outcome status with respect to biologically based limits.	Information is sufficient to estimate outcome status with respect to biologically based limits.	Information is sufficient to quantitatively estimate outcome status with a high degree of certainty.
	Danish seine	Y	Y	N
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	N
	Gillnets	Y	Y	N
	Demersal trawls	Y	Y	N

PI 2.1.3		Information on the nature and extent of retained species is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage retained species		
	Justification	<p>There are no main retained species for the purse seine UoC. For other UoCs, main retained species are NEA cod, coastal cod and haddock.</p> <p>For those species subject to ICES advice and where reference points are defined (such as NEA cod, coastal cod and haddock) there is sufficient information to quantitatively estimate outcome status with a high degree of certainty. SG80 is met by all UoCs.</p> <p>As regards minor retained species such as Greenland halibut, tusk, ling, monkfish and redfish, the lack of reference points makes it difficult to assess outcome status with respect to biologically based limits. As all UoC have some of these minor retained species in their catch composition, the team concludes that SG100 is not met for the Danish seine, hooks and lines, gillnets and demersal trawl UoCs.</p> <p>The purse seine UoC benefits from not having retained species to consider. SG100 is met by the purse seine UoC.</p>		
c	Guidepost	Information is adequate to support measures to manage main retained species.	Information is adequate to support a partial strategy to manage main retained species.	Information is adequate to support a strategy to manage retained species, and evaluate with a high degree of certainty whether the strategy is achieving its objective.
	Danish seine	Y	Y	Y
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	Y
	Justification	<p>Landing statistics since the implementation of the Norwegian landing obligation can provide trends of the landings of the different retained species in the catch composition and the areas where these species are more abundant. On general terms, the evaluation of how new management measures serve to manage retained species can be done by comparing landing statistics before and after the implementation of the different management measures.</p> <p>Besides, the status of the different stocks present in the catch composition is studied by research institutions such as ICES, IMR and also by PINRO (for those stocks in the Barents Sea waters). Special attention is paid to the coastal cod stock due to its poor stock status. Specifically, the Directorate of Fisheries started in 2009 a process of mapping resources and fisheries which takes place in the inshore area along the coast of Norway. The information generated through this process is based on interviews with experienced fishermen with the aim to detect spawning and feeding grounds as well as migrations routes, coral areas etc. Many of these areas has been verified by the IMR, which in turn has led to minor adjustments of the Fjordlines.</p> <p>Since 1995, the IMR has each autumn been monitoring the stock of coastal cod in an acoustic trawl survey along the Norwegian coast from the Russian border south to the 62° N, thus obtain estimates on fluctuations in the size of the spawning stock and the composition of age groups. SG100 is met by all UoCs.</p>		

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		
d	Guidepost		Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator score or the operation of the fishery or the effectiveness of the strategy)	Monitoring of retained species is conducted in sufficient detail to assess ongoing mortalities to all retained species.
	Danish seine		Y	Y
	Purse seine		Y	Y
	Hooks and lines		Y	Y
	Gillnets		Y	Y
	Demersal trawls		Y	Y
	Justification	The monitoring by the IMR and the mapping of key areas along the coast, is an ongoing process. Besides, the implementation of the landing obligation and the statistics associated serve to monitor ongoing mortalities of all retained species. All records are subject to scrutiny by the Directorate of Fisheries who follows up catches and quotas. SG100 is met by all UoCs.		
References		Directorate of Fisheries personal comments. Landing records. http://www.fiskeridir.no/ (with management measures) https://www.sildelaget.no/ (with allocated quotas) http://www.fisheries.no/ (with fishing regulations) http://www.fiskeridir.no/English/Fisheries/Real-Time-Closure-RTC http://www.fiskeridir.no/Yrkesfiske/Dokumenter/Hoeringer/Hoering-om-fjordlinjer-og-redskapsbegrensninger http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2010/Special%20Requests/Norway%20NCC%20plan.pdf ICES 2017 advice for cod in subareas I and II ICES 2017 advice for coastal cod in subareas I and II ICES 2017 advice for haddock in subareas I and II ICES 2017 advice for Greenland halibut in subareas I and II ICES 2017 advice for tusk in subareas I and II ICES 2017 advice for ling in subareas I and II ICES 2017 advice for anglerfish in subareas I and II ICES 2017 advice for beaked redfish in subareas I and II		
OVERALL PERFORMANCE INDICATOR SCORE: Danish seine				90
OVERALL PERFORMANCE INDICATOR SCORE: Purse seine				100
OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines				90
OVERALL PERFORMANCE INDICATOR SCORE: Gillnets				90
OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawls				90



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	
CONDITION NUMBER (if relevant):		N/A

Evaluation Table for PI 2.2.1

PI 2.2.1		The fishery does not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted bycatch species or species groups		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Main bycatch species are likely to be within biologically based limits (if not, go to scoring issue b below).	Main bycatch species are highly likely to be within biologically based limits (if not, go to scoring issue b below).	There is a high degree of certainty that bycatch species are within biologically based limits.
	Danish seine	Y	Y	N
	Purse seine	Y	Y	N
	Hooks and lines	Y	Y	N
	Gillnets	Y	Y	N
	Demersal trawls	Y	Y	N

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
Justification	<p>Since the implementation of the landing obligation in Norway in 1987, discarding is not permitted. In practice this means that all commercial species are landed and recorded on sales slips, but non-commercial species and small individuals of commercial species may still be discarded. Besides, Regulation J-250-2013 obliges to the discarding of certain shark species as long as they are alive, in order to minimise their mortality. Unfortunately, there are no records by the commercial fleet about the identification or number of individuals released every year, so there is no option to measure trends of these interactions. Non-fatal interactions with marine mammals or birds are not recorded either.</p> <p>There is no formal observer programme, so there are no direct observations on the level of discarding or the species composition of discards from the Norwegian fleet. However, there is information available regarding the expected catch composition of the different fishing gears thanks to the research undertaken by the IMR reference fleet. Crew members in the reference fleet vessels record all interactions, including those with released individuals.</p> <p>The data gathered through the reference fleet is sufficient to estimate which could be the main and minor bycatch species in the Norwegian NEA saithe fishery. Data collected in 2016 shows that, when quantities are compared to landing per gear type, there are no main bycatch species to consider for any UoC. SG80 is met by default by all gear types.</p> <p>There is however a wide range of minor bycatch species for the different gear types in the reference fleet North of 62°N, including numerous shakes, rays and sharks, and some birds and marine mammals. The majority of inter-actions were with the gillnet and hooks and lines fleets:</p> <ul style="list-style-type: none"> - For the 5 vessels in the Danish seine reference fleet: 1 Thornback skate (<i>Raja clavata</i>), 1 spotted ray (<i>Raja montagui</i>), 4 starry ray (<i>Amblyraja radiata</i>). - For the 3 vessels in the purse seine reference fleet there are no bycatch species. - For the 10 vessels in the hooks and lines reference fleet: 838 starry ray (<i>Amblyraja radiata</i>), 58 spinetail (<i>Bathyrāja spinicauda</i>), 736 velvet belly (<i>Etmopterus spinax</i>), 370 blackmouth dogfish (<i>Galeus melastomus</i>), 9 European herring gull (<i>Larus argentatus</i>), 2 great blackbacked gull (<i>Larus marinus</i>), 112 round ray (<i>Raja fyllae</i>), 19 Arctic skate (<i>Amblyraja hyperborea</i>), 2 sail ray (<i>Rajella lintea</i>), 300 unidentified skates, 1 small spotted catfish. - For the 26 vessels in the gillnet reference fleet (21 coastal vessels and 5 offshore vessels): Bycatch interactions: 49 harbour porpoise (<i>Phocoena phocoena</i>), 7 starry skate (<i>Amblyraja radiata</i>), 2 European herring gull (<i>Larus argentatus</i>), 31 Northern gannet (<i>Morus bassanus</i>), 1 Black guillemot (<i>Cepphus grille</i>), 2 tope shark (<i>Galeorhinus galeus</i>), 2 spinetail (<i>Bathyrāja spinicauda</i>), 7 grey seal (<i>Halichoerus grypus</i>), 8 sail ray (<i>Rajella lintea</i>), 1100 blackmouth dogfish (<i>Galeus melastomus</i>), 2 Greenland shark (<i>Somniosus microcephalus</i>), 516 starry ray (<i>Amblyraja radiata</i>), 426 thornback skate (<i>Raja clavata</i>), 307 sandy ray (<i>Leucoraja circularis</i>), 2 cormorants (<i>Phalacrocoracidae spp.</i>), 217 small spotted catfish (<i>Scyliorhinus canicula</i>), 148 longnosed skate (<i>Dipturus oxyrinchus</i>), 16 common harbour seal (<i>Phoca vitulina</i>), 300 velvet belly (<i>Etmopterus spinax</i>) and 4 eider ducks. - For the 5 vessels in the trawling reference fleet: 26 skates (unidentified). <p>There is limited information on the status or populations of all minor bycatch species, although certain research is undertaken and published by ICES. Due to the high number of minor bycatch species, the low proportion of each of them, and the limited information regarding their stock status, minor bycatch species have been grouped to facilitate their evaluation. Given the uncertainties both in the specific bycatch ratio per gear type and the status of the different bycatch species, SG100 is not met for any gear type.</p>

PI 2.2.1		The fishery does not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted bycatch species or species groups		
b	Guidepost	If main bycatch species are outside biologically based limits there are mitigation measures in place that are expected to ensure that the fishery does not hinder recovery and rebuilding.	If main bycatch species are outside biologically based limits there is a partial strategy of demonstrably effective mitigation measures in place such that the fishery does not hinder recovery and rebuilding.	
	Danish seine	N/A (Y)	N/A (Y).	
	Purse seine	N/A (Y)	N/A (Y)	
	Hooks and lines	N/A (Y)	N/A (Y)	
	Gillnets	N/A (Y)	N/A (Y)	
	Demersal trawls	N/A (Y)	N/A (Y)	
	Justification	There are no main bycatch species to consider.		
c	Guidepost	If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the bycatch species to be outside biologically based limits or hindering recovery.		
	Danish seine	N/A (Y)		
	Purse seine	N/A (Y)		
	Hooks and lines	N/A (Y)		
	Gillnets	N/A (Y)		
	Demersal trawls	N/A (Y)		
	Justification	There are no main bycatch species to consider.		

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	
References	Reference fleet data for vessels north 62°N.	
OVERALL PERFORMANCE INDICATOR SCORE: Danish seine		80
OVERALL PERFORMANCE INDICATOR SCORE: Purse seine		80
OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines		80
OVERALL PERFORMANCE INDICATOR SCORE: Gillnets		80
OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawls		80
CONDITION NUMBER (if relevant):		N/A

Evaluation Table for PI 2.2.2

PI 2.2.2		There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are measures in place, if necessary, that are expected to maintain the main bycatch species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a partial strategy in place, if necessary, that is expected to maintain the main bycatch species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a strategy in place for managing and minimizing bycatch.
	Danish seine	Y	Y	Y
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	Y
	Justification	Data collected by the IMR reference fleet serves to support that there are no main bycatch species to consider. The implementation of the landing obligation in 1987 served to minimize the bycatch of the different commercial species, although certain discarding of non-commercial species is known to take place. Both IMR and the Ministry of Fisheries have shown no concerns as regards this practice, and consider the discarding to be minimal and with no significant detrimental effects for the different stocks. Mesh regulations and mandatory use of sorting grids in the trawl fishery should serve to avoid catch of small fish, and move on rules to avoid the continued catch of juvenile fish. Tori lines and pingers should serve to prevent interactions with seabirds and marine mammals. The team considers the landing obligation as a strategy for minimizing bycatch. SG100 is met by all UoCs.		
b	Guidepost	The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/species).	There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or species involved.	Testing supports high confidence that the strategy will work, based on information directly about the fishery and/or species involved.
	Danish seine	Y	Y	N
	Purse seine	Y	Y	N
	Hooks and lines	Y	Y	N
	Gillnets	Y	Y	N

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		
	Demersal trawls	Y	Y	N
	Justification	The measures that have been in place for many years are known to be effective. The small proportion of non-commercial species in the catch composition of the reference fleet for the different gear types gives confidence that the strategy is working in avoiding the catch of these species. The high survival rate of Chondrichthyes after release also gives confidence that the strategy will work in not hindering the rebuilding of these species. All UoCs meet SG80. The lack of specific testing or research undertaken for each gear type and fishing area prevent the fishery from achieving SG100.		
c	Guidepost		There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
	Danish seine		Y	Y
	Purse seine		Y	Y
	Hooks and lines		Y	Y
	Gillnets		Y	Y
	Demersal trawls		Y	Y
	Justification	There is clear evidence that the strategy is successfully implemented, as confirmed by conversations with the Norwegian Ministry of Fisheries. There is a strong enforcement system covering fleet effort, gear types and mesh sizes, landings and permanent and temporary area closures. All UoCs meet SG100.		
d	Guidepost			There is some evidence that the strategy is achieving its overall objective.
	Danish seine			Y
	Purse seine			Y
	Hooks and lines			Y
	Gillnets			Y
	Demersal trawls			Y
	Justification	Data provided by the IMR reference fleet show a small proportion of non-commercial (potential bycatch) species in the catch, which generally do not reach a 1% of the catch (although certain species, such as sharks, skates and rays can reach higher numbers, but less than 4% of the catch). This data, and the lack of infringements by the fleet as regards discarding, serves as an evidence that the strategy is achieving its objective of minimizing bycatch. SG100 is met by all gear types.		

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	
References	Reference fleet data north of 62°N. Conversations with the Ministry of Fisheries and the Directorate of Fisheries.	
OVERALL PERFORMANCE INDICATOR SCORE: Danish seine		95
OVERALL PERFORMANCE INDICATOR SCORE: Purse seine		95
OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines		95
OVERALL PERFORMANCE INDICATOR SCORE: Gillnets		95
OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawls		95
CONDITION NUMBER (if relevant):		N/A

Evaluation Table for PI 2.2.3

PI 2.2.3		Information on the nature and the amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Qualitative information is available on the amount of main bycatch species taken by the fishery.	Qualitative information and some quantitative information are available on the amount of main bycatch species taken by the fishery.	Accurate and verifiable information is available on the catch of all bycatch species and the consequences for the status of affected populations.
	Danish seine	Y	Y	N
	Purse seine	Y	Y	N
	Hooks and lines	Y	Y	N
	Gillnets	Y	Y	N
	Demersal trawls	Y	Y	N
	Justification	Landing obligation was implemented in Norway in 1987, banning the discarding of commercial species. Discarding of non-commercial species is known to take place, but according to data by the reference fleet there are no main bycatch species in the catch of any of the assessed gear types. SG80 is met by all UoCs. Data from the reference fleet is sufficient to quantitatively estimate the catch of discarded species, however, the limited information on the status of the different species prevent all UoC under assessment from achieving SG100.		
b	Guidepost	Information is adequate to broadly understand outcome status with respect to biologically based limits	Information is sufficient to estimate outcome status with respect to biologically based limits.	Information is sufficient to quantitatively estimate outcome status with respect to biologically based limits with a high degree of certainty.
	Danish seine	Y	Y	N
	Purse seine	Y	Y	N
	Hooks and lines	Y	Y	N
	Gillnets	Y	Y	N
	Demersal trawls	Y	Y	N
	Justification	Data collected by the reference fleet is sufficient to identify which are the bycatch species to consider. It could also give an estimation of the quantities taken by the different gear types in the Norwegian fleet. However, the lack of information on the stock and population status of the different species makes it difficult to estimate the outcome status with respect to biologically based limits, as these are not defined for many bycatch species. SG100 is not met. Data provided by the reference fleet shows that there are no main species to consider for any UoC. SG80 is met by all UoCs.		

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		
c	Guidepost	Information is adequate to support measures to manage bycatch.	Information is adequate to support a partial strategy to manage main bycatch species.	Information is adequate to support a strategy to manage bycatch species, and evaluate with a high degree of certainty whether the strategy is achieving its objective.
	Danish seine	Y	Y	Y
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	Y
	Justification	The main objective of the bycatch strategy would be to reduce the catch of unwanted species to the minimum, and to ensure survival of discarded species. The team considers that the continued recording by the reference fleet serves to evaluate whether the strategy to minimizing bycatch is achieving its objective of minimizing such interactions over the years. Moreover, data gathered by the reference fleet is subject to review by IMR. This information serves to highlight any individual or group of species that might be at specific risk through being bycatch in the saithe fishery. SG100 is met by all UoCs.		
d	Guidepost		Sufficient data continue to be collected to detect any increase in risk to main bycatch species (e.g., due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the strategy).	Monitoring of bycatch data is conducted in sufficient detail to assess ongoing mortalities to all bycatch species.
	Danish seine		Y	N
	Purse seine		Y	N
	Hooks and lines		Y	N
	Gillnets		Y	N
	Demersal trawls		Y	N
	Justification	The reference-fleet programme is an ongoing programme which has been implemented for several years so far. The programme serves to collect any necessary information as regards bycatch species, in order to detect any increase in the risk to their populations. SG80 is met by all UoCs. Monitoring of bycatch is limited to a small number of reference fleet vessels, which may or may not be truly representative of the fleet and the general fishing practice across the fleet. SG100 is not met by any UoC.		

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	
References	Reference fleet catch data.	
OVERALL PERFORMANCE INDICATOR SCORE: Danish seine		85
OVERALL PERFORMANCE INDICATOR SCORE: Purse seine		85
OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines		85
OVERALL PERFORMANCE INDICATOR SCORE: Gillnets		85
OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawls		85
CONDITION NUMBER (if relevant):		N/A

Evaluation Table for PI 2.3.1

PI 2.3.1		The fishery meets national and international requirements for the protection of ETP species The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Known effects of the fishery are likely to be within limits of national and international requirements for protection of ETP species.	The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species.	There is a high degree of certainty that the effects of the fishery are within limits of national and international requirements for protection of ETP species.
	Danish seine	Y	Y	Y
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	Y
	Justification	According to MSC FCR V1.3, CB.3.11.1, ETP Species are those recognized by national ETP legislation or listed in Appendix 1 of the Convention on International Trade in Endangered Species (CITES), unless it can be shown that the particular stock of the CITES listed species impacted by the fishery under assessment is not endangered. Species recognized by national legislation (such as Regulation J-250-2013, protecting basking sharks, spurdogs, porbeagles and silky sharks) or by signed binding agreements (such as OSPAR) shall also be considered as ETP species. Species listed in the Norwegian Red List of Protected Species are also considered here, as the Norwegian Marine Resources Acts (section 7.b), sets that "management measures shall incorporate an approach that takes into account habitats and biodiversity", taking action to avoid the red-listing of species. As detailed in Sib, ETP species to consider (due to interactions with the reference fleet) are golden redfish, porbeagle, spurdog, common skates, fulmars, razorbills, puffins, common guillemots and black-legged kittiwakes. Most of the interactions were by the gillnet and the hooks and lines fleet. Interactions by the purse seine reference fleet were nil. There is a high degree of certainty that the fishery complies with the limits set in the different regulations. All UoCs meet SG100.		
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.
	Danish seine	Y	Y	N
	Purse seine	Y	Y	N
	Hooks and lines	Y	N	N
	Gillnets	Y	N	N
	Demersal trawls	Y	N	N

PI 2.3.1	<p>The fishery meets national and international requirements for the protection of ETP species</p> <p>The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species</p>
Justification	<p>Landing obligation, implemented in 1987, would require vessels to land any dead animal, regardless it being ETP species or not. Landing records show landings of redfish (unspecified) by most UoCs (with the exception of the purse seine fleet). For 2016, landings of redfish were 72 tonnes for the Danish seine fleet (0.05% of the total catch of Danish seine vessels); 0 tonnes for the purse seine fleet; 436 tonnes for the hooks and lines fleet (0.29% of the hooks and lines landings); 261 tonnes for gillnets (0.21% of gillnets landings); and 5361 tonnes for trawlers (1.98% of total landings by demersal trawlers). It was not possible to determine if these individuals of redfish were beaked redfish or golden redfish. While the beaked redfish would be considered as a retained species, the golden redfish (<i>Sebastes marinus</i>) is considered as an ETP species as it is listed in the Norwegian Red List of Protected Species. There were no landings of other ETP species by any other UoC under assessment.</p> <p>ICES 2017 advice for golden redfish states that catches should be zero for 2017, 2018 and 2019. The species is red-listed in the Norwegian red list of protected species and catches should be kept to minimum. For the 3600 tonnes landed in 2015 in ICES subareas I and II, 52% were landed by the trawl fleet, 25 % were landed by the gillnet fleet, 20 % by the longline fleet and 3% by other gear types. The spawning-stock biomass (SSB) has experienced a continuous decline since the late 1990s and is currently at the lowest in the time-series of the assessment results. Fishing mortality (F) has been increasing since the mid-2000s, with F in 2015 being the second highest in the time-series. There are specific management measures which were implemented with the intention of reverting the poor situation of this stock. Such measures are area closures and bycatch limitations, and also a move-on rule for the prawn trawl fishery:</p> <ul style="list-style-type: none"> - In 2004 the redfish fishery became banned from 1st to 31st of May. Maximum bycatch allowed was reduced to 20% and a minimum landing size was established at 32 cm. - In 2005 the prohibition to target redfish was extended from 20th April till 19th June. - In 2006 fishing season was again modified, and prohibitions remained during the months of April and September. A minimum mesh size of 120 mm was introduced. - In 2007 fishing was banned from 1st March till 30th June, and also during September. However, the hand-line fleet smaller than 11 m was excluded from these regulations. - In 2012 fishing closures run from 20th December till 30th June, and also during September. However, all hand-line vessels were excepted from the regulatory measures for future years. - In 2015 the fishing closures remained the same but additional restrictions were added such that redfish catch should be less than 50% of the catch per week. - In 2016 fishing closures were modified from previous years, and was now banned from 1st January to 31st July. Catch of redfish was restricted as it shouldn't be more than 30% of the total catch per week. <p>According to IMR, total catch by the Norwegian fleet was reduced from 6233 tonnes in 2004 down to 1969 in 2016 (68 %), where the landings from trawlers was reduced by 82%, while the landings from coastal fleet was reduced by 55 %. In spite of the reduction, as mentioned above, the stock has so far shown no signs of recovery.</p>

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
	<p>While the low level of landings of golden redfish by gillnets and hooks and lines could serve to justify that direct effects caused by these gear types are highly unlikely to create unacceptable impacts for the golden redfish stock, the high proportion of landings of golden redfish by the different gear types (trawlers 50%, hooks and lines 25%, and gillnets 25%) as described in ICES 2017 advice for golden redfish prevent these gear types (trawlers, hooks and lines and gillnets) from achieving SG80.</p> <p>Danish seine and purse seine UoCs achieve SG80, as interactions with golden redfish are minimal. The lack of an implemented effective system to record interactions with the different ETP species prevent these UoCs from achieving SG100. The reduction in golden redfish catches as a result of implemented management measures serves to support that gear types such as trawlers, hooks and lines, and gillnets, achieve SG60. However, SG80 is not met as the 3 gear types are heavily responsible of golden redfish landings (according to ICES advice).</p> <p>It is noteworthy mentioning that there are other expected interactions of the different gear types with other ETP species. The IMR Norwegian reference fleet recording system showed that, for 2016, interactions of the Norwegian coastal reference fleet north 62°N with ETP species showed the following results:</p> <ul style="list-style-type: none"> - For the 5 vessels in the Danish seine reference fleet there were interactions with 1 spurdog (<i>Squalus acanthias</i>) and 0.2 tonnes of golden redfish (<i>Sebastes marinus</i>). - For the 3 vessels in the purse seine reference fleet there were no interactions with any ETP species. - For the 10 vessels in the hooks and lines reference fleet there were interactions with 1 porbeagle (<i>Lamna nasus</i>), 38 spurdogs (<i>Squalus acanthias</i>), 6 common skates (<i>Dipturus batis</i>), 25 fulmars (<i>Fulmarus glacialis</i>) and 110 tonnes of golden redfish (<i>Sebastes marinus</i>). - For the 21 coastal gillnets and 5 offshore gillnets in the reference fleet there were interactions with 14 porbeagles (<i>Lamna nasus</i>), 2250 spurdogs (<i>Squalus acanthias</i>, which weighted 5.5 tonnes), 1 common skate, 2 puffins (<i>Fratercula arctica</i>), 9 razorbill (<i>Alca torda</i>), 14 fulmars (<i>Fulmarus glacialis</i>), 1 black-legged kittiwake, 31 common guillemot (<i>Uria aalge</i>) and 15 tonnes of golden redfish (<i>Sebastes marinus</i>). - For the 5 demersal trawlers in the reference fleet there were interactions with 250 tonnes of golden redfish (<i>Sebastes marinus</i>). Specifically, for the offshore reference fleet, catches of golden redfish were much higher than catches of beaked redfish. <p>Records from the reference fleet show significant interactions of the reference fleet with spurdogs (<i>Squalus acanthias</i>). Spurdog is also listed in IUCN red list as Vulnerable. Elasmobranchs present a high survival post capture rate. If the return is done quickly, experimental studies demonstrate that there is a high probability of survival (Mandelman and Farrington 2007a). The Norwegian management system obliges to the releasement of these species when encountered alive (most of the times) or to the landing when they are fatally injured or dead. However, so far the system does not require the recording of these interactions. ICES 2016 Advice on spurdog establishes that there shouldn't be any targeted fishery for spurdog and that bycatches should be kept to minimum. The allocated quota by all EU countries is zero. ICES 2016 also shows that, of the 265 tonnes of spurdog landed in 2015 by the European Northeast Atlantic fleet, 80% were taken by Norwegian vessels. ICES Advice also reports that 68% of catches were taken by gillnets (while 16% were taken by bottom trawlers, 12 % by lines and 2% by other gear types). In any case, according to ICES 2016 advice, and "based on medium-term projections, annual catches at the recent assumed level (2468 tonnes) would allow the stock to increase at a rate close to that estimated with zero catches".</p>

PI 2.3.1	<p>The fishery meets national and international requirements for the protection of ETP species</p> <p>The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species</p>
	<p>ICES 2016 Advice on porbeage (<i>Lamna nasus</i>) in the Northeast Atlantic reflects that direct fishing should be prohibited and bycatch should be minimized. There is limited information on the stock. Landings in the NEA region were 7 tonnes in 2014. The catch taken by the reference fleet were 15 individuals in 2016. Both spurdogs and porbeagles benefit from Regulation J-250-2013, which obliges to the release of these individuals if still alive when taken.</p> <p>There is no ICES advice on the stock of common skate (<i>Dipturus batis</i>) in subareas I and II. Regulation J-250-2013 does not specifically protect common skates. If this are released soon they will probably recover from the entanglement due to their high survival rate, however it could be the case that the species is just landed.</p> <p>Other species interacting with the different gear types in the reference fleet are fulmars, puffins, razorbills, black-legged kittiwates and common guillemots. There were 2 puffins trapped by the gillnet reference fleet north 62°N during 2016. According to the Norwegian red list of species, it is estimated that there are 3 million individuals in Norway. Data from the National Monitoring Program for Seabirds indicate a population decline of almost 50% in the Norwegian Sea for the period 1980-2009, but a more stable stock in the Barents Sea.</p> <p>There were 9 razorbills trapped by the gillnet reference fleet north 62°N during 2016. According to the description given at Norway Red List of Species, the Norwegian population of <i>Alca torda</i> is estimated to be approximately 90,000 reproducing individuals. There appears to have been a decline in stocks for the entire Norwegian <i>Alca torda</i> stock in the range of 50-80% during the last 3 generations of the species (1967-2014), and the decline was particularly high in the first part of this period. The stock in the UK (where the fishery also takes place) is large and appears to have grown in the last 40 years.</p> <p>10 fulmars were taken by the hooks and lines reference fleet and 14 by the gillnet reference fleet. According to the Norwegian red list of species, the species established itself in Norway in the 1920s. After that, the stock grew gradually and the stock size was evaluated to approximately 6,000 reproducing individuals around 1980 and 14,000 in the early 1990s. However, to date, there have been several declines and the Norwegian reproductive stock is estimated to be in the range of 1000-2000 individuals, which is probably only about 10-20% of reproducing stock as it was at its peak towards the end of the 1900s.</p> <p>The gillnet reference fleet north of 62°North interacted with one individual of black-legged kittiwake during 2016. According to the Norwegian redlist of species, the Norwegian population of black-legged kittiwakes is estimated to be of 175,000 reproducing individuals. Data from the National Monitoring Program for Seabirds shows that the populations have declined in different locations in Norway. The extinction risk has been calculated for some colonies in Norway, showing median times to extinction ranging from 10 to 180 years depending on which colonies are concerned and what parameters are included in the models.</p> <p>31 common guillemots (<i>Uria aalge</i>) interacted the gillnet reference fleet North 62°N during 2016. According to the Norwegian red list of species, population is estimated to be of 34000 individuals (2015). The decline in the Norwegian stock is estimated to clearly exceed 80% for the last 3 generations of the species (1967-2014). This decline could be caused by nutritional deficiencies but also by the presence of eagles.</p> <p>Data given above reflects interactions of all the different fisheries and gear types in the Norwegian reference fleet. With the given data, it is not possible to discriminate which were the directed fishery for the different gear types. For that reason such data shall be observed in a precautionary manner, as a proxy to possible interactions by the different gear types, as such interactions would surely change depending on the targeted species.</p>

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	
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.
	Danish seine	Y	N
	Purse seine	Y	N
	Hooks and lines	Y	N
	Gillnets	Y	N
	Demersal trawls	Y	N
	Justification	Indirect effects on ETP populations would be those caused as results of interactions with the fishing gear (such as injuries, which are difficult to quantify) or those related to the reduction of prey availability for prey species, competition for forage, destruction of egg cases or geolocation difficulties. Indirect effects such as prey removal are normally taken into account in the management plans by increasing the natural mortality in the assessment to account for the needs of higher trophic levels. Personal comments by the Institute of Marine Research in Bergen reported that marine mammals are normally taken into account on catch advice, but they could not asseverate the same for bird species. Notwithstanding this, indirect effects are considered unlikely to create unacceptable impacts on ETP species, based on current knowledge in relation to the population status and life history of potentially impacted ETP species. The difficulty to provide a high degree of confidence that there aren't significant detrimental effects of the fishery on ETP species prevents the fishery from obtaining SG100, even though IMR ecosystem modelling of Norwegian fisheries, long-term monitoring of marine mammals by IMR, seabirds by NINA and ICES reviews of seabird, elasmobranchii and marine mammal–fishery interactions have not identified any cause for concern with respect to the Norwegian NEA saithe fisheries. All UoCs achieve SG80.	
References		http://www.ecolex.org/details/legislation/act-no-37-of-2008-relating-to-the-management-and-conservation-of-living-marine-resources-marine-living-resources-act-lex-faoc082017/ http://www.ecolex.org/details/legislation/regulation-no-1475-on-the-ban-from-catch-of-sharks-in-2012-lex-faoc115522/ Northridge (1988) http://artsdatabanken.no/Files/13973/Norsk_r_dliste_for_arter_2015_(PDF) CITES Appendix I www.ospar.org ICES advice on spurdog in NEA Fangel, K., Aas, Ø., Bærum, K. M., Anker-Nilssen, T. & Christensen- Dalsgaard, S. 2015. Utisiktet bifangst av sjøfugl i norske kystfiskerier med garn og line. - NINA Temahefte 64. 20 s. Mandelman, J.W., and M.A. Farrington. 2007a. The estimated short-term discard mortality of a trawled elasmobranch, the spiny dogfish (<i>Squalus acanthias</i>). Fisheries Research 83 (2007) 238–245. Norwegian Red List of Species 2015. https://www.artsdatabanken.no/Files/18047/Norwegian_Red_List_of_Species_2015_-_methods_and_results_2015 http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2016/2016/dgs-	

PI 2.3.1	<p>The fishery meets national and international requirements for the protection of ETP species</p> <p>The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species</p>	
	<p>nea.pdf http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/byc.eu.pdf https://artsdatabanken.no/Rodliste</p>	
OVERALL PERFORMANCE INDICATOR SCORE: Danish seine		85
OVERALL PERFORMANCE INDICATOR SCORE: Purse seine		85
OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines		75
OVERALL PERFORMANCE INDICATOR SCORE: Gillnets		75
OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawls		75
CONDITION NUMBER (if relevant): Condition for hooks and lines, gillnets and demersal trawls		COND 3

Evaluation Table for 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	Guidepost	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.
	Danish seine	Y	Y	N
	Purse seine	Y	Y	N
	Hooks and lines	Y	Y	N
	Gillnets	Y	Y	N
	Demersal trawls	Y	Y	N
	Justification	<p>The NEA saithe fishery takes place in Norwegian waters. Norway is a signatory party to key international conventions affecting ETP species, including CITES (Annex I), OSPAR and the UN code for responsible fishing. Regulation J-250-2013 is specifically designed for the protection of basking sharks, spurdogs, porbeagles and silky sharks. There is also a Norwegian red list of threatened species based on IUCN red list. Besides, the Norwegian Marine Resources Acts (section 7.b), sets that "management measures shall incorporate an ecosystem approach that takes into account habitats and biodiversity", taking action to avoid the redlisting of species.</p> <p>Electronic logbooks should serve to record fatal interactions with seabirds and marine mammals when these happen. Records of fatal interactions with these species show very limited interactions. There is no requirement to record non-fatal interactions, which would serve to better quantify the effects that different UoCs have on the different ETP populations. As described under PI 2.3.1, the Norwegian reference fleet records interactions of the different vessels in the reference fleet with all affected species, which serves to quantify the effects of the different gear types.</p>		

PI 2.3.2	<p>The fishery has in place precautionary management strategies designed to:</p> <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. 		
	<p>Fishermen always avoid interactions of ETP species with the fishing gear, as these may result in damages to the net that would require expensive reparations:</p> <ul style="list-style-type: none"> • Hooks and lines have implemented streamers (tori lines) which should serve to prevent interactions with seabirds. The implementation of swivel hooks could also serve to minimise such interactions (Fangel, 2015). • Demersal gillnets have pingers (acoustic scaring devices) which should serve to prevent interactions with marine mammals. According to Fishbase, saithe is located at depths ranging from 37 to 360 m. Demersal gillnets under assessment are therefore located at depths above 37 m. According to Fangel (2015), interactions of seabirds with gillnets decreases significantly at depths equal to or higher than 50 m, so interactions with the gillnet UoC and seabirds are also expected to be minimised. • There are no specific concerns as regards ETP interactions by the purse seine UoCs, as, if trapped, ETP individuals could easily be released without damage. • Entanglements with Danish seine and demersal trawlers could result either in casualty or in releasement, depending on the level of entanglement. Data from the reference fleet show no specific concerns for the Danish seine fleet, although the demersal trawling fleet show high records of golden redfish. <p>The team considers that the different regulations and measures in place are considered as a strategy which is highly likely to achieve national and international requirements for the protection of ETP species. However, the team feels that, although very specific to ETP species such as golden redfish, spurdogs, porbeagles, basking sharks and silky sharks, the strategy implemented is not comprehensive enough, as it still lacks from mandatory use of tori lines and pingers (which are however voluntary implemented by most vessels) and from the mandatory record for all interactions and measures to avoid non-fatal interactions. SG80 is met for all UoCs.</p>		
b	<p>Guidepost</p> <p>The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).</p>	<p>There is an objective basis for confidence that the strategy will work, based on information directly about the fishery and/or the species involved.</p>	<p>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.</p>
Danish seine		Y	N
Purse seine		Y	N
Hooks and lines		Y	N
Gillnets		Y	N
Demersal trawls		Y	N

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. 		
Justification	<p>There is on-site research by IMR through the study of catch composition by the reference fleet. As described in PI2.3.1.b, these interactions have resulted negligible for Danish seine and purse seine but have shown significant interactions with hooks and lines, gillnets and demersal trawls.</p> <p>As regards gear types with higher interactions, such as hooks and lines, gillnets, and demersal trawls, the team considers that the specific measures in place will work in relation to the species and gears affected. Such specific measures are the use of tori lines in the hook and line fleet, the use of pingers in the gillnet fleet, the use of sorting grids and bycatch move on rules for the demersal trawl fleet, and the area closures (fjordlines) for the protection of both coastal cod and golden redfish. Besides, Regulation J-250-2013 applies to all gear types and obliges to the releasement of both spurdogs and porbeagles if entangled. Research undertaken by Madelman and Farrington (2007) shows that shark species have a high survival rate if released soon.</p> <p>The team concludes that the low number of interactions by gears types such as Danish seine and purse seine, and the specific measures in place for hooks and lines, gillnets and demersal trawlers, along with the high post-capture survival rate of certain species, and the reduction in the catch of golden redfish over the past years, give an objective basis for confidence that this strategy will work for all UoCs. SG80 is met by all UoCs.</p> <p>However, the reference fleet only represents a small proportion of the Norwegian fleet, and to this day e-logbooks in normal operational vessels do not record non-fatal ETP interactions, not even catches of elasmobranchs (or any other species) that are released alive, but only landings of those that did not manage to survive. The lack of specific knowledge on both the real impact by the fleet and the status of some ETP species prevent all UoCs from achieving SG100.</p>		
c Guidepost		There is evidence that the strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully.
Danish seine		Y	Y
Purse seine		Y	Y
Hooks and lines		Y	Y
Gillnets		Y	Y
Demersal trawls		Y	Y
Justification	<p>ICES, IMR and NINA conduct research and monitoring of the populations of marine mammal and seabirds. Their results are afterward reviewed by OSPAR and NAMMCO.</p> <p>Norwegian specific management measures such as landing obligation of all species, area closures, bycatch limitations, move on rules, return to sea of alive elasmobranchs, use of sorting grids to avoid catch of juvenile fish, use of specific scaring devices such as streamers (by longlines) and pingers (by gillnets), comprehensive recording system by the reference fleet and a robust enforcement system serve as a clear evidence that the strategy is being implemented successfully. All UoCs reach SG100.</p>		

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. 	
d	Guidepost		There is evidence that the strategy is achieving its objective.
	Danish seine		Y
	Purse seine		Y
	Hooks and lines		N
	Gillnets		N
	Demersal trawls		N
	Justification	<p>The monitoring of interactions with the fishery (conducted by the Norwegian reference fleet), and the monitoring of elasmobranchians, marine mammal and seabird populations by ICES, IMR and NINA, would serve to detect any increase in the risk posed by these populations due to the NEA saithe fishery. Data by the reference fleet show negligible interactions with ETP species by the Danish seine and purse seine fleets. This low level of interactions serves to justify that the strategy is achieving its objective as regards these fishing gears. The Danish seine and purse seine UoCs achieve SG100.</p> <p>As regards the hooks and lines, gillnet and demersal trawl UoCs, the significant level of interactions reported by the reference fleet prevent these UoCs from achieving SG100, as at present is not possible to asseverate that these fleets are achieving the objective of minimizing interactions with ETP species.</p>	
References		http://www.ices.dk/community/groups/Pages/WGFTFB.aspx http://www.ecolex.org/details/legislation/act-no-37-of-2008-relating-to-the-management-and-conservation-of-living-marine-resources-marine-living-resources-act-lex-faoc082017/ http://www.ecolex.org/details/legislation/regulation-no-1475-on-the-ban-from-catch-of-sharks-in-2012-lex-faoc115522/ Northridge (1988) The Norwegian red list of endangered species. http://artsdatabanken.no/Files/13973/Norsk_r_dliste_for_arter_2015_(PDF) CITES Appendix I www.ospar.org Fangel, K., Aas, Ø., Bærum, K. M., Anker-Nilssen, T. & Christensen- Dalsgaard, S. 2015. Utilsiktet bifangst av sjøfugl i norske kystfiskerier med garn og line. - NINA Temahefte 64. 20 s. Mandelman, J.W., and M.A. Farrington. 2007a. The estimated short-term discard mortality of a trawled elasmobranch, the spiny dogfish (<i>Squalus acanthias</i>). Fisheries Research 83 (2007) 238–245.	
OVERALL PERFORMANCE INDICATOR SCORE: Danish seine			90
OVERALL PERFORMANCE INDICATOR SCORE: Purse seine			90
OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines			85



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.	
OVERALL PERFORMANCE INDICATOR SCORE: Gillnets		85
OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawls		85
CONDITION NUMBER (if relevant):		N/A

Evaluation Table for 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	Guidepost	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.
	Danish seine	Y	Y	Y
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	Y
	Justification	The ICES, IMR and NINA institutions collect information on sharks, marine mammals and seabird populations. Landing obligation, implemented in 1987, should serve to detect any increase in landings of ETP species. Besides, the reference fleet has a comprehensive system of recording all interactions by these vessels, including interactions with ETP species. The use of both information on casualties and population status on ETP species serve to provide quantitative information as regards outcome status of ETP species with a high degree of certainty. All UoC achieve SG100.		
b	Guidepost	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.
	Danish seine	Y	Y	N
	Purse seine	Y	Y	N
	Hooks and lines	Y	Y	N
	Gillnets	Y	Y	N
	Demersal trawls	Y	Y	N

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. 		
	Justification	<p>Even though all fatal interactions are recorded by the fleet, the lack of records on non-fatal interactions prevent the fishery from gaining SG100, as so far injuries or other non-fatal impacts cannot be measured. However, it is considered that the information collected is sufficient to determine whether the fishery may be a threat to the protection and recovery of ETP species, as information on fatal interactions is collected by the reference fleet and there is research undertaken by different institutions such as ICES, IMR and NINA on the status of different ETP populations. Information on interactions and information on stock status is considered sufficient to determine whether the fishery is a threat to protection and recovery of ETP species. All UoCs achieve SG80. It is recommended that all vessels record all ETP interactions in an electronic database.</p>		
c	Guidepost	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.
	Danish seine	Y	Y	N
	Purse seine	Y	Y	N
	Hooks and lines	Y	Y	N
	Gillnets	Y	Y	N
	Demersal trawls	Y	Y	N
	Justification	<p>The team considers that the volume of data provided by ongoing monitoring programs by NINA, IMR and ICES on ETP species, as well as landing records from the reference fleet and from the fishery's e-logbooks, are adequate to measure trends and support a full strategy to manage the fatal impacts that the fishery may have on ETP species. It could also serve to evaluate if the strategy is achieving its overall objective. However, the lack of records of non-fatal interactions which could result in injuries on ETP species prevent the fishery from reaching SG100. All UoCs achieve SG80.</p>		
References		<p>Landing records http://www.ecolex.org/details/legislation/act-no-37-of-2008-relating-to-the-management-and-conservation-of-living-marine-resources-marine-living-resources-act-lex-faoc082017/ http://www.ecolex.org/details/legislation/regulation-no-1475-on-the-ban-from-catch-of-sharks-in-2012-lex-faoc115522/ Northridge (1988) http://artsdatabanken.no/Files/13973/Norsk_r_dliste_for_arter_2015_(PDF) CITES Appendix I www.ospar.org ICES advice on spurdog in NEA</p>		
OVERALL PERFORMANCE INDICATOR SCORE: Danish seine				85
OVERALL PERFORMANCE INDICATOR SCORE: Purse seine				85

PI 2.3.3	<p>Relevant information is collected to support the management of fishery impacts on ETP species, including:</p> <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.
OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines	85
OVERALL PERFORMANCE INDICATOR SCORE: Gillnets	85
OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawls	85
CONDITION NUMBER (if relevant): A Recommendation (1) has been set.	N/A

Evaluation Table for PI 2.4.1

PI 2.4.1		The fishery does not cause serious or irreversible harm to habitat structure, considered on a regional or bioregional basis, and function		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The fishery is unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.	The fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.	There is evidence that the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.
	Danish seine	Y	Y	N
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	N
	Justification	<p>MSC guidance suggests that serious (or irreversible) harm refers to change that fundamentally alters the capacity of the component to maintain its function (e.g. reducing ecosystem services; loss of resilience; regime shift; gross changes in composition of dependent species) or to recover from the impact (within timescales of natural ecological processes – normally one or two decades).</p> <p>As shown in both VMS maps and sedimentary maps, most common encountered habitats by the NEA saithe fishery are sandy and muddy bottoms, but also some small rocky and reef areas.</p> <p>The NEA saithe fishery includes several UoCs (which include different fishing gears). While Danish seines and demersal trawls are expected to disturb the seafloor, other gears such as purse seines, hooks and lines and gillnets are expected to have very limited impact on the seafloor, mainly produced by the local impact caused by anchors.</p> <p>The team concludes that it is highly unlikely that the mentioned gears (purse seines, hooks and lines and gillnets) will have any significant impact on the seafloor, as this would only happen in case of gear loss, which is an rare event which is avoided when possible by the crew by choosing smooth fishing grounds. If a gear is lost, efforts will be made to recover it. Impacts on sedimentary bottoms, if any, would have a minimum effect on habitat structure and function, far from being serious or irreversible. The evidence to support the statement that these gears do not reduce the structure and function of habitats encountered (if any), would be its design and testing on testing pools, which show that interactions with the seafloor are not expected. The UoCs that include purse seine, hooks and lines and gillnets achieve SG100.</p> <p>As regards demersal gears that actively touch the seafloor (such as Danish seine and demersal trawls) relocating shallow burrowing infaunal species to the surface of the seafloor, and re-suspending surface sediment, Kaiser et al. (2006) concluded that otter trawling produces a significant, negative, short-term effect on muddy habitats, but no detrimental effects were seen in the long term once the fishing stops. Besides, trawl modified habitats continue to cover ecosystem needs, regardless of showing a lower biodiversity rate. As regards sandy habitats, and according to Meenakumari et al (2008), and Gordon et al (2002) these can recover after trawling disturbance in less than 5 years.</p> <p>As regards hard substrates such as rocky areas, fishermen would avoid deploying the nets in there as it would result in damages for the nets.</p> <p>The team considers that it is highly unlikely that the common habitats affected by these gears would suffer any serious or irreversible harm.</p>		

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
		<p>Within the Norwegian EEZ there are numerous VME habitats which have been identified both by the OSPAR Commission and by the MAREANO program, including corals and sponge aggregations, amongst other species. The Mareano program has comprehensively mapped Norwegian waters, identifying some coral reefs in the Norwegian main coast. These coral reefs, mostly located in coastal areas, have already been protected as Marine Protected Areas, so that the coastal fleet does not fish in there. Besides, trawling is forbidden within 12 nautical miles from the coastline. The VMS on board serves the Directorate of Fisheries to ensure that these areas are not entered by the fleet. The Directorate of Fisheries reported no infringements as regards the Norwegian fleet accomplishment of management measures in MPAs with designated management measures. Besides, Regulation J-40-2016 establishes that if a trawl vessel catches more than 30 kg corals or 400 kg sponges in a single haul the vessel shall stop fishing and move position at least 2 nautical miles in order to avoid such catches and report such incident to the Directorate of Fisheries, although the mandatory use of sorting grids could favour the discarding of such VME species within the water and before the hauling of the net.</p> <p>The team considers that given the already implemented management measures and the nil infractions reported by the Directorate of Fisheries as regards the accomplishment of these management measures, it is highly unlikely that these vulnerable habitats would be irreversibly affected by the Danish seine and bottom trawl UoCs. SG80 is met by the Danish seine and demersal trawl UoCs. Overlapped maps of the VMS activity and the location of VME habitats would serve as an evidence to support a higher score. SG100 is not met.</p>
	References	<p>VMS maps OSPAR threatened habitats maps Regulation J-209-2011 www.mareano.no Meenakumari, B., Bhagirathan, U. and Pravin, P. Impact of Bottom Trawling on Benthic Communities: A Review. Fishery Technology 2008, Vol. 45(1) pp: 1 – 22. https://www.researchgate.net/publication/259979122_Impact_of_bottom_trawling_on_benthic_communities_a_review Kaiser, M. J., Clarke, K. R., Hinz, H., Austen, M. C. V., Somerfield, P. J., and Karakassis, I. 2006. Global analysis of response and recovery of benthic biota to fishing. Marine Ecology Progress Series, 311: 1 –14. Gordon, Donald C. Jr., Ellen L.R. Kenchington, Kent D. Wilkinson, Gordon B.J. Fader, Gordon B.J. Fader, Cynthia Bourbonnais-Boyce, Kevin G. MacIsaac, David L. McKeown, Lea-Anne Henry and W. Peter Vass. Summary of the Western Bank otter trawling experiment (1997-1999): Effects on benthic habitat and communities. Can. Tech. Rep. Fish. Aquat. Sci. 2822: vii + 70 p. http://www.dfo-mpo.gc.ca/Library/336797.pdf Hiddink J.G., Jennings S., and Kaiser M.J (2006). Indicators of the Ecological Impact of Bottom-Trawl Disturbance on Seabed Communities. Ecosystems (2006) 9: 1190– 1199. https://link.springer.com/content/pdf/10.1007%2Fs10021-005-0164-9.pdf</p>
OVERALL PERFORMANCE INDICATOR SCORE: Danish seine		80
OVERALL PERFORMANCE INDICATOR SCORE: Purse seine		100
OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines		100
OVERALL PERFORMANCE INDICATOR SCORE: Gillnets		100
OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawls		80
CONDITION NUMBER (if relevant):		N/A

Evaluation Table for PI 2.4.2

PI 2.4.2		There is a strategy in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to habitat types		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are measures in place, if necessary, that are expected to achieve the Habitat Outcome 80 level of performance.	There is a partial strategy in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above.	There is a strategy in place for managing the impact of the fishery on habitat types.
	Danish seine	Y	Y	Y
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	Y
	Justification	The Norwegian MAREANO program, which maps depth, topography, sediment composition, contaminants, biotopes and habitats in Norwegian waters, serves as a valuable tool to manage habitat types in Norwegian waters, and has help to establish no fishing zones in Norwegian waters, which have been designed mainly to protect cold corals which are mostly located near the shore line, with the exception of two protected areas in more open waters. The mandatory VMS in place serves the enforcement system to verify that these regulations are followed. All UoCs achieve SG100.		
b	Guidepost	The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/habitats).	There is some objective basis for confidence that the partial strategy will work, based on information directly about the fishery and/or habitats involved.	Testing supports high confidence that the strategy will work, based on information directly about the fishery and/or habitats involved.
	Danish seine	Y	Y	N
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	N

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	
c	Justification	<p>The research undertaken in the status of benthic habitats by different institutions such as the OSPAR Commission and the MAREANO program, along with the establishment of protected areas based on these results, serve to provide an objective basis of confidence that the management strategy will work. Vessels carry VMS which serve to monitor their position and accomplishment of regulation measures as regards Marine Protected Areas. Enforcement is carried out by the Norwegian Coast Guard. No infringements were reporting regarding entrance in area closures.</p> <p>It is not expected that pelagic gears as purse seines and hooks and lines, and demersal fixed gears such as gillnets will cause any irreversible harm in the seafloor. The research showing the limited effects of these gears on bottom habitats gives high confidence that the strategy will work. SG100 is met for these fishing gears.</p> <p>As regards fishing gears such as Danish seine and demersal trawlers, these could have an impact on vulnerable habitats if these are not effectively protected. The team considers that with the existing information on bottom habitats in the Norwegian EEZ, there is some objective basis for confidence that the strategy will work. SG80 is met for Danish seines and demersal trawls. The team considers that the strategy won't be fully tested until all Norwegian EEZ are mapped and research in undertaken to see the response of vulnerable habitats to management measures. SG100 is not met for Danish seines nor demersal trawls.</p>	
	Guidepost		<p>There is some evidence that the partial strategy is being implemented successfully.</p> <p>There is clear evidence that the strategy is being implemented successfully.</p>
	Danish seine	Y	Y
	Purse seine	Y	Y
	Hooks and lines	Y	Y
	Gillnets	Y	Y
	Demersal trawls	Y	Y
Justification	<p>The Mareano program began mapping the Norwegian Sea seafloor in 2005 and continues to increase its coverage of the Norwegian EEZ seafloor annually. The Marine Resources Act was established in 2008. Regulation J- 187-2008, which prohibits trawling near coral reefs, was implemented in 2008, while Regulation J-40-2016, which protects corals and sponges through the implementation of a move on rule, was implemented in 2016. In 2016 different areas were closed to the fishing activity in order to protect vulnerable habitats.</p> <p>The Norwegian Coast Guard enforces these regulations, and, as reported by the Directorate of Fisheries, there are no serious infringements to report as regards this UoA.</p> <p>Given the different management measures implemented, the enforcement in place, and the low ratio of infringements, the team considers that there is clear evidence that the management strategy to ensure that the fishery does not cause serious or irreversible harm to habitat types is successfully implemented. All UoCs achieve S100.</p>		

PI 2.4.2		There is a strategy in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to habitat types	
d	Guidepost		There is some evidence that the strategy is achieving its objective.
	Danish seine		N
	Purse seine		N
	Hooks and lines		N
	Gillnets		N
	Demersal trawls		N
	Justification	There is evidence that the Norwegian fishing fleet is not entering protected areas in Norwegian waters. However, there is no evidence as yet of the recovery of vulnerable habitats following area closures. SG100 is not met by any UoC.	
References		Act 17 December 1976 relating to the establishment of the Economic zone of Norway. Arctic Agreement Regulation J-209-2011 Regulation J-40-2016 , http://www.mareano.no/en/about_mareano/activities	
OVERALL PERFORMANCE INDICATOR SCORE: Danish seine			90
OVERALL PERFORMANCE INDICATOR SCORE: Purse seine			95
OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines			95
OVERALL PERFORMANCE INDICATOR SCORE: Gillnets			95
OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawls			90
CONDITION NUMBER (if relevant):			N/A

Evaluation Table for 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	Guidepost	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.
	Danish seine	Y	Y	Y
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	Y
	Justification	The location of all fishing activities can be known thanks to VMS in place. There is broad information as regards the distribution of habitat types in the Norwegian EEZ, as has been collected through the MAREANO Program and the OSPAR Commission (www.ospar.org). Both institutions websites display maps with information on the type of substrate, the seafloor topography, the biota present in the area, the location of vulnerable habitat types and the physical variables in the area. All UoCs achieve SG100.		
b	Guidepost	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.
	Danish seine	Y	Y	N
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	N

PI 2.4.3		Information is adequate to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types		
	Justification	<p>As regards specific impacts that each gear type has, it is known that trawling activity generates disturbance on any type of sediments. Effects such as bottom damage, seabed relief, sediment sorting and species survival, abundance and recovery have been studied in different research programs. According to Kaiser et al (2006), Gordon et al (2002) and Meenakumari et al (2008), soft grounds such as muddy and sandy bottoms are expected to recover quickly, and in a timeframe smaller than 5 years once the disturbance is stopped. It is acknowledged that the composition of the benthic communities may swift favouring more resilient species, but the overall structure and function of the habitats remains. Effects on hard substrate have also been studied and are considered far more harmful.</p> <p>The effect of pelagic gears on sensitive habitats has not been quantified other than by the general observation that such physical impact is avoided by the fishermen as it could generally damage the net, and also by trials of pelagic gears on trial pools showing no interactions with the seafloor. The quantification of physical impacts of bottom fixed gears can be calculated by the study of the number, size and distribution of these gears, and the proportion of affected area versus the Norwegian Sea area.</p> <p>It is therefore considered that sufficient data are available to allow the nature of the impacts of the fishery on habitat types to be identified, and that there is reliable information on the spatial extent of interaction, and the timing and location of use of the fishing gear. Although effects of the bottom trawl gears have been studied in different research papers, its effects in the affected fishing grounds have not been quantified fully yet, although information available should be sufficient to do so. Bottom towed gears such as trawlers and Danish seines achieve SG80.</p> <p>The confidence on the lack of interactions between the pelagic trawls and the seafloor serve to quantify these interactions as nil. The limited interactions of bottom fixed gears and the seafloor serve to quantify these interactions as minimal. Purse seine, hooks and lines and gillnets achieve SG100.</p>		
c	Guidepost		Sufficient data continue to be collected to detect any increase in risk to habitat (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).	Changes in habitat distributions over time are measured.
	Danish seine		Y	N
	Purse seine		Y	N
	Hooks and lines		Y	N
	Gillnets		Y	N
	Demersal trawls		Y	N

PI 2.4.3		Information is adequate to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types
	Justification	Information on habitats continues to be collected through the MAREANO Program and the OSPAR Commission (www.ospar.org). The combination of VMS maps and habitat maps serve to determine the risk that a fishery may have for the habitat of a certain area. SG80 is met by all UoCs. However, the measure of changes in habitat distributions over time would require of habitat maps on the same area that date back time enough to measure trends. SG100 is not met for any UoC.
	References	VMS maps. MAREANO Program OSPAR Commission (www.ospar.org) Gordon, Donald C. Jr., Ellen L.R. Kenchington, Kent D. Gilkinson, Gordon B.J. Fader, Gordon B.J. Fader, Cynthia Bourbonnais-Boyce, Kevin G. MacIsaac, David L. McKeown, Lea-Anne Henry and W. Peter Vass. Summary of the Western Bank otter trawling experiment (1997-1999): Effects on benthic habitat and communities. Can. Tech. Rep. Fish. Aquat. Sci. 2822: vii + 70 p. http://www.dfo-mpo.gc.ca/Library/336797.pdf Kaiser, M. J., Clarke, K. R., Hinz, H., Austen, M. C. V., Somerfield, P. J., and Karakassis, I. 2006. Global analysis of response and recovery of benthic biota to fishing. Marine Ecology Progress Series, 311: 1 –14. Meenakumari, B., Bhagirathan, U. and Pravin, P. Impact of Bottom Trawling on Benthic Communities: A Review. Fishery Technology 2008, Vol. 45(1) pp: 1 – 22. https://www.researchgate.net/publication/259979122_Impact_of_bottom_trawling_on_benthic_communities_a_review
OVERALL PERFORMANCE INDICATOR SCORE: Danish seine		85
OVERALL PERFORMANCE INDICATOR SCORE: Purse seine		95
OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines		95
OVERALL PERFORMANCE INDICATOR SCORE: Gillnets		95
OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawls		85
CONDITION NUMBER (if relevant):		N/A

Evaluation Table for PI 2.5.1

PI 2.5.1		The fishery does not cause serious or irreversible harm to the key elements of ecosystem structure and function		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The fishery is unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	The fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	There is evidence that the fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.
	Danish seine	Y	Y	Y
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	N
	Gillnets	Y	Y	N
	Demersal trawls	Y	Y	N
	Justification	<p>The NEA saithe fishery takes place in the coastal areas of the Norwegian Sea and the Barents Sea ecoregions, both within Norwegian EEZ.</p> <p>The relationships of saithe with prey species on the NEA have been studied through different ecosystem models for the Norwegian Sea (Hjollo et al, 2012; Utne et al, 2012). There are also different ecosystem models specific to the Barents Sea (EwE and Ecospace, ATLANTIS, DSF (Dinamic Stochastic food web)). The ICES Arctic Fisheries Working Group, the ICES WG for Regional Ecosystem Description, and the WG on Integrated Assessment in the Barents Sea, also provide annual assessments on the pressures for the Barents Sea and its response. The different models and assessments provide enough information to support that both the Norwegian and the Barents Sea ecosystems are relatively healthy (affected however by global warming and other human pressures).</p> <p>The Marine Resources Act makes it an explicit requirement that an ecosystem approach is taken to all aspects of marine resource management. Norway maintains extensive ecosystem monitoring and management programmes that review the role of fisheries and target species' trophic role. Similar monitoring programs are carried out by ICES in EU jurisdiction. A key element of this is the annual assessment, management advice and landing for the NEA saithe fishery. The fishery's share of TAC is based on ICES advice, which takes into account the potential needs of other species in the ecosystem, such as other fish species or marine mammals. However, the feed needs of other predators such as seabirds are not yet taken into account.</p> <p>The fact that saithe is not a low trophic level specie, and that the fishing activity is lower than FMSY, and that no major concerns have been identified during the assessment regarding other impacts on the ecosystem that the UoCs may have, give confidence 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.</p> <p>Given the mentioned rationale, the team considers 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. All UoCs achieve SG80.</p>		

PI 2.5.1		The fishery does not cause serious or irreversible harm to the key elements of ecosystem structure and function	
		<p>The evidence to support such argument would be the fact that catch is taken according to scientific advice, that there are other species in the same trophic level and that the Norwegian and Barents Seas have shown availability to respond to ecosystem regime shifts.</p> <p>The team considers that SG100 can be met for the Danish seine and purse seine UoCs, as they have limited interactions both with ETP and primary and secondary species. However, given the numerous ETP species that interact with hooks and lines, gillnets and demersal trawls the team considers that, although it is highly unlikely that the UOCs would cause any irreversible harm to the ecosystem, there is no evidence as regards interactions with non-target species. SG100 is not met for hooks and lines, gillnets and demersal trawls.</p>	
References		<p>ICES 2016 Report of the Arctic Fisheries Working Group (AFWG). Section 1: General description of the Barents Sea Ecosystem.</p> <p>ICES 2016 Report from the WG for Regional Ecosystem Description.</p> <p>ICES 2016 Report from the WG on Integrated Assessment in the Barents Sea.</p> <p>ICES 2017 General overview of the Barents Sea ecoregion</p> <p>ICES 2017 General overview of the Norwegian Sea ecoregion</p> <p>Hjollo et al, 2012;</p> <p>Utne et al, 2012a, b</p>	
OVERALL PERFORMANCE INDICATOR SCORE: Danish seine			100
OVERALL PERFORMANCE INDICATOR SCORE: Purse seine			100
OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines			80
OVERALL PERFORMANCE INDICATOR SCORE: Gillnets			80
OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawls			80
CONDITION NUMBER (if relevant):			N/A

Evaluation Table for PI 2.5.2

PI 2.5.2		There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are measures in place, if necessary.	There is a partial strategy in place, if necessary.	There is a strategy that consists of a plan, in place.
	Danish seine	Y	Y	Y
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	Y
	Justification	<p>The Norwegian EEZ is subject to management measures which seek profit from the fishery as well as the protection of the fishing resources. This is done by the establishment of fishing regulations, mesh limitations and technical measures, closed areas, bycatch limitations, move on rules, enforcement effort, landing obligation, and continue monitoring of many species present in the ecosystem.</p> <p>The Norwegian Marine Resources Act has an explicit requirement to take an ecosystem approach to resource management and exploitation. The act provides the statutory basis for the suite of regional seas management plans (for the North Sea and Skagerrak, the Norwegian Sea, and the Barents Sea), each of them aimed at monitoring and safeguarding the status of the marine environment and the resources it supports. The strategy bases its measures on data gathered through different research institutions (including IMR), ICES advice on fish stocks (which is based on SMS modelling, which includes prey-predator relationships), ICES Advisory Committee on Ecosystems (ACE), habitat mapping programs (MAREANO Programme) and OSPAR Commission research (www.ospar.org).</p> <p>The team considers that all these management measures confirm a plan to ensure that the fishery does not pose a risk of serious or irreversible harm to the ecosystem structure and function. SG100 is met for all UoCs.</p>		
b	Guidepost	The measures take into account potential impacts of the fishery on key elements of the ecosystem.	The partial strategy takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance.	<p>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.</p> <p>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.</p>

PI 2.5.2		There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function		
	Danish seine	Y	Y	Y
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	Y
	Justification	Different management measures, such as effort limitations, enforcement system, and fishing closures, are examples of implemented measures to address main impacts of the fishery in the ecosystem. The mentioned measures are based on a comprehensive collection of information on fish stocks, fishing removals, research undertaken by different research institutions, ICES annual or biennial advice of fishing options, and also from estimations derived from the different Norwegian and Barents Sea ecosystem models. As mentioned above, Norway has developed a suite of regional sea management plans (for the Barents Sea, the Norwegian Sea, and the North Sea and Skagerrak Sea) that are aimed at monitoring and safeguarding the status of the marine environment of the different marine ecosystems in Norwegian EEZ. The Norwegian Marine Resources Act has an explicit requirement to take an ecosystem approach to resource management and exploitation. Both the Norwegian Sea and the Barents Sea management plans contain already implemented measures to address all main impacts of the NEA saithe fishery in the ecosystem, ensuring that the fishery does not cause serious or irreversible harm. SG 100 is met for all UoCs.		
c	Guidepost	The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems).	The partial strategy is considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems).	The measures are considered likely to work based on prior experience, plausible argument or information directly from the fishery/ecosystems involved.
	Danish seine	Y	Y	Y
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	Y

PI 2.5.2		There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function		
	Justification	The comprehensive collection of information of fish stocks, fishing removals, the research undertaken by different research institutions, ICES annual or biennial advice of fishing options, the information obtained from the different Norwegian and Barents Sea ecosystem models, along with effort limitation measures, the rigorous enforcement system, and the fishing closures of certain areas to prevent depletion of vulnerable stocks (such as the fjordline closures to protect coastal cod, and bycatch limitations to protect golden redfish), give confidence that the Norwegian Sea and Barents Sea management plans will work in ensuring the long term sustainability of the ecosystem. An example of this success would be the improvement (although not full recover yet) on the coastal cod and golden redfish stocks after the implementation of management measures. SG100 is met for all UoCs.		
d	Guidepost		There is some evidence that the measures comprising the partial strategy are being implemented successfully.	There is evidence that the measures are being implemented successfully.
	Danish seine		Y	Y
	Purse seine		Y	Y
	Hooks and lines		Y	Y
	Gillnets		Y	Y
	Demersal trawls		Y	Y
	Justification	The different measures have been implemented through different means, for a considerable period so far. These means include banning bycatch, the obligation of the use of VMS, regulating closed areas both for the protection of juveniles and for the protection of vulnerable habitats, establishing procedures for the weighing and sampling of landings, promoting marine research, establishing quotas for different marine stocks in accordance with marine research, and establishment a strong enforcement system through the Directorate of Fisheries and the Norwegian Coast Guard, to ensure the accomplishment of the different measures. Infringements are reported to be negligible. SG100 is met for all UoCs.		
References		<p>The Norwegian Sea ecosystem programme http://www.imr.no/forskning/programmer/okosystem_norskehavet/en The Barents Sea ecosystem programme http://www.imr.no/forskning/programmer/okosystem_barentshavet/en https://ec.europa.eu/fisheries/cfp/fishing_rules/multi_annual_plans_en Norwegian Marine Resources Act ICES advice ICES Advisory Committee on Ecosystems (ACE) MAREANO Programme OSPAR Commission (www.ospar.org) Olsen, E., Gjøsæter, H., Røttingen, I., Dommasnes, A., Fossum, P., and Sandberg, P. 2007. The Norwegian ecosystem-based management plan for the Barents Sea. – ICES Journal of Marine Science, 64: 599–602. ICES 2016 Report of the Arctic Fisheries Working Group (AFWG). Section 1: General description of the Barents Sea Ecosystem. Gullestad P., Blom G., Bakke G., and Bogstad, B. (2015). The "Discard Ban Package": Experiences in efforts to improve the exploitation patterns in Norwegian fisheries. Marine Policy 54 (2015) 1–9.</p>		



PI 2.5.2	There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function	
OVERALL PERFORMANCE INDICATOR SCORE: Danish seine		100
OVERALL PERFORMANCE INDICATOR SCORE: Purse seine		100
OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines		100
OVERALL PERFORMANCE INDICATOR SCORE: Gillnets		100
OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawls		100
CONDITION NUMBER (if relevant):		N/A

Evaluation Table for PI 2.5.3

PI 2.5.3		There is adequate knowledge of the impacts of the fishery on the ecosystem		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Information is adequate to identify the key elements of the ecosystem (e.g., trophic structure and function, community composition, productivity pattern and biodiversity).	Information is adequate to broadly understand the key elements of the ecosystem.	
	Danish seine	Y	Y	
	Purse seine	Y	Y	
	Hooks and lines	Y	Y	
	Gillnets	Y	Y	
	Demersal trawls	Y	Y	
	Justification	<p>Key elements of the ecosystem, such as primary and secondary productivity, and predator-prey relationships, have been studied through different ecosystem models both in the Norwegian and the Barents Seas.</p> <p>The trophic relationships of saithe with prey species on the North East Atlantic have been studied through ecosystem models for the Norwegian Sea (Hjollo et al, 2012; Utne et al, 2012) and the Barents Sea.</p> <p>The Norwegian Institute for Nature Research (NINA) monitors birds populations while the IMR Institute studies the Norwegian Sea ecosystem through the Norwecom.E2E project.</p> <p>Information from these studies is adequate to broadly understand the key elements of the ecosystem in this area. SG80 is met.</p>		
b	Guidepost	Main impacts of the fishery on these key ecosystem elements can be inferred from existing information, and have not been investigated in detail.	Main impacts of the fishery on these key ecosystem elements can be inferred from existing information and some have been investigated in detail.	Main interactions between the fishery and these ecosystem elements can be inferred from existing information, and have been investigated.
	Danish seine	Y	Y	Y
	Purse seine	Y	Y	Y
	Hooks and lines	Y	Y	Y
	Gillnets	Y	Y	Y
	Demersal trawls	Y	Y	Y

PI 2.5.3		There is adequate knowledge of the impacts of the fishery on the ecosystem	
	Justification	<p>Direct fishery interactions are reasonably well understood and indirect effects can be inferred, often from direct experience or comparison with similar species and areas elsewhere. Stock–recruitment relationships are a focus of detailed attention in many stocks, including the targeted saithe.</p> <p>Ecosystem modelling is an on-going aspect of IMR investigations. The different models and projects mentioned in 2.5.1 serve to describe main impacts and interactions between the UoCs and the different ecosystem elements, such as fishery biomass removal, trophic interactions and prey relationships or impacts on the seabed. SG100 is met for all UoCs.</p>	
c	Guidepost	The main functions of the Components (i.e., target, Bycatch, Retained and ETP species and Habitats) in the ecosystem are known.	The impacts of the fishery on target, Bycatch, Retained and ETP species are identified and the main functions of these Components in the ecosystem are understood.
	Danish seine	Y	N
	Purse seine	Y	N
	Hooks and lines	Y	N
	Gillnets	Y	N
	Demersal trawls	Y	N
	Justification	<p>The long-established and long-term research programmes have built a database that ensures that the main functions of the components in the ecosystem are known. Different ecosystem models (mentioned in 2.5.1) provide a broad knowledge of the impacts that the fishery has on the targeted species and dependent predators. Impacts of the fishery on target and retained species are quantified and monitored. Although the landing obligation would require all species to be landed, there is an exemption to it which allows discarding of certain shark species. The lack of records of interactions with those discarded species, along with the lack of records on non-fatal interactions with ETP species make it difficult to assure that main functions of these components in the ecosystem are understood. All UoCs meet SG80.</p>	
d	Guidepost	Sufficient information is available on the impacts of the fishery on these Components to allow some of the main consequences for the ecosystem to be inferred.	Sufficient information is available on the impacts of the fishery on the Components and elements to allow the main consequences for the ecosystem to be inferred.
	Danish seine	Y	Y
	Purse seine	Y	Y
	Hooks and lines	Y	Y
	Gillnets	Y	Y
	Demersal trawls	Y	Y

PI 2.5.3		There is adequate knowledge of the impacts of the fishery on the ecosystem	
	Justification	<p>The long-established and long-term research programmes have built a database that ensures that interactions with fish, bird and mammal components can be inferred even if they cannot be quantified explicitly. Moreover, there is plenty of information regarding the impact that the fishery may have on different scoring elements such as the different fish species in PI 2.1.1. Information collected by the MAREANO programme also serves to infer what may be the consequences for the different affected habitats. Collected information is central to an ecosystem approach, as required by the Marine Resources Act, and is used in the design of both the Norwegian Sea and Barents Sea ecosystem management plans. Available information gathered by landing records and sampling, research investigation and ecosystem modelling are considered adequate to allow the main consequences for the ecosystem to be inferred. SG100 is met for all UoCs.</p>	
e	Guidepost		<p>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).</p> <p>Information is sufficient to support the development of strategies to manage ecosystem impacts.</p>
	Danish seine	Y	Y
	Purse seine	Y	Y
	Hooks and lines	Y	Y
	Gillnets	Y	Y
	Demersal trawls	Y	Y
	Justification	<p>Detailed information is obtained through landing obligation, landing records and sampling, VMS tracks on fishing grounds, ICES advice on different fishing stocks, IMR research trips and programmes, monitoring of marine mammals and bird populations, studies on climate change impacts, sampling on benthic communities and mapping of Norwegian EEZ seabed, along with the enforcement system and monitoring of protected areas, are considered to provide adequate information to detect any increase in risk levels. SG80 is met.</p> <p>The associated database is considered sufficient to support the development of strategies to manage ecosystem impacts. SG100 is met for all UoCs.</p>	
References		<p>IMR Institute for Marine Research Norwecom.E2E project. Utne, K. R., S. S. Hjøllo, G. Huse, and M. Skogen (2012). Estimating the consumption of <i>Calanus finmarchicus</i> by planktivorous fish in the Norwegian Sea using a fully coupled 3D model system. Marine Biology Research 8 (5-6), 527–547. Hjøllo, S.S., Huse, G., Skogena, M.D., and Mellea, W. 2012. Modelling secondary production in the Norwegian Sea with a fully coupled physical/primary production/individual-based <i>Calanus finmarchicus</i> model system. Marine Biology Research April 2012; Volume 8 (5-6): Pages 508-526 http://dx.doi.org/10.1080/17451000.2011.642805.</p>	
OVERALL PERFORMANCE INDICATOR SCORE: Danish seine			95

PI 2.5.3	There is adequate knowledge of the impacts of the fishery on the ecosystem	
OVERALL PERFORMANCE INDICATOR SCORE: Purse seine		95
OVERALL PERFORMANCE INDICATOR SCORE: Hooks and lines		95
OVERALL PERFORMANCE INDICATOR SCORE: Gillnets		95
OVERALL PERFORMANCE INDICATOR SCORE: Demersal trawls		95
CONDITION NUMBER (if relevant):		N/A

Principle 3

Evaluation Table for 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	Guidepost	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	Y	Y

PI 3.1.1	<p>The management system exists within an appropriate legal and/or customary framework which ensures that it:</p> <ul style="list-style-type: none"> 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. 			
	Justification	<p>Norway has a well-established system for fisheries management, which has evolved over more than a century and is now codified in the 2008 Marine Resources Act and secondary legislation. The Act applies to all catch and use of marine resources and their genetic material (§ 3) and covers issues such as bioprospecting (Chapter 2), catch levels and quotas (Chapter 3), catch and use of marine resources (Chapter 4), arrangements on the fishing fields, liability for damage and local regulations (Chapter 5) and monitoring, enforcement, sanctions and criminal liability (Chapters 6–12) (see PI 3.2.3 below).</p> <p>The Marine Resources Act is a framework law, which in the main authorizes the Government to issue specific regulations within designated fields. The most important rules are found in the Regulation on the Execution of Marine Fisheries, which is updated annually. The Regulation contains rules for mesh size, selection and limitations on the use of specific catch gear (Chapters II–V), seasonal restrictions (Chapter VI), bycatch (Chapters VII–VIII), minimal fish size (Chapter IX), discard ban (Chapter X), restrictions on the use of trawl in specific areas (Chapters XI–XII), protection of coral reefs (Chapter XIII), documentation on hold volumes (Chapter XIV), marking of vessels and gear (Chapters XV–XVI), loss of gear (Chapter XVII) and fish welfare (Chapter XVIII). Other important legal instruments are the 1999 Act on the Right to Participate in Fisheries, the 2015 Act on First-Hand Sales of Wild Catch of Marine Resources, the 2016 Regulation on Participation in Fisheries, the 2016 Regulation on Licencing and the 2016 Regulation on Landing and Sales Notes. All Regulations are subject to running modifications and additions through so-called J-orders, which are distributed to the fishing fleet electronically. This includes dedicated and regularly updated annual regulations for the fishery of each specific species, including separate regulations for saithe.</p> <p>The executive body at governmental level is the Ministry of Trade, Industry and Fisheries, while the practical regulation of fisheries is delegated to the Directorate of Fisheries. Enforcement at sea is taken care of by the Coast Guard, which is part of the Royal Norwegian Navy, but performs tasks on behalf of several ministries, including the Ministry of Trade, Industry and Fisheries. Scientific research is performed by the Institute of Marine Research. Fisheries management authorities coordinate their regulatory work with that of other bodies of governance, for instance the Ministry of Climate and Environment and the Norwegian Environmental Agency, which are responsible for the implementation of the integrated management plans for different marine areas. The system is considered to be effective insofar as it constitutes a coherent set of binding rule-making practices. SG 100 is met.</p>		
b	Guidepost	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	Y	Y

PI 3.1.1		The management system exists within an appropriate legal and/or customary framework which ensures that it: <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. 		
	Justification	At the national level in Norway, there is an effective, transparent dispute resolution system in place, as fishermen can take their case to court if they do not accept the rationale behind an infringement accusation by enforcement authorities, or the fees levied against them. Verdicts at the lower court levels can be appealed to higher levels. There are instances from recent years that management authorities have lost cases against fishermen and accepted the verdict, which is a clear demonstration that the system works. SG 100 is met.		
d	Guidepost	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	Y	Y
	Justification	The Norwegian system for fisheries management includes various mechanisms that generally respect and observe the rights of the coastal population along the country's northern, western and southern coast. For the most important species, significantly and proportionately larger quota shares are allotted to coastal fisheries than to the ocean going fleet (see, for instance, the Regulation on Participation in Fisheries for an overview), with particular attention to the traditional fisheries of the coastal Sami population in the northernmost part of the country. The Sami Parliament, which is a consultative body for the indigenous Sami population on Norwegian territory, is consulted on all management measures, including the distribution of the national quota, related to species of particular historic importance to the Sami. The Government has formally committed to this through the 2005 Royal Decree on Consultations with the Sami Parliament. SG 100 is met.		
References		<ul style="list-style-type: none"> • Deltakerloven, LOV-1999-03-26-15, 1999 (Act on the Right to Participate in Fisheries). • Interviews with representatives of the Directorate of Fisheries and Ministry of Trade, Industry and Fisheries during the site visit. • J-36-2016: Forskrift om landings- og sluttseddel (landingsforskriften), 2016 (Regulation on Landing and Sales Notes). • J-115-2016: Konesjonsforskriften, 2016 (Regulation on Licencing). • J-122-2016: Deltakerforskriften, 2016 (Regulation on Participation in Fisheries). • J-125-2016: Forskrift om utøvelse av fisket i sjøen, 2016 (Regulation on the Execution of Marine Fisheries). • J-153-2017: Forskrift om regulering av fisket etter torsk, hyse og sei nord for 62°N i 2017 (Regulation on the Fishery for Cod, Haddock and Saithe North of 62°N in 2017). • Lov om førstehandsomsetning av viltlevande marine ressursar (fiskesalslagslova), LOV-2015-06-19-65, 2015 (Act on First-Hand Sales of Wild Catch of Marine Resources). • Lov om forvaltning av viltlevande marine ressursar (havressurslova), 		

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.	
	<p>LOV-2008-06-06-37, 2008 (Marine Resources Act).</p> <ul style="list-style-type: none">• Meld. St. 10 (2010–2011) Oppdatering av forvaltningsplanen for det marine miljø i Barentshavet og havområdene utenfor Lofoten, 2011 (Update of the [Integrated] Management Plan for the Marine Environment in the Barents Sea and the Marine Area outside Lofoten).• Meld. St. 37 (2012–2013) Helhetlig forvaltning av det marine miljø i Nordsjøen og Skagerrak (forvaltningsplan), 2013 (White Paper on the Integrated Management Plan for the North Sea and Skagerrak).• Meld. St. 35 (2016–2017) Oppdatering av forvaltningsplanen for Norskehavet, 2017 (Update of the [Integrated] Management Plan for the Norwegian Sea).• Prosedyrer for konsultasjoner med Sametinget, Kgl. res. 04/186, 2005 (Royal Decree on Procedures for Consultations with the Sami Parliament).• NEAFC Dispute Resolution Mechanism, Annex K – Amendment of the Convention on Dispute Settlement, 2004.• Prosedyrer for konsultasjoner med Sametinget, Kgl. res. 04/186, 2005 (Royal Decree on Procedures for Consultations with the Sami Parliament).• St. meld. nr. 37 (2008-2009) Helhetlig forvaltning av det marine miljø i Norskehavet (forvaltningsplan), 2009 (White Paper on the Integrated Management Plan for the Norwegian Sea).	
OVERALL PERFORMANCE INDICATOR SCORE:		100
CONDITION NUMBER (if relevant):		

Evaluation Table for PI 3.1.2

PI 3.1.2		<p>The management system has effective consultation processes that are open to interested and affected parties.</p> <p>The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties</p>		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are generally understood.	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for key areas of responsibility and interaction.	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for all areas of responsibility and interaction.
	Met?	Y	Y	Y
	Justification	<p>The most important organizations involved in Norwegian fisheries management are government bodies such as the Ministry of Trade, Industry and Fisheries, the Directorate of Fisheries and the Coast Guard, sales organizations such as the Norwegian Fishermen's Sales Organization, fishermen's organizations such as the Norwegian Fishermen's Association and environmental NGOs such as WWF, Greenpeace and the Norwegian Society for the Conservation of Nature. The Sami Parliament is consulted in the management of fisheries that are of historical importance to the Sami people. The roles, functions and responsibilities of the various actors are clearly defined in longstanding practice and are now codified in the Marine Resources Act and secondary legislation.</p> <p>According to interviews at the site visit, roles, functions and responsibilities are well understood by all involved entities in all areas of responsibility and interaction. SG 100 is met.</p>		
b	Guidepost	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	Y	Y

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		
	Justification	<p>Norway has a long tradition of including non-governmental organizations in fisheries management, with continuous consultation and close cooperation between governmental agencies and user-group organizations, in particular, the Norwegian Fishermen's Association, but also the more specialized organizations such as the fishermen's sales organizations. As these organizations have regional branches, whose representatives are actively involved in policy-making, ensuring that local knowledge is also taken into consideration in the management process. So-called Regulatory Meetings are organized twice a year are open to all; user-group organizations and NGOs attend on a regular basis. In addition, there is day-to-day contact by telephone and email between authorities, user groups and other interested parties. Distribution of the national quota between different gear and fishing fleets has in practice been delegated to the Norwegian Association of Fishermen, which includes all fishermen from the smallest coastal vessels to ocean-going trawlers. Hence, the inherent conflict of interest between different vessel types is handled at the level of the Fishermen's Association, and the outcome is formalized by the Ministry or Directorate after agreement has been reached within the Association. Technical regulation measures are to a large extent decided upon in direct consultations 'over the table' between authorities and user groups at the Regulatory Meetings. As mentioned under SI 3.1.1 d) above, the Sami Parliament is formally consulted in the management of fisheries that are of historical importance to the Sami population.</p> <p>In addition to formal and informal consultation on the running regulation of the fisheries, user-group organizations and authorities work together – e.g. in designated working groups – to tackle new and emerging challenges to the fishery, such as conflicts with the petroleum sector, marine litter, ghost fishing and other threats to the marine environment.</p> <p>User groups such as the Norwegian Fishermen's Association also participate in the annual negotiations conducted between Norway and other countries.</p> <p>Norwegian management authorities actively seek advice from user groups in preparation for all international consultations and negotiations, and user groups are included in the Norwegian delegation.</p> <p>Consultation processes are inclusive and transparent, and according to views expressed by user-group representatives and individual fishermen during the site visit, authorities explain how the information is used or not used. SG 100 is met.</p>		
c	Guidepost		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	Y
	Justification	<p>As follows from SI 3.1.2 b) above, the consultation processes provide ample opportunity for all interested and affected parties to be involved in discussions about fisheries management. All interested parties are given the opportunity to participate in the Regulatory Meetings, which is the most important formal arena for interaction between fisheries management authorities and the public in Norway. Meetings are announced publicly and all relevant stakeholders are well informed about where and when the meetings take place. The fact that the distribution of quota shares between different vessels are in effect decided within the Fishermen's Association before being formalized by the authorities, and that many technical regulations are agreed upon at the Regulatory Meetings, goes to show that authorities give user groups sufficient opportunity and encouragement and actively facilitate their effective engagement. SG 100 is met.</p>		

PI 3.1.2	<p>The management system has effective consultation processes that are open to interested and affected parties.</p> <p>The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties</p>	
References	<p>Interviews with representatives of the Directorate of Fisheries, representatives of the Norwegian Fishermen’s Association and individual fishermen during the site visit.</p> <p>Lov om førstehandsomsetning av villlevande marine ressursar (fiskesalslagslova), LOV-2015-06-19-65, 2015 (Act on First-Hand Sales of Wild Catch of Marine Resources).</p> <p>Lov om forvaltning av villlevande marine ressursar (havressurslova), LOV-2008-06-06-37, 2008 (Marine Resources Act).</p> <p>Lov om kystvakten (kystvaktloven), LOV-2015-06-19-65, 1997 (Coast Guard Act).</p> <p>Referat fra reguleringsmøtet 2. og 3. november 2016, Directorate of Fisheries, 2016 (Minutes from the Regulatory Meeting 2 and 3 November 2016).</p> <p>Referat fra reguleringsmøtet 8. juni 2017, Directorate of Fisheries, 2017 (Minutes from the Regulatory Meeting 8 June 2017).</p> <p>Prosedyrer for konsultasjoner med Sametinget, Kgr. res. 04/186, 2005 (Royal Decree on Procedures for Consultations with the Sami Parliament).</p>	
OVERALL PERFORMANCE INDICATOR SCORE:		100
CONDITION NUMBER (if relevant):		

Evaluation Table for PI 3.1.3

PI 3.1.3		The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Principles and Criteria, and incorporates the precautionary approach		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Long-term objectives to guide decision-making, consistent with the MSC Principles and Criteria and the precautionary approach, are implicit within management policy	Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach are explicit within management policy.	Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are explicit within and required by management policy.
	Met?	Y	Y	Y
	Justification	The 2008 Marine Resources Act requires that Norwegian fisheries management be guided by the precautionary approach, in line with international treaties and guidelines (§ 7 a)), and by an ecosystem approach that takes into account habitats and biodiversity (§ 7 b)). The same objectives are found in the most relevant policy documents, such as the integrated management plans for the Barents and Norwegian Seas, and for the North Sea and Skagerrak. SG 100 is met.		
References		<p>Lov om forvaltning av viltlevande marine ressursar (havressurslova), LOV-2008-06-06-37, 2008 (Marine Resources Act).</p> <p>Meld..St. 10 (2010–2011) Oppdatering av forvaltningsplanen for det marine miljø i Barentshavet og havområdene utenfor Lofoten, 2011 (Update of the [Integrated] Management Plan for the Marine Environment in the Barents Sea and the Marine Area outside Lofoten).</p> <p>Meld. St. 37 (2012–2013) Helhetlig forvaltning av det marine miljø i Nordsjøen og Skagerrak (forvaltningsplan), 2013 (White Paper on the Integrated Management Plan for the North Sea and Skagerrak).</p> <p>Meld. St. 35 (2016–2017) Oppdatering av forvaltningsplanen for Norskehavet, 2017 (Update of the [Integrated] Management Plan for the Norwegian Sea).</p>		
OVERALL PERFORMANCE INDICATOR SCORE:				100
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 3.1.4

PI 3.1.4		The management system provides economic and social incentives for sustainable fishing and does not operate with subsidies that contribute to unsustainable fishing		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and seeks to ensure that perverse incentives do not arise.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and explicitly considers incentives in a regular review of management policy or procedures to ensure they do not contribute to unsustainable fishing practices.
	Met?	Y	Y	Y
	Justification	<p>The management system provides for negative incentives designed to prevent fishers from violating regulations (see PI 3.2.3 on the enforcement system for details), designed to meet the outcomes expressed by MSC Principles 1 and 2 (see PIs 3.1.3 and 3.2.1 on the objectives of the general and fishery-specific management systems, respectively). These incentives are subject to regular internal review of enforcement policies. A risk-based framework aimed at utilizing resources to optimize compliance at any given moment is applied, implying that priorities are regularly amended.</p> <p>The management system does not include any subsidies that contribute to unsustainable fishing or ecosystem degradation. Subsidies to the fishing fleet were terminated in 1990 following the agreement between the European Free Trade Area signatories, negotiated in preparation of the European Economic Area Agreement. Since incentives are explicitly reviewed on a regular basis, and no subsidies exist in the fishery, SG 100 is met.</p>		
References		<p>Interviews with representatives of the Directorate of Fisheries, representatives of the Norwegian Fishermen's Association and individual fishermen during the site visit.</p> <p>Lov om forvaltning av viltlevande marine ressursar (havressurslova), LOV-2008-06-06-37, 2008 (Marine Resources Act).</p>		
OVERALL PERFORMANCE INDICATOR SCORE:				100
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 3.2.1

PI 3.2.1		The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Objectives, which are broadly consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are implicit within the fishery's management system	Short and long-term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.	Well defined and measurable short and long-term objectives, which are demonstrably consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.
	Met?	Y	Y	Y
	Justification	Well defined and measurable short and long-term objectives consistent with achieving the outcomes of MSC Principles 1 and 2 are explicit in the integrated management plans for the Barents and Norwegian Seas, the Marine Resources Act and supporting legislation on the Norwegian saithe fishery. This includes objectives to maintain fish stocks at sustainable levels (here: both target stocks and other retained species) and protect other parts of the ecosystem, such as habitats. These objectives are well defined and measurable, in the sense that performance against them can be measured through the enforcement bodies' recording and inspection routines (see PI 3.2.3). SG 100 is met.		
References		<p>J-125-2016: Forskrift om utøvelse av fisket i sjøen, 2016 (Regulation on the Execution of Marine Fisheries).</p> <p>J-153-2017: Forskrift om regulering av fisket etter torsk, hyse og sei nord for 62°N i 2017 (Regulation on the Fishery for Cod, Haddock and Saithe North of 62°N in 2017).</p> <p>Lov om forvaltning av villlevande marine ressursar (havressurslova), LOV-2008-06-06-37, 2008 (Marine Resources Act).</p> <p>Meld. St. 10 (2010–2011) Oppdatering av forvaltningsplanen for det marine miljø i Barentshavet og havområdene utenfor Lofoten, 2011 (Update of the [Integrated] Management Plan for the Marine Environment in the Barents Sea and the Marine Area outside Lofoten).</p> <p>Meld. St. 35 (2016–2017) Oppdatering av forvaltningsplanen for Norskehavet, 2017 (Update of the [Integrated] Management Plan for the Norwegian Sea).</p>		
OVERALL PERFORMANCE INDICATOR SCORE:				100
CONDITION NUMBER (if relevant):				

Evaluation Table for PI 3.2.2

PI 3.2.2		The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives, and has an appropriate approach to actual disputes in the fishery under assessment.		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	There are some decision-making processes in place that result in measures and strategies to achieve the fishery-specific objectives.	There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.	
	Met?	Y	Y	
	Justification	Established decision-making procedures at national level in Norway – evolved over several decades and now codified in the 2008 Marine Resources Act and secondary legislation – ensure that strategies are produced and measures taken to achieve the fishery-specific objectives. This applies to the saithe fisheries as it does to Norwegian fisheries in general; see PIs 3.1.1 and 3.1.2 above. The Ministry of Trade, Industry and Fisheries decides on policy and regulatory schemes, while the Directorate of Fisheries acts as a technical body with a main responsibility for secondary legislation. The Directorate and the Coast Guard perform compliance control, on shore and at sea respectively. The decision-making processes include the allocation of national quotas to different fleet groups according to an elaborate distributional scheme based on vessel groups defined by gear and length of the vessels. Further, technical regulations are defined by the Directorate of Fisheries, after consultations with user groups and other stakeholders. The enforcement system is further described under PI 3.2.3 below. SG 100 is met.		
b	Guidepost	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	Y	Y

PI 3.2.2		The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives, and has an appropriate approach to actual disputes in the fishery under assessment.		
	Justification	<p>The well-established decision-making procedures in the Norwegian system for fisheries management respond to issues identified in research, monitoring, evaluation or by groups with an interest in the fishery through the arenas for regular consultations between governmental agencies and the public. This happens first and foremost at the Regulatory Meetings, further through ad hoc consultation with the industry and other stakeholders (see PI 3.1.2 above). In addition, there is close contact between authorities and scientific research institutions, primarily between the Directorate of Fisheries and the Institute of Marine Research. Both scientists and user-group representatives claim that the relevant governmental agencies are open to any kind of input at any time. They feel that the authorities' response is transparent and timely and that the ensuing policy options take adequate account of their advice. One recent example is how Norwegian authorities immediately took action when the seapen challenge was identified (see discussion under P2 above).</p> <p>It is a principal challenge to claim that absolutely 'all' issues are responded to, which is required to achieve a 100 score on this SI, but from an opposite point of view, we cannot see that there issues that are not responded to in this fishery. Hence, SG 100 is met.</p>		
c	Guidepost		Decision-making processes use the precautionary approach and are based on best available information.	
	Met?		Y	
	Justification	Decision-making processes are based on scientific recommendations from ICES and the Institute for Marine Research. The Norwegian Marine Resources Act, which applies to the capture of all marine species, requires fisheries management to be based on the precautionary approach (see PI 3.1.3 above). SG 80 is met.		
d	Guidepost	Some information on fishery performance and management action is generally available on request to stakeholders.	Information on fishery performance and management action is available on request, and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.	Formal reporting to all interested stakeholders provides comprehensive information on fishery performance and management actions and describes how the management system responded to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.
	Met?	Y	Y	Y

PI 3.2.2		The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives, and has an appropriate approach to actual disputes in the fishery under assessment.		
	Justification	The Ministry of Trade, Industry and Fisheries submits annual reports to the Parliament on behalf of the entire system for fisheries management (see PI 3.2.5 below). Other involved agencies, such as the Institute of Marine Research, the Directorate of Fisheries and the Coast Guard, produce annual reports that are available to the public on request. In these reports, actions taken or not taken by the relevant authority are accounted for, including those proposed on the basis of information from research, monitoring, evaluation and review activity. The website of the Directorate of Fisheries contains detailed and updated information on quotas and catches broken down to individual vessels, species and gear, among other things. In the opinion of the assessment team, this counts as formal reporting appropriate to the context of the fishery, as much as letters to stakeholders would have done. SG 100 is met.		
e	Guidepost	Although the management authority or fishery may be subject to continuing court challenges, it is not indicating a disrespect or defiance of the law by repeatedly violating the same law or regulation necessary for the sustainability for the fishery.	The management system or fishery is attempting to comply in a timely fashion with judicial decisions arising from any legal challenges.	The management system or fishery acts proactively to avoid legal disputes or rapidly implements judicial decisions arising from legal challenges.
	Met?	Y	Y	Y
	Justification	The Norwegian system for fisheries management is not subject to continuing court challenges. When occasionally taken to court by fishing companies, the management authority complies with the judicial decision in a timely manner. There are, for instance, recent examples of authorities losing court cases and immediately accepting the verdict. However, the management authority works proactively to avoid legal disputes. This is done partly through the tight cooperation with user groups at the regulatory level (see PI 3.1.2 above), ensuring as high legitimacy as possible for regulations and other management decisions. Regulatory and enforcement authorities offer advice to the fleet on how to avoid infringements, on request but often on their own initiative (see PI 3.2.3 below). For example, Coast Guard inspectors work in a dedicated manner to communicate with fishers on the fishing grounds, keeping them updated on changes in regulations and explaining the rationale of the rules in an attempt to increase their legitimacy. In 2012, the enforcement agencies were given the authority to issue administrative penalties for minor infringements (serious enough to be met by a reaction above a written warning), thus referring only the more serious cases to prosecution by the police and possible transfer to the court system. SG 100 is met.		
References		Interviews with representatives of the Directorate of Fisheries, the Institute of Marine Research, the Ministry of Trade, Industry and Fisheries and the Norwegian Fishermen's Association as well as individual fishermen during the site visit. Lov om forvaltning av villlevande marine ressursar (havressurslova), LOV-2008-06-06-37, 2008 (Marine Resources Act). Referat fra reguleringsmøtet 2. og 3. november 2016, Directorate of Fisheries, 2016 (Minutes from the Regulatory Meeting 2 and 3 November 2016). Referat fra reguleringsmøtet 8. juni 2017, Directorate of Fisheries, 2017 (Minutes from the Regulatory Meeting 8 June 2017).		



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.	
OVERALL PERFORMANCE INDICATOR SCORE:		100
CONDITION NUMBER (if relevant):		

Evaluation Table for PI 3.2.3

PI 3.2.3		Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with		
Scoring Issue		SG 60	SG 80	SG 100
a	Guidepost	Monitoring, control and surveillance mechanisms exist, are implemented in the fishery under assessment and there is a reasonable expectation that they are effective.	A monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated an ability to enforce relevant management measures, strategies and/or rules.	A comprehensive monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules.
	Met?	Y	Y	Y

PI 3.2.3	Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with
Justification	<p>The 2008 Marine Resources Act contains provisions in Chapter 6 on fishermen's duties to contribute to an effective control (see, e.g., § 36 and § 39 on catch log and sales notes requirements, respectively); in Chapter 7 on authorities' responsibilities for control and enforcement (including, in § 48, the sales organizations' control obligations); in Chapter 8 measures to combat illegal, unreported and unregulated (IUU) fisheries (including § 50 on the ban to land IUU catch); and in Chapter 9 on illegally caught fish.</p> <p>The Marine Resources Act places the overall responsibility for monitoring, control and surveillance in Norwegian fisheries with the Directorate of Fisheries (§ 44). The 1997 Coast Guard Act provides the Coast Guard with the authority to conduct inspections in waters under Norwegian jurisdiction, within the fields covered by the Marine Resources Act and secondary legislation given with statutory authority in that Act (§ 9). Hence, MCS in Norwegian fisheries is taken care of through shared responsibility and close collaboration between the Directorate of Fisheries, the Coast Guard and the regional sales organizations. The Directorate of Fisheries keeps track of how much fish is taken of the quotas of individual vessels, different vessel groups and other states at any given time, based on reports from the fishing fleet. Norwegian vessels are required to have electronic logbooks, or more specifically Electronic Reporting Systems (ERS). This implies that real-time data are forwarded to the Directorate of Fisheries, with the possibility to make corrections of data submitted each day within 12 hours into the next day. Norway has agreements in place with a number of other countries about exchange of ERS data, including the EU. The self-reported catch data can be checked at sales operations through the sales organizations, which have monopoly on first-hand sale of fish in Norway, and through physical checks performed by the sales organizations, the Directorate of Fisheries and the Coast Guard. The sales organizations are required to record all landings of fish in Norway and keep track of how much remains of a vessel's quota at any given time, on the basis of the landings data. This information is compared to the figures provided by the vessels to the Directorate of Fisheries through the electronic logbook. The value of any catch delivered above a vessel's quota is retained by the sales organization and used for control purposes. The sales organizations have their own inspectors who carry out physical controls of landings. They check, among other things, weighing equipment, quantity and size distribution of the catch, the quality of the fish and documentation. The Directorate has seven regional offices along the coast, staffed with inspectors that carry out independent physical control of the fish at the point of landing, including total volume, species and fish size. All landings have to be reported six hours in advance in order to give the inspectors the possibility to check the landed catch. The landed volumes are compared to the volumes reported to the Directorate through the logbooks. Both landing and at-sea control is conducted using a risk-based framework aimed at utilizing resources to optimize compliance at any given moment.</p> <p>As mentioned under SI 3.1.1 a) above, the Coast Guard is administratively part of the Norwegian Navy but performs tasks on behalf of several ministries, including the Ministry of Trade, Industry and Fisheries. Its most important field of work in practice is fishery inspections. Coast Guard inspectors board fishing vessels and control the catch (e.g. catch composition and fish size) and fishing gear (e.g. mesh size) on deck and the volume of fish in the holds. Using the established conversion factors for the relevant fish product, the inspectors calculate the volume of the fish in round weight and compare this with the catches reported to the Directorate through the logbooks.</p> <p>There is an extensive exchange of information (e.g. inspection data) among the North East Atlantic states, bilaterally and multilaterally through the NEAFC control and enforcement scheme. As follows, there are a number of possibilities for enforcement authorities to physically check whether the data provided by fishers through self-reporting are correct. In addition, VMS data enables control of whether area restrictions are observed, among other things.</p>

PI 3.2.3		Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with		
		<p>Hence, a comprehensive monitoring, control and surveillance system has been implemented in the fishery and has demonstrated a consistent ability to enforce relevant management measures; see SI 3.2.3 c) below on compliance. SG 100 is met.</p> <p>As follows, there are a number of possibilities for enforcement authorities to physically check whether the data provided by fishers through self-reporting are correct. In addition, VMS data enables control of whether area restrictions are observed, among other things. Hence, a comprehensive monitoring, control and surveillance system has been implemented in the fishery and has demonstrated a consistent ability to enforce relevant management measures; see SI 3.2.3 c) below on compliance. SG 100 is met.</p>		
b	Guidepost	Sanctions to deal with non-compliance exist and there is some evidence that they are applied.	Sanctions to deal with non-compliance exist, are consistently applied and thought to provide effective deterrence.	Sanctions to deal with non-compliance exist, are consistently applied and demonstrably provide effective deterrence.
	Met?	Y	Y	Y
	Justification	<p>Statutory authority for the use of sanctions in the event of infringements of fisheries regulations is given in Chapters 11 and 12 of the Marine Resources Act. Intentional or negligent violations are punished with fines or prison up to one year (§§ 60–63), while infringements committed with gross intent or negligence may be punished with prison up to six years. In the judgment of the seriousness of the infringement, the economic gain of the violation, among other things, is to be taken into consideration (§ 64). Alternatively, catch, gear, vessels or other properties can be confiscated (§ 65).</p> <p>The Norwegian enforcement agencies use a graduated sanctioning system, with sanctions ranging from oral warnings, written warnings and administrative fines to formal prosecution. If the fishers do not accept the fines issued by the enforcement or prosecution authority, the case goes to court. The decision of a lower-level court can then be appealed to higher-level courts.</p> <p>The comprehensive enforcement system (see SI 3.2.3 a) above) combined with the high level of compliance (see SI 3.2.3 c) below) makes it reasonable to assume that the system demonstrably provides effective deterrence. Fishers interviewed during the site visit confirm that it is indeed the case, a finding which is corroborated by social science investigations about compliance in Norwegian fisheries. SG 100 is met.</p>		
c	Guidepost	Fishers are generally thought to comply with the management system for the fishery under assessment, including, when required, providing information of importance to the effective management of the fishery.	Some evidence exists to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery.	There is a high degree of confidence that fishers comply with the management system under assessment, including, providing information of importance to the effective management of the fishery.
	Met?	Y	Y	Y

PI 3.2.3		Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with		
	Justification	<p>Enforcement authorities report the level of compliance in the fishery to be high. In 2016, the Coast Guard carried out 1599 inspections at sea. 74 inspections (4.6 %) resulted in a fine or prosecution. The Directorate of Fisheries performed 1048 controls in the cod, haddock and saithe fishery in 2016. Infringements leading up to prosecution were found in 30 inspections (3 %).</p> <p>As follows from SIs 3.2.3 a) and b) above, the fishery has in place a comprehensive system for monitoring, control and surveillance, including physical checks of fishing operations, catch and gear, as well as a fine-meshed sanctioning system. In addition to these coercive compliance mechanisms, various forms of norm-, legitimacy- and communication-related mechanisms have also proved effective to deliver compliance in Norwegian fisheries. First, there is a degree of social control in the small coastal communities from which the fishery takes place, and the high level of user-group involvement (see SI 3.1.2 above) may provide regulations with a degree of legitimacy that increases fishermen's inclination to comply with them. The same applies to the relationship between fishermen and enforcement officers, which is reported to be good. Inspectors are trained to approach the fishermen in as forthcoming a manner as possible and perceive themselves as having a guidance-providing and not only a policing role towards the fishing fleet.</p> <p>The MSC Fisheries Standard does not give any specific guidance as to what level of compliance is required to conclude that fishers 'comply with the management system under assessment'. Nor would that be reasonable since the absence of infringements in inspection statistics might as well imply that inspectors are not competent (or willing) enough to detect non-compliance, or that they focus attention on those parts of the fishery where compliance is highest; cf. the note on risk-based control above. Hence, compliance statistics can only give an indication, and must be seen in relation to other factors, such as the comprehensiveness of the enforcement system, the legitimacy of the management system as such, assumptions on the reliability of data provided by the enforcement authorities and other anecdotal evidence of compliance. It is the qualitative judgment of the assessment team that the requirement that fishers 'comply with the management system' is met in this fishery – this does not imply that infringements never take place (which is probably not the case in any fishery), but that most rules are generally respected. The requirement that fishers provide information of importance to the effective management of the fishery is definitely met. So the question remains whether fishers are 'generally thought to comply' (required for a 60 score), whether 'some evidence exists' that they comply (required for an 80 score), or whether there is 'a high degree of confidence' that they comply (required for a 100 score). Clearly <i>some evidence exists</i>, so SG 80 is met. The reliability of inspection data from the Norwegian Directorate of Fisheries and Coast Guard is generally considered to be very high, and the inspections scheme very thorough. The level of compliance in at-sea inspections is, in a wider context, high. Inspection data from port control indicate a higher level of non-compliance. Nevertheless, 91 % of infringements revealed relate to one specific type of infringements (gear), so the general compliance in the fishery is still high, not least as far as quota control is concerned. Since the degree of certainty is considered to be high in this case, SG 100 is met.</p>		
d	Guidepost		There is no evidence of systematic non-compliance.	
	Met?		Y	

PI 3.2.3		Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with	
	Justification	As demonstrated under PI 3.2.3 c) above, there is no evidence of systematic non-compliance in the fishery. [Or is there evidence of systematic non-compliance related to gear; cf. SI 3.2.3 c) above? Awaiting response from the DoF.]	
References		<p>Årsrapport Kystvakten 2016 (Annual Report for the Coast Guard 2016), Oslo: Ministry of Defence.</p> <p>Email correspondence with representatives of the Directorate of Fisheries.</p> <p>Gezelius, S.S. (2003/2012), Regulation and Compliance in the Atlantic Fisheries: State/Society Relations in the Management of Natural Resources, Dordrecht: Springer.</p> <p>Hønneland, G. (2000/2012), Coercive and Discursive Compliance Mechanisms in the Management of Natural Resources: A Case Study from the Barents Sea Fisheries, Dordrecht: Springer.</p> <p>Hønneland, G. (2013), Making Fishery Agreements Work: Post-Agreement Bargaining in the Barents Sea, Cheltenham: Edward Elgar.</p> <p>Interviews with representatives of the Directorate of Fisheries, representatives of the Norwegian Fishermen's Association and individual fishermen during the site visit.</p> <p>J-215-2015: Forskrift om posisjonsrapportering og elektronisk rapportering for norske fiske- og fangstfartøy (Regulation on Reporting of Position and Electronic Reporting for Norwegian Fishing and Catch Vessels).</p> <p>Lov om forvaltning av viltlevande marine ressursar (havressurslova), LOV-2008-06-06-37, 2008 (Marine Resources Act).</p> <p>Lov om førstehandsomsetning av viltlevande marine ressursar (fiskesalslagslova), LOV-2015-06-19-65, 2015 (Act on First-Hand Sales of Wild Catch of Marine Resources).</p> <p>Lov om kystvakten (kystvaktloven), LOV-2015-06-19-65, 1997 (Coast Guard Act).</p> <p>[årsrapport kv]</p>	
OVERALL PERFORMANCE INDICATOR SCORE:			100
CONDITION NUMBER (if relevant):			

Evaluation Table for 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	Guidepost	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	Y	N
	Justification	Research is undertaken by the IMR, enabling the achievement of objectives consistent with MSC's Principles 1 and 2. SG 60 is met. A research plan, consisting of a number of strategic research documents within the IMR, is in place which provides management authorities with a strategic approach to research and reliable and timely scientific knowledge. SG 80 is met. The research plan can be classified as comprehensive, but it does not include P3 issues, so SG 100 is not met.		
b	Guidepost	Research results are available to interested parties.	Research results are disseminated to all interested parties in a timely fashion.	Research plan and results are disseminated to all interested parties in a timely fashion and are widely and publicly available.
	Met?	Y	Y	N
	Justification	Research results are available to all interested parties in publicly accessible reports and journal articles. SG 60 is met. They are occasionally distributed by post or email, but their accessibility online meets the requirement of dissemination to all interested parties in a timely fashion, in the opinion of the assessment team. SG 80 is met. This is, however, not the case with the research plan, so SG 100 is not met.		
References		Annual report IMR, 2016		
OVERALL PERFORMANCE INDICATOR SCORE:				80
CONDITION NUMBER (if relevant):				

Evaluation Table for 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	Guidepost	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	Y	N
	Justification	<p>There are various mechanisms in place to evaluate key parts of the fishery-specific management system, but at varied levels of ambition and coverage. At the Regulatory Meetings that take place twice a year (see PI 3.1.2 above), management authorities receive feedback on management practices from the industry and other interested stakeholders, including NGOs. The scientific research component of the fisheries management system is reviewed in ICES reports and advice. The enforcement component is subject to continuous evaluation at meetings between the various bodies involved in enforcement activities, where priorities are hammered out on the basis of risk-based monitoring of past experience. The international side to the Norwegian fisheries management system is reviewed by the Parliament upon submission by the Government (through the Ministry of Trade, Industry and Fisheries) of annual reports on the agreements concluded with other states for the coming year, and the previous year's fishing in accordance with such agreements. The Office of the Auditor General conducts annual reviews of the financial performance of the fishery management system. Hence, the fishery has in place mechanisms to evaluate key parts of the management system, so SG 80 is met.</p> <p>It is a principal challenge to claim that absolutely 'all' parts of a fisheries management system are subject to review, but it seems reasonable to expect some sort of a holistic evaluation of the system as such. The Office of the Auditor General regularly carries out holistic reviews of different sectors of the Norwegian bureaucracy (so-called 'management audits', as opposed to the more traditional, annual financial audits). Such a review of the fisheries management system was undertaken in 2003–2004. At the initiative of the Russian Auditor General, a parallel audit of the Norwegian and Russian management systems for the Barents Sea fisheries was carried out in 2006–2007 and updated in 2011. While this SI, as opposed to SI 3.2.5 b) below, asks about the <i>extent</i> of the reviews and not their <i>frequency</i>, it is the opinion of the assessment team that some level of regularity and consistency in initiative, intent and approach must be present for a series of two or more reviews to qualify as reflecting a 'mechanism'. The parallel revision in 2006–2007 came about at the initiative of the Russian Auditor General, and a decade has passed since then (with a lesser update in 2011). The last 'management review' proper, performed by the Office of the Auditor General at its own initiative, took place 12–13 years ago. (A review of the North Sea fisheries was carried out in 2017, but that does not apply to the fishery-specific management system of the present assessment.) So while holistic evaluations of the Norwegian system for fisheries management have been carried out, in the opinion of the assessment team they fall short of reflecting a 'mechanism'. Hence, SG 100 is not met.</p>		
b	Guidepost	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.

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		
	Met?	Y	Y	N
	Justification	<p>This SI, as opposed to 3.2.5 a) above, does not ask about the <i>extent</i> of reviews (covering some/key/all parts of the management system), but rather about their <i>frequency</i> and whether they are internal or external to the management system. (If that were not the case, scoring 3.2.5 b) would have made no sense in cases where 3.2.5 b) does not reach a 100 score, i.e. if not 'all' parts of the management system are subject to review.) Hence, various forms of evaluation can be taken into consideration under this SI even if they do not comprise the entire management system. But as discussed under SI 3.2.5 a) above, some level of interrelationship between these PIs must be assumed. For instance, external reviews of only peripheral components of the management system should not automatically lead to a positive score on the external review indicator (whether 'occasional' for SG 80 or 'regular' for SG 100), in the opinion of the assessment team.</p> <p>The fishery-specific management system is subject to various forms of internal self-evaluation within the Norwegian bodies of governance (see SI 3.2.5 a) above); these take place on a regular basis. Hence, the requirement for a 100 score is met as far as internal reviews are concerned.</p> <p>The system is also subject to various mechanisms for external review. The international component – Norway's fishery agreements with other states – is annually reviewed by Parliament following the submission of status reports by the Ministry of Trade Industry and Fisheries. None of the stocks under assessment here are subject to joint management with other states, but are managed by Norway alone. Hence, this review mechanism does not qualify as a relevant external review mechanism here (which is required to achieve an 80 score). The same applies to the financial audits performed by the Office of the Auditor General, which cover only a minor and rather peripheral aspect of the fisheries management system, seen in the context of an MSC assessment. As mentioned under SI 3.2.5 a) above, the Office of the Auditor General conducted comprehensive evaluations of the Norwegian system for fisheries management in 2003–2004 and 2006–2007, so the system is indisputably subject to external reviews, thus meeting the criterion for an 80 score. And although it can be debated how often (and at what intervals) reviews must be carried out to meet the SG 100 requirement of 'regular' external reviews, we conclude that it is not met here. While only three years passed between the two mentioned evaluations, none has been carried out for nearly a decade now. SG 100 is not met.</p>		
	References	<p>Forvaltning og kontroll av fiskeressursene i Barentshavet: en parallellevisjon mellom norsk og russisk Riksrevisjon, Office of the Auditor General, Oslo, 2007 (Management and Control of the Fish Resources in the Barents Sea: A Parallel Audit between the Norwegian and Russian Auditors General).</p> <p>Meld. St. 20 (2015–2016) Noregs fiskeriavtaler for 2016 og fisket etter avtalene i 2014 og 2015, 2016 (White Paper on Norway's [International] Fisheries Agreements and Fishing in Accordance with the Agreements in 2014 and 2015).</p> <p>Riksrevisjonens oppfølging av parallellevisjonen med Den russiske føderasjons riksrevisjon om forvaltningen av fiskeressursene i Barentshavet og Norskehavet, Dokument 3:8 (2010–2011), Office of the Auditor General: Oslo, 2011 (The Office of the Auditor General's Follow-up of the Parallel Audit with the Auditor General of the Russian Federation on the Management of the Fish Resources in the Barents Sea and the Norwegian Sea).</p> <p>Riksrevisjonens undersøkelse av fiskeriforvaltningen i Nordsjøen og Skagerrak (The Office of the Auditor General's Investigation of the Fisheries Management in the North Sea and Skagerrak), Dokument 3:9 (2016–2017), Oslo: Office of the Auditor General, 2017.</p>		

PI 3.2.5	<p>There is a system of monitoring and evaluating the performance of the fishery-specific management system against its objectives</p> <p>There is effective and timely review of the fishery-specific management system</p>	
	<p>Riksrevisjonens undersøkelse av forvaltninen av fiskeressursene (The Office of the Auditor General’s Investigation on the Management of Fish Resources), Dokument 3:13 (2003–2004), Oslo: Office of the Auditor General, 2004.</p>	
OVERALL PERFORMANCE INDICATOR SCORE:		80
CONDITION NUMBER (if relevant):		

Appendix 1.3 Conditions

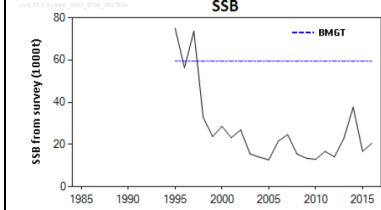
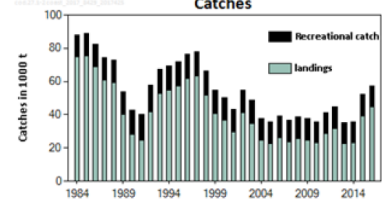
There are 3 conditions, all related to P2.

Table 42 Condition 1: Applies to Danish seine, hooks and lines, gillnets and demersal trawls. The condition only applies to coastal cod as a retained species.

Performance Indicator	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
Score	75
Rationale	<p>SIa SG80: Main retained species are highly likely to be within biologically based limits (if not, go to scoring issue c below). As regards most UoCs (with the exception of purse seine), main retained species to consider are cod and haddock. It has not been possible for the team to determine if the cod taken by the fleet is coastal cod or not. Therefore, both stocks will be considered in the assessment. <u>Cod</u>: The spawning-stock biomass (SSB) has been above MSY Btrigger since 2002, and reaches values that double BMSY. SG100 is met for cod. Coastal cod: The survey estimate in 2015 is close to the lowest value in the time-series and well below the rebuilding biomass set in the Norwegian Rebuilding Plan. SSB is below (nearly half) of the estimated BMSY. Fishing mortality is above FMSY. SG60 and SG80 are not met. Go to SIc. Coastal cod is a main retained species for all UoC, SIa is not met. The species is evaluated under Sic.</p> <p>SIc SG80: 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. <u>Coastal cod</u>: The coastal cod stock is under a Norwegian coastal cod Rebuilding Plan, intended "to rebuild the stock complex to full reproductive capacity, as well as to give sufficient protection to local stock components. Until a biologically founded rebuilding target is defined, the stock complex will only be regarded as restored when the survey index of spawning stock in two successive years is observed to be above 60 000 tons". Although the Rebuilding Plan can be considered as a strategy for the rebuilding of the coastal cod stock, the fact that it was implemented in 2009 with limited results yet, rests confidence in its effectiveness. Besides, a Recovery Plan was first set in 2004. At present catches are higher than the ICES advice. SG80 is not met. SG60 is met for the different UoCs as it is expected that the Coastal cod rebuilding plan will later or sooner succeed in bringing the stock back to safer status, as it did with the North Sea cod stock, which was in a similar situation in the recent past. Besides, ICES evaluated the Norwegian Sea coastal cod rebuilding plan in 2010 and considered it to be consistent with the precautionary approach. SG60 is met for coastal cod.</p>
Condition	By the 4 th surveillance audit client shall demonstrate that the NEA saithe fishery does not pose a risk of serious or irreversible harm to the coastal cod stock, and that it does not hinder its recovery.
Milestones	<p>Annual surveillance 1: The client shall provide disaggregated data on the NEA cod and coastal cod taken by the different UoCs. The client shall evaluate the damage caused to the coastal cod stock by the different UoCs. The client shall report on the efficacy of measures implemented by UoC vessels to reduce coastal cod catch. If measures are not proven to be effective through field trials or if coastal cod</p>

	<p>recovery is not evident, the client is to identify and implement what additional catch reduction measures are to be applied.</p> <p>Annual surveillance 2: The client shall repeat 1st annual surveillance actions until either:</p> <ul style="list-style-type: none"> - Demonstrably effective measures are implemented - Coastal cod recovery is evident. <p>Annual surveillance 3: The client shall repeat 1st annual surveillance actions until either:</p> <ul style="list-style-type: none"> - Demonstrably effective measures are implemented - Coastal cod recovery is evident. <p>Annual surveillance 4: Client shall demonstrate that the NEA saithe fishery does not pose a risk of serious harm to the coastal cod stock (either because the coastal cod stock is recovered or because management measures are proven to be effective).</p>
Client action plan	<p>Coastal cod recovery has been a long standing priority for Norwegian management authorities for the coastal demersal fisheries. It is also a priority for the NFA, both on its own merits and through other MSC certificates that the organization holds. As pointed out in this report, rebuilding measures until now have succeeded in halting the decline in the stock, but are yet to show definitive signs of leading to consistent recovery.</p> <p><u>Action 1.1</u> NFA will, in cooperation with the Directorate of Fisheries, IMR and/or independent 3rd party resources, provide more fine- meshed data on the coastal cod taken by the different UoCs. (SA1, SA2 and SA3). Saithe fisheries on a disaggregate/local level are in most cases quite targeted with limited bycatch. It is therefore expected that this analysis may provide a different outcome than the data that was provided to the CAB at the time of assessment.</p> <p><u>Action 1.2</u> Based on the knowledge gained from 1.1, NFA will assess the impact of the fishery on the coastal cod stock and the efficiency of measures implemented by the UoC to reduce coastal cod catch. (SA2 and SA3)</p> <p><u>Action 1.3</u> If measures are not proving to be effective or if coastal cod recovery is not evident in the period, NFA will liaise with IMR and the Directorate of Fisheries to identify and implement what additional measures can be implemented to further reduce catches of coastal cod in the UoCs. (SA3)</p> <p><u>Action 1.4</u> NFA shall, by SA4, demonstrate that the UoCs do not pose a risk of serious or irreversible harm to coastal cod and an objective basis to score the fishery at an 80 level or above on PI 2.1.1.</p>
Consultation on condition	<p>None. The relevant parties here are the Directorate of fisheries and IMR. As all scoring under principle 3 for these fisheries confirms, these three parties have close consultations with NFA, as well as the larger Norwegian seafood industry. Through both formal and informal channels during the year, NFA provides input on management priorities and research projects. Although successful outcomes cannot be <u>guaranteed</u>, NFA input has heavy emphasis, and there is vast empirical evidence of this. This standing practice in Norwegian management gives the largest degree of credibility to the action plan possible. Should DoF or IMR in spite of this not be able to provide input due to e.g. resource constraints, the condition opens for the use of other private entities to be consulted.</p>

Table 43 Condition 2: Applies to Danish seine, hooks and lines, gillnets and demersal trawls. The condition only applies to coastal cod as a retained species.

Performance Indicator	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
Score	75
Rationale	<p>SIb: 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.</p> <p>All UoCs (Apart from purse seines) have cod (NEA cod and coastal cod) and haddock as main retained species. The status of coastal cod requires of specific management measures, some of which have been implemented for more than 10 years now. And although the coastal cod stock shows some signs of recovery over the years, these are sporadic and short lasting, and catches continue to be at the same levels as in 2004, exceeding ICES Advice. SG80 is not met for coastal cod and all UoCs catching coastal cod.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>SSB (trend)</p>  </div> <div style="text-align: center;"> <p>Catches (trend)</p>  </div> </div> <p>The records on landings, the monitoring of the different species and the scientific advice given for the different stocks serve to give confidence that the measures are likely to work, at least for the other retained species. As regards coastal cod, the success of the cod recovery in the North Sea after the implementation of the Cod Management Plan provide sufficient confidence that the Rebuilding Plan is likely to work. SG60 is met for coastal cod and for all UoCs catching coastal cod.</p>
Condition	By the 4 th surveillance audit the client shall demonstrate that there is some objective basis for confidence that the Norwegian coastal cod rebuilding plan will effectively contribute to the rebuilding of the coastal cod stock.
Milestones	<p>Annual surveillance 1:</p> <p>The client shall provide disaggregated data on the NEA cod and coastal cod taken by the different UoCs.</p> <p>The client shall evaluate the damage caused to the coastal cod stock by the different UoCs.</p> <p>The client shall report on the efficacy of measures implemented by UoC vessels to reduce coastal cod catch.</p> <p>If measures are not proven to be effective through field trials or if coastal cod recovery is not evident, the client is to identify and implement what additional catch reduction measures are to be applied.</p> <p>Annual surveillance 2:</p> <p>The client shall repeat 1st annual surveillance actions until either:</p> <ul style="list-style-type: none"> - Demonstrably effective measures are implemented - Coastal cod recovery is evident. <p>Annual surveillance 3:</p> <p>The client shall repeat 1st annual surveillance actions until either:</p> <ul style="list-style-type: none"> - Demonstrably effective measures are implemented - Coastal cod recovery is evident.

	<p>Annual surveillance 4: Client shall demonstrate that the NEA saithe fishery does not pose a risk of serious harm to the coastal cod stock (either because the coastal cod stock is recovered or because management measures are proven to be effective).</p>
Client action plan	<p>(Joint action plan with condition 1) Coastal cod recovery has been a long standing priority for Norwegian management authorities in their management of coastal demersal fisheries. It is also a priority for the NFA, both on its own merits and through other MSC certificates that the organization holds. As pointed out in this report, rebuilding measures until now have succeeded in halting the decline in the stock, but are yet to show definitive signs of consistent recovery.</p> <p>Action 2.1 NFA will, in cooperation with the Directorate of Fisheries, IMR and/or independent 3rd party resources, provide more fine- meshed data on the coastal cod taken by the different UoCs. (SA1, SA2 and SA3). Saithe fisheries on a disaggregate/local level are usually quite targeted with limited bycatch. It is therefore expected that this analysis may provide a different outcome than the data that was provided to the CAB at the time of assessment.</p> <p>Action 2.2 Based on the knowledge gained from 1.1, NFA will assess the impact of the fishery on the coastal cod stock and the efficiency of measures implemented by the UoC to reduce coastal cod catch. (SA2 and SA3)</p> <p>Action 2.3 If measures are not proving to be effective or if coastal cod recovery is not evident in the period, NFA will liaise with IMR and the Directorate of Fisheries to identify and implement what additional measures can be implemented to further reduce catches of coastal cod in the UoCs. (SA3)</p> <p>Action 2.4 NFA shall, by SA4, demonstrate that the UoCs do not pose a risk of serious or irreversible harm to coastal cod and an objective basis to score the fishery at an 80 level or above on PI 2.1.2.</p>
Consultation on condition	See condition 1.

Table 44 Condition 3: Applies to hooks and lines, gillnets and demersal trawls.

Performance Indicator	<p>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</p>
Score	75
Rationale	<p>SIb: Direct effects are highly unlikely to create unacceptable impacts to ETP species.</p> <p>Landing obligation, implemented in 1987, would require vessels to land any dead animal, regardless it being ETP species or not. Landing records show landings of redfish (unspecified) by most UoCs (with the exception of the purse seine fleet). For 2016, landings of redfish were 72 tones for the Danish seine fleet (0.05% of the total catch of Danish seine vessels); 0 tones for the purse seine fleet; 436 tones for the hooks and lines fleet (0.29% of the hooks and lines landings); 261 tones for gillnets (0.21% of gillnets landings); and 5361 tones for trawlers (1.98% of total landings by demersal trawlers). It was not possible to determine if these individuals of redfish were beaked</p>

	<p>redfish or golden redfish. While the beaked redfish would be considered as a retained species, the golden redfish (<i>Sebastes marinus</i>) is considered as an ETP species as it is listed in the Norwegian Red List of Protected Species. There were no landings of other ETP species by any other UoC under assessment.</p> <p>ICES 2017 advice for golden redfish states that catches should be zero for 2017, 2018 and 2019. The species is red-listed in the Norwegian red list of protected species and catches should be kept to minimum. For the 3600 tonnes landed in 2015 in ICES subareas I and II, 52% were landed by the trawl fleet, 25 % were landed by the gillnet fleet, 20 % by the longline fleet and 3% by other gear types. The spawning-stock biomass (SSB) has experienced a continuous decline since the late 1990s and is currently at the lowest in the time-series of the assessment results. Fishing mortality (F) has been increasing since the mid-2000s, with F in 2015 being the second highest in the time-series. There are specific management measures which were implemented with the intention of reverting the poor situation of this stock. Such measures are area closures and bycatch limitations, and also a move-on rule for the prawn trawl fishery:</p> <ul style="list-style-type: none"> - In 2004 the redfish fishery became banned from 1st to 31st of May. Maximum bycatch allowed was reduced to 20% and a minimum landing size was established at 32 cm. - In 2005 the prohibition to target redfish was extended from 20th April till 19th June. - In 2006 fishing season was again modified, and prohibitions remained during the months of April and September. A minimum mesh size of 120 mm was introduced. - In 2007 fishing was banned from 1st March till 30th June, and also during September. However, the hand-line fleet smaller than 11 m was excluded from these regulations. - In 2012 fishing closures run from 20th December till 30th June, and also during September. However, all hand-line vessels were excepted from the regulatory measures for future years. - In 2015 the fishing closures remained the same but additional restrictions were added such that redfish catch should be less than 50% of the catch per week. - In 2016 fishing closures were modified from previous years, and was now banned from 1st January to 31st July. Catch of redfish was restricted as it shouldn't be more than 30% of the total catch per week. <p>According to IMR, total catch by the Norwegian fleet was reduced from 6233 tonnes in 2004 down to 1969 in 2016 (68 %), where the landings from trawlers was reduced by 82%, while the landings from coastal fleet was reduced by 55 %. In spite of the reduction, as mentioned above, the stock has so far shown no signs of recovery.</p> <p>While the low level of landings of golden redfish by gillnets and hooks and lines could serve to justify that direct effects caused by these gear types are highly unlikely to create unacceptable impacts for the golden redfish stock, the high proportion of landings of golden redfish by the different gear types (trawlers 50%, hooks and lines 25%, and gillnets 25%) as described in ICES 2017 advice for golden redfish prevent these gear types (trawlers, hooks and lines and gillnets) from achieving SG80.</p> <p>Danish seine and purse seine UoCs achieve SG80, as interactions with golden redfish are minimal. The lack of an implemented effective system to record interactions with the different ETP species prevent these UoCs from achieving SG100. The reduction in golden redfish catches as a result of implemented management measures serves to support that gear types such as trawlers, hooks and lines, and gillnets, achieve SG60. However SG80 is not met as the 3 gear types are heavily responsible of golden redfish landings (according to ICES advice).</p>
Condition	By the 4 th surveillance audit the client shall demonstrate that the direct effects of the NEA saithe fishery (specifically with the hooks and lines, gillnets

	and demersal trawl UoCs) are highly unlikely to create unacceptable impacts to ETP species such as golden redfish.
Milestones	<p>Annual surveillance 1 Client shall provide information as regards the impact that each UoC (trawlers, hooks and lines and gillnets) has on the golden redfish stock. When possible, client shall provide disaggregate data as regards interactions with golden redfish and beaked redfish.</p> <p>Annual surveillance 2 Client shall provide an evaluation on the damage caused to the golden redfish stock by the different UoCs to which the condition relates. Client shall evaluate implementations in the existing management strategy to minimise such interactions.</p> <p>Annual surveillance 3 Client shall either reduce interactions or prove that its interactions are not significant to the stocks. Client shall implement the necessary amendments (if needed) to the already existing strategy, to improve its effectiveness.</p> <p>Annual surveillance 4 Client shall demonstrate that the NEA saithe fishery does not pose a risk of serious harm to the golden redfish stock (either because the improvement on their stock status or because management measures are proven to be effective in avoiding interactions).</p>
Client action plan	<p>Action 3.1 NFA will, in cooperation with the Directorate of Fisheries, IMR and/or independent 3rd party resources provide more fine- meshed data on the bycatch of golden redfish taken by the different UoCs. This will also include bottom trawlers where disaggregate data will be provided as for interactions with golden redfish and beaked redfish.</p> <p>Action 3.2 Based on the knowledge gained from 3.1, NFA will assess the impact of the fishery on rebuilding of redfish and the efficiency of measures implemented by the UoC to reduce redfish catches. (SA2 and SA3)</p> <p>Action 3.3 By SA3, it will either be documented that interactions with redfish do not pose a risk of serious or irreversible harm or that further efforts to the existing bycatch reduction strategy are being implemented.</p> <p>Action 3.4 NFA shall, by SA4, demonstrate that the UoCs do not pose a risk of serious or irreversible harm to redfish and an objective basis to score the fishery at an 80 level or above on PI 2.1.2.</p>
Consultation on condition	See condition 1.

Table 45: Recommendation 1.

PI 2.3.3.b	<p>PI 2.3.3: Relevant information is collected to support the management of fishery impacts on ETP species, including:</p> <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. <p>b. Accurate and verifiable information is available on the magnitude of all impacts, mortalities and injuries and the consequences for the status of ETP species.</p>
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Recommendation	It is recommended that all encounters with the different identified ETP species are comprehensively recorded in an electronic database by all vessels in the UoA.
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NORGES FISKARLAG
FISKARLAGETS SERVICEKONTOR AS



DNV GL

Vår dato
10.01.2018

Vår referanse

Vår saksbehandler
Tor Bjørckund Larsen/

Deres referanse

Client Action Plan for meeting the certification conditions for the Norway North East Arctic saithe fishery – reassessment.

The Norwegian Fishermen's Association (NFA) submits this action plan for meeting the conditions for the 2nd reassessment of the Norway North East Arctic (NEA) saithe fishery.

NFA agrees to make a good faith effort to meet the intent of the conditions set forth by the conformity assessment body DNV GL in their client review draft report in December 2017. This report determines that, with a total of three conditions, the fishery is sustainable and well-managed in accordance with the MSC principles and criteria for sustainable fisheries.

The Norwegian Seafood Industry has set up a permanent formal advisory committee working with environmental and eco-labelling issues, reporting to the boards of NFA, the fisherman's sales organizations, the Norwegian Seafood Export Council and the Norwegian Seafood Federation. The Norwegian Ministry of Trade, Industry and Fisheries is a permanent observer to the group. This ensures that all certification decisions, including this action plan, are supported and accepted among all the parties involved directly or indirectly in the fisheries.

In the following sections we will address each of the conditions individually in the table format provided by the CAB.

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APPENDIX 2 PEER REVIEW REPORTS

Peer Reviewer Information

Contact Name	First	PR1	Last	
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Fishery Assessment Details

Fishery	Norway North East Arctic saithe fishery
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Summary of Peer Reviewer Opinion

Has the assessment team arrived at an appropriate conclusion based on the evidence presented in the assessment report?	Yes	CAB Response
<u>Justification:</u> The assessment team concluded that the fishery be certified. The overall determination that this fishery should be certified according to the MSC principles and criteria is appropriate and correctly based on the findings of this assessment.		No comment required

Do you think the condition(s) raised are appropriately written to achieve the SG80 outcome within the specified timeframe? [Reference: FCR 7.11.1 and sub-clauses]	Yes	CAB Response
<u>Justification:</u> I agree with the three conditions, and with the actual topics or tasks that have been identified by the milestones. For condition 3 on PI 2.3.1 however I feel that the condition might be broadened to impacts on other species than golden redfish. See comments on PI 2.3.1 SI2.		No comment required here – see comments in PI 2.3.1 SI2.

If included:

Do you think the client action plan is sufficient to close the conditions raised? [Reference FCR 7.11.2-7.11.3 and sub-clauses]	Yes	CAB Response
<u>Justification:</u>		No comment required

Performance Indicator Review

Table 46 For reports using one of the default assessment trees:

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

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary. Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
2.1.1	No	No	Yes	Purse seine UoC: it was determined that there are no minor retained species since 99% of the catch is saithe. This however only means that there are no main retained species. Species that consist less than 1 % of the catch should still be considered as minor retained species. SG100a is not met unless there is a high degree of certainty that retained species are within biologically based limits and fluctuating around their target reference points.	99.93 % of purse seine landings are the targeted saithe. 0.05% of the landings are cod, with 15 tonnes landed in 2016, while 0.02% of the landings are haddock, with 6 tonnes landed in 2016. The team considers that these catches are incidental, rather than representative of the fishery, and for that reason decided not to score them as minor species. In any case, both the stock status of oceanic cod and haddock are in a very healthy situation, with SSB being well above BMSY. Score remains unchanged at SG100. No changes in the report.

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

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary. Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
2.3.1	Yes	No	Yes (see comments on Condition 3 above)	<p>SlA: it is concluded that international requirements do not set limits to the bycatch of ETP species and that therefore SG100a is met. However the fact that there are no quantitative limits defined does not mean that international requirements are always met outcome status is good. It should be also considered qualitatively whether effects on ETP species protected species are within the limits defined by their protected state.</p> <p>Slb: Other ETP species are mentioned in the rational but it seems that only the impact on golden redfish is scored. (Maybe the rational is cut off?). The rational should also conclude about the impact on other species that are discussed in the rational. If the impact on other species (like elasmobranchs) can not be determined highly unlikely to have unacceptable impacts on this species this should also be reflected in the condition.</p>	<p>SlA: wording has been modified. Scoring remains unchanged.</p> <p>Slb: The rationale on Slb talks about all species recorded by the reference fleet. However, with the data given by the reference fleet, the team can not distinguish which was the targeted species for each gear type or which was the fishing area (apart from North or South 62°N). Therefore there is no sufficiently strong rationale to conclude that impacts by the UoCs will be comparable. The information on the reference fleet has been given to give a broader view on possible impacts. However, the only impacts as reported in the UoCs landings are impacts with golden redfish.</p> <p>A recommendation is already in place to improve the recording of non- fatal interactions. Scoring remains unchanged.</p>

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary. Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
2.3.2	No	No	NA	Slc: it is concluded that there is an objective basis for confidence that the strategy will work, based on information directly about the fishery and/or the species involved. However concerning the impact of demersal trawls some concerns are raised (no reporting) and the real impact of the fleet is not known. This uncertainty of impacts should be reflected in the scoring of PI 2.3.1 and it also would mean that SG80c for OI 2.3.2 is not met.	The no reporting concern is only referring to non-fatal interactions. A recommendation is in place to improve such knowledge. Scoring remains unchanged.
2.3.3	Yes	No		SG80 indicators are all met but as concluded under PI 2.3.2 there is concern about the reporting of interactions with ETP species and that the real impact of the demersal fleet on other ETP species is not known. This should be reflected in the scoring and a condition should be formulated.	There is good information as regards fatal interactions as those species are landed and recorded in landing records. The lack of information refers to non-fatal interactions. A recommendation is in place to improve such knowledge. Rationale and scoring remains unchanged.

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary. Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
2.4.1	Yes	Yes	NA		No comment required.
2.4.2	Yes	Yes	NA		No comment required.
2.4.3	Yes	Yes	NA		No comment required.
2.5.1	No	No	NA	The rational focusses on the impact of the removal of saithe from the ecosystem. Impacts on other elements of the ecosystem like bycatch species and interactions with ETP species and habitats should also be considered.	The team considers that the impacts of the fishery on other elements such as retained, bycatch, ETP species and habitats is already evaluated in the different PI's. A new sentence has been added to highlight that the fishery does not raise any special concerns on any of these topics. Score remains unchanged.
2.5.2	Yes	Yes	NA		No comment required.

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary. Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
2.5.3	Yes	No	NA	Sld: The rational should also consider the main impacts on the elements of the ecosystem.	A new sentence has been added regarding the available information on scoring elements such as the primary species. No changes in score.
3.1.1	Yes	Yes	NA		No comment required.
3.1.2	Yes	Yes	NA	Final conclusion that SG100a is met is lacking (although clear from the rational)	This has now been inserted into the report. (We assume the reviewer refers to SI c) and not a).)
3.1.3	Yes	Yes	NA		
3.2.1	Yes	Yes	NA	Final conclusion that SG100a is met is lacking (although clear from the rational)	This has now been inserted.
3.2.2	Yes	Yes	NA	Final conclusions on scores are lacking on all SI's (although clear from the rational)	This has now been inserted.

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary. Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
3.2.3	Yes	No	NA	The rational for SIb concludes that the comprehensive enforcement system makes it reasonable to assume that the system provides effective deterrence. This would suggest that only SG80 is met It is not concluded that sanctions demonstrably provide effective deterrence nor that SG100 is met.	The team upholds the 100 score here and has amended the text accordingly. 'Demonstrably' documenting compliance is a challenging task in any fishery; hence the more careful original wording in the justification. That said, in a wider context compliance in this fishery is very high, and documentation to that effect is more convincing than in most other large-scale fisheries. Hence the 100 score.

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary. Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
3.2.4	No	No		The rationale for SG80a states that there is a research plan for the North Sea. This statement is merely repeating the scoring issue but the research plan is not mentioned in the body of the report nor in the references. Some further explication is necessary.	The research plan does not consist of one single document, but of a multitude of strategic research plans within the IMR, which is not uncommon in a large-scale fishery within a 'mature' management context (where systems for research planning have evolved over decades – in this case for more than a century – hence, appropriate to the context of the fishery). The text in the rationale has been amended.
3.2.5	Yes	Yes	NA		No comment required.

Peer Reviewer Information

Contact Name	First	PR2	Last	
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Fishery Assessment Details

Fishery	Norway North East Arctic saithe fishery
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Summary of Peer Reviewer Opinion

Has the assessment team arrived at an appropriate conclusion based on the evidence presented in the assessment report?	Yes	CAB Response
<u>Justification:</u> I have agreed with all the scores and the Conditions set		No comment required.
Do you think the condition(s) raised are appropriately written to achieve the SG80 outcome within the specified timeframe? [Reference: FCR 7.11.1 and sub-clauses]	Yes	CAB Response
<u>Justification:</u>		No comment required.

If included:

Do you think the client action plan is sufficient to close the conditions raised? [Reference FCR 7.11.2-7.11.3 and sub-clauses]	Yes	CAB Response
<u>Justification:</u> The client has correctly all the actions that are appropriate to them in addressing these three Conditions		No comment required.


Performance Indicator Review

- General Comments of Peer reviewer. (repeated at the end of the report)**

The text of the report is generally good in particular the sections related to Principles 2 and 3. However I was disappointed with the report section on Principle 1. The information provided in this section of the report is very sparse, lacks important detail and in my opinion falls well short of the high standard I have come to expect in an MSC report.

I think that the problem, as I see it, is almost certainly related to the undoubted vast experience and stock assessment expertise of the P1 expert. In that context I feel that he has taken too much for granted and failed to provide the ordinary reader with sufficient background to this fishery and its assessment.

I will not go into great detail on this, mainly because I do not expect the team to do anything about my comments, but I will provide one example of what I mean, namely the stock assessment modelling. This relatively new State Space Assessment model (SAM) is unconventional in the ICES suite of models and should be described in a bit more detail rather than simply giving the reader a reference to look up. The model has many strengths compared with other models, not least the fact that it offers 95%



confidence intervals on all the estimated parameters. However, it also has potential weaknesses which have manifested themselves retrospectively in some other ICES assessments, where the model has been abandoned. This should at least be mentioned in an honest description and appraisal of SAM.

Finally, some explanation of the basis of the management Reference points not simply an ICES reference. Does the ordinary reader for example know what the change point in the regression for Blim means? It only need a short sentence and *'job done'*

The general lack of detail in the report has impacted on the scoring comments against some performance indicators in Principle 1 and this will be dealt with appropriately.

Table 47 For reports using one of the default assessment trees:

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary. Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
1.1.1	No	No	N/A	Needs to explain the Blim reference point as defined by ICES, ie the change point in the regression. Also needs to quote the 95% confidence intervals which strongly support the scoring. These must be listed in the current stock status relative to reference points Table	Text in report updated, Blim explained in a footnote and reference inserted to the ICES (2017)Advice technical report. Justification text Sla updated and CV value inserted
1.1.2	No	No	N/A	Again needs to be more explicit on how Blim is set (there are many different approaches by ICES) At 1.1.2c where is the evidence that oprecautionary issues such as the ecological rolve of the stock are taken into account with a 95% probability – certainly not inther text of the report.	Table 14 informs that the approach is “change point regression”, i.e. segmented regression, see Advice Technical report Table 12.4.3.1.3, Type 2
1.2.1	Yes	Yes	N/A	Score of 100 well supported	No comment required.

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary. Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
1.2.2	Yes	Yes	N/A	Score of 90 OK weakness at scoring issue b identified	No comment required.
1.2.3	Yes	Yes	N/A	Information adequate here but spares in the text of the report	No comment required.
1.2.4	No	No	N/A	From personal knowledge I know that the score is correct. However, the information provided here and in the text of the report is inadequate. I have explained in my general comments that SAM and in particular the confidence interval estimates need explaining and listing at least for SSB and F	The justification text has been updated with more information on the SAM approach.
2.1.1	Yes	Yes	Yes	The failure to meet SG 60 at scoring issue a is allowed in the assessment tree and is addressed at scoring issue c. The PI correctly generates an appropriate Condition for all gears apart from the Purse seine which scores 100 at a as it does not impact on Coastal cod.	No comment required.

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary. Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
2.1.2	Yes	Yes	Yes	Addresses the issues related to Coastal cod and this fishery which appropriately generates a Condition	No comment required.
2.1.3	Yes	Yes	N/A		No comment required.
2.2.1	Yes	Yes	N/A	No bycatch species permitted by law but this topic and the exceptions are comprehensively covered.	No comment required.
2.2.2	Yes	Yes	N/A	Score of 95 well supported	No comment required.
2.2.3	Yes	Yes	N/A	Clearly not possible to quantitatively estimate outcome status for all species and all gears. Score of 85 correct	No comment required.

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary. Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
2.3.1	Yes	Yes	Yes	The uncertainty regarding the impact of some gears on ETP,species is exceptionally well documented in the report. This has correctly generated a Condition for three of the gears which do not fully meet the international requirements for the protection of ETP species	Received with thanks.
2.3.2	Yes	Yes	N/A	The management strategies are well described for each gear	No comment required.
2.3.3	Yes	Yes	N/A	Information provided correctly scores 85 for all gears.	No comment required.
2.4.1	Yes	Yes	N/A	Main issues with the Danish Seine trawl and demersal trawl, all with sea bed impact, They correctly only scores 80 whilst other three gears score 100..	No comment required.
2.4.2	Yes	Yes	N/A	Same issues as above with the Danish Seine and demersal trawl with reduced scores	No comment required.

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary. Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
2.4.3	Yes	Yes	N/A	Again same issues correctly identified plus the issue of the measurement of changes in habitat distribution over time in relation to all, gears.	No comment required.
2.5.1	Yes	Yes	N/A	A lack of evidence of the ecosystem impact by some gears on non target species,	No comment required.
2.5.2	Yes	Yes	N/A	Measures are in place, 100 score justified	No comment required.
2.5.3	Yes	Yes	N/A	A lack of knowledge of the ecosystem impact on the target species, by catch species, retained species and ETP species correctly reduces the score to 95.	No comment required.
3.1.1	Yes	Yes	N/A	The legal and customary framework essential to deliver the requirements of P1 and P2 are very well established by Norway and well described in the report	No comment required.
3.1.2	Yes	Yes	N/A	Procedures well established in Norway.	No comment required.

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary. Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
3.1.3	Yes	Yes	N/A	The requirements of the Marine Resources Act underpin a score of 100 here	No comment required.
3.1.4	Yes	Yes	N/A	Please note that this template did not provide a 3.1.4 PI comment line. The requirements for a score of 100 are fully met	No comment required.
3.2.1	Yes	Yes	N/A	All objectives are clear and explicit	No comment required.
3.2.2	Yes	Yes	N/A	Very well described and 100 score supported	No comment required.
3.2.3	Yes	Yes	N/A	MCS system in Norway is first class and the evidence is well documented in the report and scoring comments	No comment required.
3.2.4	Yes	Yes	N/A	Will I ever see a score above 80 at this PI?? The issues at SG 100 a and b are generally met but the publication and dissemination of a Research Plan per se is just not the way things happen!	The team agrees. No further comments.

Performance Indicator	Has all available relevant information been used to score this Indicator? (Yes/No)	Does the information and/or rationale used to score this Indicator support the given score? (Yes/No)	Will the condition(s) raised improve the fishery's performance to the SG80 level? (Yes/No/NA)	Justification Please support your answers by referring to specific scoring issues and any relevant documentation where possible. Please attach additional pages if necessary. Note: Justification to support your answers is only required where answers given are 'No'.	CAB Response
3.2.5	Yes	Yes	N/A	Please note that this template did not provide a 3.2.5 PI comment line. The requirements for a score of 80 are fully met	No comment required.


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

- **General Comments of Peer reviewer.**

The text of the report is generally good in particular the sections related to Principles 2 and 3. However I was disappointed with the report section on Principle 1. The information provided in this section of the report is very sparse, lacks important detail and in my opinion falls well short of the high standard I have come to expect in an MSC report.

I think that the problem, as I see it, is almost certainly related to the undoubted vast experience and stock assessment expertise of the P1 expert. In that context I feel that he has taken too much for granted and failed to provide the ordinary reader with sufficient background to this fishery and its assessment.

I will not go into great detail on this, mainly because I do not expect the team to do anything about my comments, but I will provide one example of what I mean, namely the stock assessment modelling. This relatively new State Space Assessment model (SAM) is unconventional in the ICES suite of models and should be described in a bit more detail rather than simply giving the reader a reference to look up. The model has many strengths compared with other models, not least the fact that it offers 95% confidence



intervals on all the estimated parameters. However, it also has potential weaknesses which have manifested themselves retrospectively in some other ICES assessments, where the model has been abandoned. This should at least be mentioned in an honest description and appraisal of SAM.

Finally, some explanation of the basis of the management Reference points not simply an ICES reference. Does the ordinary reader for example know what the change point in the regression for Blim means. It only needs a short sentence and *'job done'*

The general lack of detail in the report has impacted on the scoring comments against some performance indicators in Principle 1 and this will be dealt with appropriately.

APPENDIX 3 HARMONISATION

Barents Sea Harmonisation meeting results summary

Harmonisation meeting for Barents Sea bottom trawl fisheries took place on 10.03.2016 and was coordinated by the MSC. Following Barents Sea cod, haddock and saithe fisheries were included into the harmonisation:

- Scapêche and Compagnie de Pêche de St. Malo saithe
- Barents Sea cod, haddock and saithe (Ocean Trawlers)
- Greenland cod, haddock and saithe trawl
- Norway North East Arctic saithe
- UK Fisheries/DFFU/Dogger Bank group saithe
- UK Fisheries/DFFU/Dogger Bank Northeast Arctic cod, haddock and saithe
- Russian Federation Barents Sea cod and haddock
- AGARBA Spain Barents Sea cod
- Comapêche and Euronor cod and haddock
- FIUN Barents & Norwegian Seas cod and haddock
- Norway North East Arctic cod and haddock
- Faroe Islands North East Arctic cod and saithe
- Faroe Islands North East Arctic haddock.

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 below². 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.

² The harmonisation summary note was prepared by the MSC and distributed to all CABs who participated in the harmonisation meeting 10.03.2016.

- 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

PI 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.

PI 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).

PI 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 4 STAKEHOLDER SUBMISSIONS

No stakeholder comments received on the PCDR.

APPENDIX 5 SURVEILLANCE FREQUENCY

There are 3 conditions and 1 recommendation on this fishery, all related to P2.

Table 48 Surveillance level rationale

Year	Surveillance activity	Number of auditors	Rationale
1	On-site audit	2 auditors on-site	The 3 conditions on this fishery all require feedback from various stakeholders including the management authorities in addition to the Client, and it is considered essential to hold the surveillance audit on-site in year 1 with the option to review in later years.

Table 49 Timing of surveillance audit

Year	Anniversary date of certificate	Proposed date of surveillance audit	Rationale
1	Expected June 2018	June 2019	1 calendar year after certificate issue.

Table 50 Fishery Surveillance Program

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 6 OBJECTIONS PROCESS

Following the publication of the Final report, the MSC allows 15 working days for stakeholders to file intent for objection to the Final report. No formal objection to the assessment were raised and accepted by an independent adjudicator as defined in the MSC Certification Requirements.

APPENDIX 7 VESSEL LIST

Regmerke	Vessel name	Regmerke	Vessel name	Regmerke	Vessel name
ZZ1149ZZ	-	LBX649	STRAUMINGEN	SF0055A	ATLØY VIKING
LAP0106	-	LBX863		SF0066G	SILENE
LAE0024	-	LCGG		SF0068SU	VIKTOR
LBU0075	-	LDNX		SF0069SU	BARSTEIN
LBH0724	-	LF5045		SF0071SU	PLØY
LBT0166	Nelly	LG3934		SF0075B	FRØYBAS
LBU0332	-	LG5471		SF0100SU	SULEBAS
LAH0762	-	LG6165		SF0130S	STORMHAV
LAM0620	-	LG6345		SF0160A	VESTPYNT
LBU0003	Mossa	LG6452		SF0161S	ARGO SENIOR
LBU0816	-	LG7804	ARGUS	SP4326	BELOMORSK
LBW0612	Tobias	LG9068		ST0001B	VASØYGUTT
LAB0488	-	LG9165		ST0001F	JAN HALVAR
VAG0278	-	LGMG		ST0001OL	KRISTINE
LAT0955	-	LH2222		ST0001R	TYR
ZZ1119ZZ	-	LI4148		ST0001RS	FRENGEN
LBW0784	Sjøvåk	LJ4172		ST0002A	LORINE
ZZ1145ZZ	Våganes	LJAM		ST0002AA	VITO
ZZ1146ZZ	-	LK2230		ST0002F	PONTUS
ZZ1101ZZ	-	LK6701		ST0002H	VEDØEN
ZZ1142ZZ	-	LK7903	RUBEN	ST0002HE	LIV MARVIN
ZZ1224ZZ	-	LK9018		ST0002O	DJUPASKJÆR
R0172K	Torino	LM2781		ST0002OL	RYDNINGEN
R0002G	Ronny	LM5323		ST0002SK	BOREAS
R0007SK	Martor	LM5357		ST0003AA	ALBION
R0014KP	Sindre	LM8944		ST0003B	VASØYFISK
R0112K	Seiskjer	LM9458		ST0003O	RAMSØY
R0063K	Anna Christine	LN5427		ST0003OL	BORGENFJORD
VA0041K	Monsun	M0001AV		ST0003R	PERLEN
VA0033K	Sigjo	M0001K		ST0003T	AUKNES
R0066K	Elvira	M0001SM	KARDINAL	ST0004F	NORDHOLMEN
R0012B	Jarstein	M0001VS	MALIN	ST0004H	VERONIKA
R0020K	Molinergutt	M0002AE	ÆRLING	ST0004OL	KRISTINE
R0790K	Eskimo	M0002AV	BRIM	ST0004RS	SILDJO
H0067B	Sjøfalk	M0003AE	TUSTNATIND	ST0004Ø	MARIA HELEN
R0003TV	Krolei	M0003GS	EVA	ST0005AA	NINA
R0014K	Athena	M0003HS	SNORRE	ST0005F	FRØYSTEIN
R0059ES	Øyestein	M0003VN	HAUGEN	ST0005H	WILMA

R0009HM Labrus
 R0018SO Optimist
 R0020ST Teis
 R0022SK Mersey
 R0042K Jim
 R0060ST Trio
 R0048SK Ann Kristin
 R0036TV Langøysund
 R0009ST Silver II
 H0061B Bølgen
 R0062ES Tråsavik
 R0047K Kvartnes
 H0060B Santos
 R0058K Matel
 R0037K Janne
 R0005K Holm
 H0064B Havøy
 R0157K Skude
 R0051ES John Junior
 R0847TV Mix
 R0013ES Caprice
 R0045K Solglytt
 R0024B Vågan
 R0005V Terna
 R0087K Skårholm
 R0133K Erly
 H0098B Stokkøy
 R0784K Silvervåg
 R0023B Kansas
 R0002ES Ebenezer
 R0011TV Nesbuen
 R0002HM Madelen
 R0004B Nilssabas
 AA0090A Starlight Rays
 R0019ES Eline
 R0077SK Vestavind
 VA0017F Hidraskjær
 R0182K Vicma
 R0003ES Guldringnes
 R0409K Jens
 R0002H Andungen
 R0009K Olter

M0004EE JAN ÅGE
 M0005AE BJØRNHOLM JUNIOR
 M0005AK SIGGEN
 M0005AV GULARØY
 M0005M FANGST
 M0005SM TOR HARALD
 M0005VN RAGNHILD EMILIE
 M0006HD ONSØYGUTT
 M0006SM VANJA
 M0007G TOPAS
 M0008AV ORFJORD
 M0008G ODA
 M0008GS ROAR
 M0008SM EVELYN
 M0009GS BERNHARD
 M0009HØ REMØYBUEN
 M0009K IDA MARIE
 M0010AE TUFSE
 M0010AV TERNUNG
 M0010GS BJØRN ROBIN
 M0010RA CHEVY
 M0010SM FRØY
 M0012AV HAVBUEN
 M0012K SJØSTJERNA
 M0012VN HAUGEN SENIOR
 M0012ØG VARING
 M0013AV MATHILDE
 M0014SM JULIAN
 M0015AE HAVGUTT
 M0015SM KVITHOLMEN
 M0016AE VALØY
 M0016F RINGO
 M0016K LINHAV
 M0016SM OLSØYVÆRING
 M0017SM STEINARSON
 M0018A SELBJØRNSFJORD
 M0018AE VALØY
 M0018K SOFIE MARI
 M0018SM ODD EINAR
 M0019A ATLANTIC
 M0019AE KNOTT
 M0019K SINDRE

ST0005SI VIKING
 ST0005SK SELDA
 ST0005T HVITSAND SENIOR
 ST0006AA STJERNTIND
 ST0006R VIKAGUT
 ST0006SI VIKASKJÆR
 ST0006Ø RØKKEBUEN
 ST0007R RINGSKJÆR
 ST0007T EMIL
 ST0008H MEGRUNN
 ST0008O RAV
 ST0008T TORSHAV
 ST0008Ø POLARLYS
 ST0009AA MAGNUS
 ST0009F SOLØY
 ST0009O SJØSTJERNA
 ST0010B HAVBRIS
 ST0010R MASKOT
 ST0010Ø MORILD
 ST0011B HELLEM JR
 ST0011F FRØYVÆRING
 ST0011R HELETO
 ST0011T MJØLNER
 ST0012F TEIST
 ST0012H SJØSVANEN
 ST0012R HAMNAHOLM
 ST0013O CONAN
 ST0013R SENIOR
 ST0013T KAI OVE
 ST0014F TOBIAS
 ST0014T FARK
 ST0015F ORMSKJÆR
 ST0015R MONA
 ST0015T MAREN
 ST0016F FRIDA
 ST0016R SIV
 ST0017H MATHILDE
 ST0017O HAVELLA
 ST0017R VIMAX
 ST0017Ø HUGNAD
 ST0018F EDNA SYNNOVE
 ST0018O ØYASKJÆR

VA0086LS Astrid Emilie
 R0020ES Svanen
 R0024HA Vestri
 R0022K Lyn
 H0037SO Teist
 R0023ES Silje
 R0333K Salvøy
 N0060H Vestskjær
 R0002TV Neskvikken
 R0033K Veiflu
 R0049K Waarøy
 M0042A Klondyke
 R0065K Bukkøy
 M0005VS Ragnhild
 R0069ES Ulken
 R0010S Abyss
 R0001V Tollak
 R0022B Håflu
 R0856K Olter
 R0029ES Svåholm
 R0014SK Hastverk
 R0005SA Roger
 R0017HA Vågen
 R0018K Ikato
 H0183AV Eikholmen
 R0019HA Vågsbuen
 R0005HM Jøsnesbuen
 VA0001FS Bakkan
 R0031K Eggøy
 R0029K Mina-M
 SF0277V Havfluna
 R0012ES Hansvik
 H0322AV Mersey
 R0039ES Vårsol
 H0002F Ligrunn
 H0014B Havlys
 H0142B Katrine
 R0029B Liten
 VA0330S Hellevig 1
 R0018HM Mareis
 R0112ES Tobias
 R0028B Nelly

M0020A SØRØYFISK
 M0020AV SANDØYSUND
 M0020K JOHN SENIOR
 M0020VD BJØRN MARTIN
 M0021AV MØRE
 M0022AK AUKRAVÆRING
 M0024SM OLE
 M0025AE PÅL MAGNAR
 M0025AV NYBROTT
 M0025EE SEIFLU JR
 M0025SM ORHOLM
 M0026AV SIMON SENIOR
 M0026EE SEIFLU
 M0027K HAVTERNA
 M0028AE VIRO
 M0029AV SATURN
 M0029SM PALMA
 M0030AV IRIS EIRIN
 M0030K LUIS
 M0031GS RØDNEBB
 M0031SM MELODI
 M0032A MARIANN
 M0032AE EIDSHOLM
 M0032SM SJØLIV
 M0033A NAPP
 M0033K PAULINE
 M0034AV PRØVEN
 M0034SM TILIA
 M0035AV VIKING
 M0035SM ELIAS
 M0039SM IRIS ANETTE
 M0040AV MARITA
 M0040K GUNNAR EGIL
 M0041AE MORILD
 M0041F ROYAL
 M0041K MARØYSUND
 M0042AE MARIE
 M0042AV SANDRA KRISTIN
 M0042SM BJØRN STEINAR
 M0044SM HOPAVÅG
 M0045AE VESLEMØY
 M0045AV DINO

ST0018R SKAGEN
 ST0018T THEA
 ST0019H ANDRE
 ST0020F FESKARGUTTEN
 ST0020O ANITA
 ST0021F SNOOPY
 ST0021H ARES
 ST0021R LOTHE
 ST0022F MATHIAS
 ST0022H AUKAN
 ST0023F VESTASKJÆR
 ST0024B MAILEN
 ST0024H EINVIKBUEIN
 ST0025A MADELEN
 ST0025F ADRIAN
 ST0025H SANDRA
 ST0025T RAVN
 ST0026B GRIMSØY
 ST0026F HEGE ANITA
 ST0026R GEIR
 ST0027H STARFISH
 ST0027R KÅPA
 ST0028F RUNAR
 ST0028R MOEN
 ST0029AA LANGHOLM
 ST0029T BÅTSMANN
 ST0030F MONA
 ST0030R BRANDY
 ST0031O TERNEN
 ST0031RS TRØNDERHAV
 ST0033F EINES
 ST0033H TALYN
 ST0033T RITA MARIE
 ST0034H ØYHOLM
 ST0034R WILMANN SEN
 ST0035F FRAM
 ST0035O BROR
 ST0036O THORY
 ST0039T BÅTSMANN III
 ST0040F FROAN
 ST0040O HEPSEFJORD
 ST0041F KARI

R0052K	Fjordtrål
R0032K	Elvira
H0088AV	Magnarson
R0007TV	Baus
R0034ES	Sirafisk
H0185AV	Skipsholmen
R0027B	Våganer
R0001B	Mira
R0088K	Marvi
R0067ES	Terje
R0001TV	Nesbuen
M0020S	Stålegg
M0135F	Ragnhild
R0030K	Pålstikk
R0001KV	Kvednå
R0149ES	Ekko
R0013HA	Alf Magne
VA0081LS	Storvig
H0313AV	Caprice
R0040K	Elvira
R0007HM	Prince
R0041K	Veafisk
R0146K	Glimt
H0039SO	Teist
AA0002L	Høvågtrål
VA0016F	Hidra
R0101K	Linda
R0017R	Høvring
R0057K	Anna Christine
R0038K	Eggøy
R0097K	Falcon
R0071B	Taifun
R0055ES	Småen
R0070ES	Nyskjær
R0031ES	Skadberg
R0018ES	Krabben
R0151ES	Vidar
R0001SS	Anne - Katharina
R0030S	Vassøybuen
R0009SK	Teodor
R0014HA	Nita
R0022HA	Tonny

M0046AV	BRATTHOLM
M0047AV	GULLFISK 2
M0047K	TIKI
M0048AV	GALIA
M0050A	SKLINNABANKEN
M0050AE	HANS-R
M0050AV	PIT
M0050G	STORNES
M0051AV	LADY ALUDIA
M0051K	MARTIN
M0053GS	HUGNAD
M0053HØ	STINA
M0054HØ	STORHAV
M0054SM	JUANITA
M0055AV	HERMON
M0056SM	IRIS ANETTE
M0060HØ	KYSTFISK
M0061SØ	HARTO
M0062HØ	SKOGLIJENTA
M0064MD	EMMA
M0065AV	BRATTHOLM
M0066AE	HANNE MARIE
M0066SM	BRATTVÆRING
M0068A	OCEAN JR
M0069SM	LAKSBERG
M0071AV	SUNBEAM
M0072AE	ANNY LOVISE
M0072SJ	VERNING
M0072SM	LILLY
M0075K	JANTO
M0080AV	BJØRNES
M0081AV	GULLFISK
M0081H	CINDY
M0081SM	GULLFISK
M0082H	REIDAR
M0084AV	RATTO
M0084K	LANGHOLMBUEN
M0084SM	ARKTOS
M0085AV	ARKTOS
M0085SM	VERONICA
M0087SM	RANGNES
M0089HØ	BUØY SR.

ST0043AA	BERGEBUEN
ST0044H	JUTINA
ST0044T	VARNA
ST0044Ø	TJONGEN
ST0046O	ØYSJARK
ST0048F	FRØYMANN
ST0048O	BUHOLMSKJÆR
ST0049T	TRØNDERFISK
ST0051F	HAVGUTT
ST0051T	SJØ-LIV
ST0052H	HITTERVÆRING
ST0054F	KYA
ST0055H	HITTERØ
ST0055T	PHILIP
ST0056R	HØVDING
ST0056Ø	RAGNA ELIN
ST0058F	JANN GEORG
ST0058O	ONSØYGUTT
ST0060H	HENRIK
ST0060O	SKIPSON
ST0060R	FJORDBAS
ST0060T	TYFON
ST0062F	SULØY
ST0063F	TUNGVÅG
ST0064F	JOHAN HÅKON
ST0067H	STINE SOFIE
ST0070F	TELLUS
ST0071F	HAVBØEN
ST0072F	HØVIK
ST0074F	FRIDA
ST0075F	SOLAN
ST0075R	EIVÆRING
ST0080H	MJØLNER 2
ST0080O	SKIPSON
ST0081F	HALTENFISK
ST0082F	SATURN
ST0083H	MONICA
ST0084F	VESTØY
ST0085H	TINE MERETHE
ST0088F	ÅRVAK
ST0090H	NORDFJELL
ST0093F	BRAKAR

R0001KP Gunny
 R0001RB Havsol
 R0008F Fossekallen
 R0021R Tordenskjold
 R0036KV Leiabu
 R0020B Vågholm
 R0041TV Sjøstjerna
 R0043SD Flyndrå
 R0070TV Palmer
 R0069K Veiding
 R0002K E.j.k
 R0053K SJØGLIMT
 R0055K Hopvåg
 R0061K Terje
 R0035K Gunner
 R0072K Repsøy
 R0068K Åkrabuen
 R0051K Syrebuen
 R0056V Lomvi
 R0002V Vestmøy
 H0013SO Svint
 R0011KV Tjeld
 H0015AV Kremmervik
 H0069S Krossfjord
 H0003F Liafjord
 R0015K Cetus
 H0005AV Morten Einar
 M0101SM Fiskebank
 H0004B Lønnøy
 VA0095K Piraja
 AA0056A Astrid Ann
 VA0196K Horisont III
 VA0019F Athena 2
 R0344K Toya
 R0168K Strand
 R0111K Rima
 R0005S Sangis
 FR0059 Golden Gain
 F0001L HERMES
 F0004BD GADUS POSEIDON
 F0017H DOGGI
 F0025A ARCTIC SWAN

M0090MD MIFJORD
 M0094H HARHAUG I
 M0094K HØLINGEN
 M0095K TRYGVASON
 M0100AV HOLMEN
 M0100SM PETTERSON
 M0103SM VIKING I
 M0104AV NESABUEN
 M0105SM LUTON
 M0112AE MENTEL
 M0115AV ASLAK
 M0115SJ SIWA
 M0115SM BARRY
 M0116HØ VESTBAS
 M0118SM MEA
 M0119AE RUSKEN
 M0121A RUNING
 M0124H SEIR
 M0131AE IMARSUND
 M0132AE SIKA
 M0144SM RAMSØYFJORD
 M0147AV LANGØYSUND
 M0150AV NYBØEN
 M0150SM FRANK
 M0152AV FRIGG
 M0155AV HANS
 M0158SM DYRNESVÅG
 M0195MD HAVSNURP
 M0200A HAVSKJER
 M0200HØ SKÅRUNGEN
 M0200SM PLUTO
 M0202AV THEA
 M0208SM NÆSSFLU
 M0211AE PEDER J
 M0218SM FISKEBANK I
 M0221SM LEON
 M0232AE SIKA
 M0249F VITO
 M0270AV ODDEN
 M0287A OLAV SELVÅG
 M0333SM ASBJØRN JOHAN
 M0345SM FALKEN

ST0094AA STORSTEIN
 ST0094F HELLEFISK
 ST0096F SJØROSA
 ST0096T RANDI-HELEN
 ST0100F LEON OLAI
 ST0103F ANN KATHRIN
 ST0105H FRODE
 ST0106F HILMARSON
 ST0111O BÅTSKJÆR
 ST0111RS SWANSEA
 ST0121H PÅL
 ST0122F ØYAVÅG
 ST0124F HAVNEVÅG
 ST0130F NORDVIK
 ST0145F SULVÆRING
 ST0147F OLAV JUNIOR
 ST0165F CAPRI
 ST0177H BOGØYVÆRING
 ST0185F FILIP
 ST0185R JENNY
 ST0188H MARTHE
 ST0201F SOLVÆR
 ST0202F NYSTUBUEN
 ST0214F MIKAEL
 ST0220F VIGRUNN
 ST0227H HJERTØYBUEN
 ST0231F ASKATI
 ST0234F SJØBLOMSTEN
 ST0264F TONJE
 ST0265F WÅGØY
 ST0270H AMALIE
 ST0300F JONAS
 ST0307F LANOFISK
 ST0312F FALK
 ST0333F NEPTUN
 ST0348H ELIJENTA
 ST0400F MEHOLM
 ST0488F ARILDSON
 ST0491F VESTASKJÆR
 ST0500F MERCUR
 ST2017UK UNGDOMSKVOTE
 ST9000H

F0038H	RYPEFJORD
F0055BD	GADUS NEPTUN
F0107BD	KONGSFJORD
F0110BD	BÅTSFJORD
F0111BD	ATLANTIC STAR
F0130HV	STORMHAV
F0202BD	DELFIN
H0002B	RØKSUND
H0002O	ELIAS
H0005FJ	STORDING
H0008S	RAUNEFJORD
H0011AV	GRANIT
H0015B	FYRHOLM
H0017B	KLIPTON
H0062S	BOGASKJÆR
H0082S	TEINESKJÆR
H0123AV	ØSTERFJORD
M0001EE	LIANES
M0001N	RAYMITA
M0001S	FLORA
M0001SJ	SEIGUTT
M0001VD	RAMOEN
M0001VN	MATS
M0002EE	TEISTKLUB
M0002G	VALDERØY
M0002HD	KLETT
M0002M	RANDI SOFIE
M0002S	HAUGSTAD
M0002SK	FANT
M0002SØ	ONING
M0003F	HELLSKJÆR
M0003RA	SKÅLVIK
M0003S	FRANTS
M0003SA	BALDER
M0003VS	ØYBAS
M0004F	SIMEN
M0004GS	SJØGUTT
M0004VN	HAVBÅRA
M0005H	HOVE ODDMUND
M0005HD	VINGHOLM
M0005VD	HAVBLÅ
M0006A	SYLTEBAS

M0400AK	O. SOLEM
M0406SM	KORALL
M0515MD	NYSKJER
M0520A	HAVFISK
M2017UK	UNGDOMSKVOTE
M9000AV	
M9000K	
M9000TV	
M0100	KOKSHAYSK
M0183	DISTINKT
M0192	TOR
M0215	SEVERYANIN 2
M0216	KAPITAN NAUMOV
M0226	GULDRANGUR
M0228	PROEKT
M0239	MELKART
M0254	KORUND
M0258	VLADIMIR ZAGOSKIN
M0264	BOREY
M0269	STRELETS
M0328	YAGRY
M0337	VIKING
M0347	MARK LIUBOVSKII
M0349	KAPITAN DOLGIKH
M0350	MELKART-3
M0351	ZVEZDA MURMANA
M0410	KAPITAN GROMTSEV
M0418	MELKART 2
MK0240	SEVRYBA-1
MK0270	ALMAK
MK0277	ALFERAS
MK0354	KAPITAN VARGANOV
MK0356	RYBAK
MK0357	VITUS BERING
MK0361	VASILIIY GOLOVNIN
MK0369	MARTHA ARENDSEE
MK0381	MIRAKH
MK0411	TAURUS
MK0473	KHOLMOGORY
MK0474	ORVAR
MK0542	PROEKT 1
MK0547	SAAMI

ST9000HE	
ST9000R	
ST9000Ø	
ST9300F	SKOLEBÅT
T0001BG	FLÆSBUE
T0001K	NORA
T0001L	SLETTIND
T0001S	KARL WOLMAR
T0001SK	CECILIE
T0001SL	GRYLLEFJORD
T0001T	BARSUND
T0001TK	ULA
T0002B	SNETIND
T0002KD	NORDNES
T0002L	FUGLØYFJORD
T0002N	STORENGBUE
T0002S	SMÅBAS I
T0002SK	NYSTART
T0002T	HAUNES
T0002TK	MÅNES
T0002TN	TRANØYJENTA
T0003BG	BEN HUR
T0003H	ELLEN
T0003I	BALLSTADØY
T0003K	BIRGITTE
T0003KD	TINGANES
T0003KF	FRISCO
T0003N	REISAVÆRINGEN
T0003S	SEGLVIK
T0003SA	NEPTUN
T0003SD	EKENBORG
T0003SK	NICO
T0004K	STEINNESVÆRING
T0004KF	BJØRNHAV
T0004LK	ALISA
T0004N	LITEN JUNIOR
T0004SA	BREMSJØ
T0004T	ODD LINDBERG
T0004TK	KASPERSON
T0005BG	FJORDFANGST
T0005K	JANNE-MARIE
T0005KF	WILLYSON

M0006GS	ISINGVÅG
M0006HØ	RANITA
M0006M	SJARKE
M0007HØ	KAMPEN
M0007U	BRAVO
M0007VD	RAMOEN
M0008F	LISJEBAS
M0008HØ	LANGAARD
M0008SK	FJORDFISK
M0008VD	HARALD JR.
M0009AK	TORNADO
M0009F	JUNO
M0009VN	JALLA
M0010A	KNAPPEN
M0010F	NYSTAD
M0010H	BRIS
M0010M	ORKAN
M0010SA	FISKENES
M0010ØG	STORSEISUND
M0011A	VOLSTAD
M0011AV	LIAHOLM
M0011F	ELNESFISK
M0011G	SYLVIA
M0011HØ	IDA
M0011RA	FJORDING
M0011SK	STORHOLM
M0012AK	FINDUS
M0012G	LORAN
M0012H	GEIR II
M0012HØ	LEANE
M0012S	ELDORADO
M0013U	STRAUMSUND
M0014A	SAFIR
M0014HØ	VOLDSUNDFISK
M0014MD	MIDØY VIKING
M0014SA	RUSKEN
M0014U	HUSLA
M0015F	MORILD
M0015G	GODØYGUTT
M0015HD	FALKVINGE
M0015HØ	TONO

MK0549	KAPITAN GERASHCHENKO
N0001AH	SJØLIV
N0001B	NORDFISK
N0001BL	ØYVÆR
N0001BR	TONNY MARIE
N0001BØ	SKARHOLMEN
N0001DA	KAIA
N0001FE	STAR
N0001G	ARNEY
N0001HR	CAMILLA
N0001L	NESØYFJORD
N0001LF	STRAUMBERG
N0001ME	STØTTFJORD
N0001SO	OLAGUTT
N0001TN	HILDRINGEN
N0001VA	SINGSHOLM
N0001Ø	MELØYJENTA
N0002AH	FJORDEGG
N0002B	STORMHAV
N0002BL	LAUVGRUND
N0002BR	HEIDI
N0002BØ	UTFLÆSA
N0002DA	VIRGO
N0002F	JENNY
N0002G	SJØBAS
N0002H	HINNØY
N0002HR	LURINGEN
N0002L	TUVA
N0002ME	OLEA
N0002MS	HÅVARD. A
N0002TN	THORSHAVET
N0002V	INGO
N0002VS	PARS
N0002VV	BRANDSHOLMBØEN
N0002Ø	RAGNI
N0003A	FISKERINNEN
N0003AH	MARITHA
N0003B	CHARLOTTE
N0003BØ	ANDHOLMEN
N0003F	SIVELAND
N0003FE	ØRNA

T0005LK	EINARSON
T0005S	LUNA
T0005SA	GLADIATOR
T0005SK	JOHANNE
T0005T	SKJERODDEN
T0005TN	LOMSTIND
T0006H	KJELL OTTO
T0006I	VALLY
T0006K	HAVGLIMT
T0006KD	YLVA
T0006KF	SALTIND
T0006KN	STRØMØY
T0006L	CONVOY
T0006SA	MONSUN
T0006SK	GEIR
T0006TK	SIFJORD
T0007D	SPURVEN
T0007G	FANAS
T0007H	KASFJORD
T0007K	BIRGITTE
T0007KD	BASSØY
T0007S	HAVGLIMT 3
T0007SA	HARMONI
T0007SK	ROCKMANN
T0007TK	FRIDA
T0007TN	SARNES
T0008BG	BERGLIBUEN
T0008H	BERGSVÅG
T0008I	NORDSILD
T0008K	SJÅVIKNES
T0008KD	IVAN
T0008KF	KRISTINE
T0008LK	LARS-AINA
T0008N	TRYGVE
T0008S	ARNØYTIND
T0008SA	EDVARD SENIOR
T0008T	FAGERVÆR
T0008TK	MONIKA
T0009B	FRØY
T0009BG	BRINGTIND
T0009H	VERA MARIA

M0015SA	BUSTER
M0015U	VÅGEBRIS
M0016EE	RINGO
M0016H	HILDRING
M0016HØ	ARGO
M0017AV	GÅRDEN SENIOR
M0018F	SØRHAV
M0018GS	LANGSKJÆR
M0018M	MOAGUTT
M0019M	VÅGAR
M0020EE	TRAMSEGG
M0020VS	MARIANN
M0021F	SKARNER
M0021G	GUTTA
M0021SA	TOR
M0021U	BRANDUNGEN
M0022F	MYRBØ JUNIOR
M0022HD	UNN
M0022VN	HAVBÅRA
M0022VS	KVALVIK
M0023A	THOIS
M0023F	JANBU
M0024F	KOBBEN
M0024HØ	VENTURA
M0024U	HASUND
M0025A	KÅRBØBAS
M0025F	MALIN
M0025HØ	LEINEFISK
M0025K	GRIPAR
M0025SA	B-VÅG
M0026HØ	SKÅRUNGEN
M0026MD	MIDSUNDJENTA
M0026VN	HAVPRINS
M0028A	HEMINGWAY
M0028HØ	GRØNHOLM
M0030EE	TRAMSEGG
M0030H	ODIN
M0030HØ	AKONO
M0030S	AGATHE
M0030SA	BØLGEN
M0030SØ	HAAVÆRBUEN
M0030VN	SMÅLINER

N0003G	LEIF-OLAI
N0003L	ELINE
N0003LF	FLOING
N0003ME	GLIMT
N0003N	INA II
N0003R	DIANA
N0003RT	SJØDRØM
N0003SA	VÅRBRIS
N0003SG	MAYLENE KAMILLA
N0003SO	HARDHAUS
N0003TN	TROLLFJELL
N0003VV	BALLSTADØY
N0003Ø	TOR JONNY
N0004B	STORBØEN
N0004BL	LAILA-ANITA
N0004BØ	BØBAS
N0004DA	RAPTUS
N0004F	GERHARD JAKOBSEN
N0004G	EVA MARIE
N0004L	STORØY
N0004MS	KIM ROGER
N0004RT	TERJE ROAR
N0004SG	SKREIEN
N0004SO	ROALD SENIOR
N0004TF	HAUKØYFJORD
N0004VR	CHRISTINE
N0004VV	IDA
N0005A	PRØVEN
N0005AH	CINITA
N0005B	SILJA
N0005BG	SKARSTADVÆRING
N0005BØ	NORBUEN
N0005F	HARALD JOHAN
N0005HR	ESBEN ANDERS
N0005LF	RANDI ELISE
N0005LN	CATO
N0005ME	BARSTIND
N0005SA	TJØNNØYFISK
N0005SF	NYVOLL
N0005TF	JUNE
N0005TN	TRÆNHAVET
N0005VN	FANDANGO

T0009K	VANNØYVÆRINGEN
T0009KD	HENRY
T0009SD	BJØRNØY
T0009T	OCEAN BLUE
T0010B	ANN-HELEN
T0010G	SALTIND
T0010H	SEA QUEST
T0010L	MIRIAM
T0010LK	AUSTBRIS
T0010SD	SULEGGA
T0010SK	SVANEN
T0010T	WIOL
T0010TK	THOR
T0011B	VETA LUCIA
T0011L	TAMPEN
T0011LK	BRENNÅJENTA
T0011SK	ØRA
T0011T	MARI
T0011TK	FRODE
T0012B	ALICE ANDREA
T0012BG	LAILA
T0012H	BERGSVÅG
T0012KF	SNUTAN
T0012KN	ODD JONNY II
T0012L	FJORDBAS
T0012LK	BLÅFJELL
T0012N	SOIANA
T0012S	SJARKE
T0012SA	STORVIKBUE
T0012TK	EIDEGUTT
T0013S	HAUKØY
T0014I	ANNBIDA
T0014K	MARIANNE
T0014L	KYSTFESK
T0014LK	LEIF-HELGE
T0014N	SIGNE
T0014SA	SJÅNES
T0014SD	PERHOLM
T0014T	BØVÆRING
T0014TK	EIDEGUTT
T0015BG	FRØGRUNN
T0015H	ALTEVAAG

M0031A	PLUTO
M0031HØ	GOLLENES
M0032EE	FRIDA
M0032G	AASE
M0033HØ	WESTHAV
M0033MD	HUSAR
M0033S	BRUSØY
M0034F	VÅGØY
M0034G	BRIS
M0035F	ALF SENIOR
M0035HØ	VATTØYFJORD
M0035MD	GANGSTAD JR
M0037G	ROALDNES
M0037HØ	NOTØYGUTT
M0038HØ	BØFJORD
M0038VN	SMÅSKJER
M0039G	ORBIT
M0040AK	BRØDRENE SOLEM
M0041HØ	PERLON
M0042HØ	HAVSOL
M0043A	MARI
M0044AK	RAGNHILD KRISTINE
M0044G	SØKERN
M0044HØ	TØFFEN
M0045HØ	ODIN
M0046K	ASPHOLM
M0050HØ	HAVSTEIN
M0050SA	HAUGEFIKSK
M0052S	LILLANN
M0053F	BUABAS
M0053G	ARTHUR
M0053SA	SOFFE
M0054G	LAUNES
M0055HØ	NÆRØYBUEN
M0055SA	STRANDBAKKEN
M0055VN	GEKO
M0056S	MYRA
M0057HØ	SIGNAL
M0058A	CAPELLA
M0058SA	BJØRNRAR
M0058VN	HAUGEN JUNIOR
M0059G	GUNN ANITA

N0005VV	SVANA
N0005Ø	LEANDER
N0006B	VESTFISK
N0006BR	LYNGVÆR
N0006F	LENA-BEATE
N0006G	DEMNING
N0006H	RØSNESVÅG
N0006HM	BREMHOLMEN
N0006L	ALDRA
N0006LF	TRITON
N0006NA	FLO
N0006RT	ALF-JENS
N0006SF	FRØKNA
N0006SG	HAVBRIS
N0006SO	HAVSULA
N0006TF	ELVINE
N0006VA	KJELLØY
N0006VN	LEDØY
N0006VV	NORDTIND
N0007B	HAVLEIK
N0007BL	TOOTSIE
N0007BR	ANNA THERESE
N0007BØ	VIKANØY
N0007F	TAMARA
N0007G	HAVTOR
N0007H	RØSNESVÅG
N0007L	BREMNES
N0007LN	IDA
N0007N	SAGA
N0007R	TERNA
N0007RT	CELINA
N0007SF	TENNSKJÆR
N0007SG	FJORDBRIS
N0007V	ØYNES
N0007VA	TOMMY ANDRE
N0007VV	HELENA
N0007Ø	RØSTAD
N0008A	MJÅSUND
N0008AH	SVINØY
N0008B	MEHOLMEN
N0008BL	PELLE
N0008BR	SATURN

T0015K	RAGNHILD EMILIE
T0015KN	ELISABETH
T0015S	LISTER
T0015SA	HAVØRNA
T0015T	SMÅVÆR
T0015TK	HAVBRYN
T0016BG	POLO
T0016H	KÅRE
T0016I	SPURVEN
T0016K	LIPELLA
T0016KD	BEKKA
T0016L	SOFUS
T0016S	SJØVERK
T0016SA	HAVØRNA
T0016SK	LANGBÅEN
T0016T	HÅR-BÅEN
T0017BG	FRØGRUNN
T0017K	VARG
T0017L	DELFIN
T0017N	VALLY
T0017S	SKJERVØYFISK
T0017T	AKSEL B
T0018H	HARSTADVÆRING
T0018K	MIE
T0018LK	HUSØYSUND
T0018N	TOR-M
T0018S	LEA ELINA
T0019K	HAVNES
T0019SA	KARL MARTIN
T0019T	SJØTUN
T0020G	HAVSULA
T0020H	BLÅTIND
T0020I	DRIVAR
T0020L	SARA KARIN
T0020LK	VIKABUKT
T0020SA	NORSUND
T0020T	TERNINGEN
T0020TK	BRIAN
T0020TN	KONVOY
T0021I	DRIVAR
T0021K	MT SENIOR
T0021L	FJORDBUEN

M0059HØ KRÅKØYSUND
 M0060A BJØRNHOLM
 M0060U FISKAREN
 M0063HØ HUGNAD
 M0066F SPRINT
 M0067HØ RAV
 M0068F OLEMANN
 M0068G ATLANTIC VIKING
 M0069G MOLNES
 M0069MD MARIE
 M0070AK JANTO JR
 M0070AV TOJAKO
 M0071A SKARSTEIN
 M0071G NESBAKK
 M0071HØ ROGNEGUTT
 M0071SA GETO
 M0073G ANNIKEN
 M0073HØ FREDØY
 M0074HØ FROMAR
 M0074SØ STRANDAR
 M0075G LINDA
 M0076G VEIDAR 1
 M0076HØ ØSTGUTT
 M0078F GULVÅG
 M0078G NYTERTEN
 M0078HØ VESTFISK
 M0078MD HOMARUS
 M0079G BROTTSJØ
 M0079HØ GENESIS
 M0080HØ MATHILDE
 M0080SJ SEA HUNTER
 M0080SØ SMIHAV
 M0081F BUAGUTT
 M0083M RASK
 M0083SA SULAHAV
 M0084HØ BØTIND
 M0085G NORDSTAR
 M0088F ØYBUEN
 M0088H BJØRNHAUG
 M0088SØ VONAR
 M0089G FORSØK
 M0090F NYMØRE

N0008BØ SANDRA
 N0008F ODDGEIR
 N0008FE KARINA
 N0008L EMBLA
 N0008LN GANAS
 N0008ME SKARSFJORD
 N0008MS IDA
 N0008N VARGEN
 N0008R STIG
 N0008RA HAVBRIS
 N0008RT RØSTBANKEN VEST
 N0008SO RYPA
 N0008TN UTVÆR
 N0008V JUNGSMANN
 N0008VA VALLSJØ
 N0008VN NORDSTADBUEN
 N0008VR MIDNATSOL
 N0008VS INNVÆR
 N0008VV STORHOLM
 N0008Ø RYPA
 N0009AH ØRNØY
 N0009B HAVDUR
 N0009BR BAMSE
 N0009BØ HAVBRYN
 N0009DA ANNA LOVISE
 N0009F VIBEKE CATHRIN
 N0009L ANDFJELL II
 N0009ME JULIE M
 N0009R HAVBUEN
 N0009SF START
 N0009SG GAUTE
 N0009TN MAY
 N0009V SOFIE
 N0009VA KATHARINA
 N0009VN ANITA
 N0009VV POLARIS
 N0009Ø VICTORIA
 N0010A BØRHELLA
 N0010AH KARINA
 N0010B REMSKJÆR
 N0010BR FLUA
 N0010DA SØRVIKING

T0021LK TRAPANI
 T0021LV PER ARVID
 T0022H KAROLINE
 T0022I ØYGUTT
 T0022KN NÆVERNES
 T0022LK HUSØYVÆRING II
 T0022S ULØYBUEN
 T0023B NILS EIVIND
 T0023BG MALOGUTT
 T0023S SK JUNIOR
 T0023SD MARIT MARIE
 T0023T SKAGØYSUND
 T0024H RIRO
 T0024KN RØSTJENTA
 T0024LK MICHELLE
 T0024N LOMSØY
 T0024S FINNVIK
 T0024T SKARVØY
 T0025BG NINA IREN
 T0025H STIG MAGNAR
 T0025K SJØLILL
 T0025LK ØYLINER
 T0025SA TORSKEN
 T0026B MÅRFJELL
 T0026BG HEGE THERESA
 T0026K BLANKFISK
 T0026L EDELFISK
 T0026N ØYÅD
 T0026S KAMØ
 T0026T HELGE VIDAR
 T0026TK NYBÅEN
 T0027K RIKKE
 T0027L GLIMT
 T0027LK WENCHE P
 T0027S KAMPEN
 T0027T SLETTAV
 T0027TK FRIDA
 T0027TN FRIDA
 T0028H SIMEN H
 T0028KF LYSÅ JR.
 T0028L SUKANYA
 T0028LK VIKAGUTT

M0090SJ	EMILIE H
M0092HØ	MAKA
M0093AK	RESABUEN
M0095G	LANGENES
M0096G	FRØY
M0096SA	URKEVIK
M0098A	SOKRATES
M0098HØ	ALEX
M0098SA	PER
M0099HØ	REMØY
M0100A	MACABO
M0106H	KORALEN
M0110G	ATLANTIC STAR
M0110SM	NY-VIKING
M0111G	ATLANTIC STAR
M0111HØ	TOPAS
M0114HØ	MARIELLE
M0115HØ	SIWA
M0117HØ	SARAH
M0124G	TOPAS
M0127HØ	FEIRVIK
M0128G	NYVOLL SENIOR
M0130A	FALKEN
M0134F	MARILENA MI
M0134H	RØRSTAD
M0138HØ	KNAUSEN
M0148HØ	CHRISANDER
M0149F	FREKØY
M0149HØ	ELLIE
M0156HØ	ARITA
M0161AV	O.HUSBY
M0174AV	PAUL SENIOR
M0176EE	RAYON
M0179F	TRYM
M0181HØ	IREN
M0182HØ	BØNES
M0183F	STEMLINGEN
M0185G	NORDØRN
M0187F	KRISTINA
M0192SØ	KATO
M0196HØ	JANSON
M0206H	HALTENTRÅL

N0010G	MARIT
N0010HR	NYHAV
N0010L	GERD JORID
N0010ME	BOLGA
N0010R	MARIUS
N0010RT	SJØSTJERNA
N0010TF	VÅGLAKS
N0010TN	HAVELLA
N0010TS	SYNØY
N0010V	BOY-ANGEL
N0010VN	STORMGUTT
N0010VR	VESTERNES
N0011A	TONJE
N0011AH	SKAGØY
N0011B	LILLE BREIVIKBUEN
N0011BØ	ROGUTT
N0011DA	AGNETHA
N0011F	REGATE
N0011G	SØRFJORD
N0011H	JOHN SVERRE
N0011HR	ANNE-IDA
N0011L	LINAS
N0011LN	NYLON
N0011ME	KLOMPEN
N0011MS	FJORDFISK
N0011N	ANN HELEN
N0011R	RUBIN
N0011RT	JUNIOR
N0011SG	FREYA
N0011SO	SJØLIV
N0011TN	BOLGA
N0011VR	HÅREK
N0011VV	HAVGUTT
N0011Ø	VÅRHEIM
N0012A	EMBLA
N0012AH	KARL EMIL
N0012B	LYNGØY
N0012DA	ANNA
N0012H	SANDNESJENTA
N0012HR	EMILIAN
N0012L	BØLGEN
N0012MS	DYPFJORD

T0028N	KARL OSKAR
T0028SK	HARSTADKYST
T0028T	JAN-KJETIL
T0029K	ADA-SOFIE
T0029LK	STORM
T0030BG	REIERT
T0030N	HELENA
T0030S	RAGNHILD
T0030T	ROSKJÆR
T0030TK	FISKENES
T0031BG	JOHAN H
T0031K	MAIBLOMSTEN
T0031KD	GREI
T0031LK	BRINGTIND
T0031T	ATINA
T0031TK	KARL ROBIN
T0032K	ARYA-ELEA
T0032LK	JM SENIOR
T0032T	TEISTEN
T0033D	VESTERBØEN
T0033KD	SOLSTRANDJENTA
T0033KN	FLYFISK
T0033L	VAGGAS
T0033N	JIM
T0033T	LOFOTVÆRING
T0034K	KARLUF
T0034LK	LEGØY
T0034S	BJØRNTIND
T0034TN	ROGNKAILN
T0035B	NYFLØ
T0035K	VIKANES
T0035KN	MAJA SOFIE
T0035LK	ERATO
T0035N	MAJA SOFIE
T0035S	CHARLOTTE
T0035TK	SENJALAND
T0036LK	HUSØYSUND
T0036T	ØRNFLØY
T0037KF	BITS
T0038TK	JOHNNY DAG
T0039BG	MONSNES
T0039D	DYRØY

M0210HØ	HAVLEIK
M0214HØ	MULØYBUEN
M0218HØ	NORBRIS
M0219G	AMANDA
M0225H	HAVSTRAND
M0232HØ	FLUMA
M0267F	ANNA MARIA
M0269HØ	DELFIN
M0278SA	SJØSTJERNEN
M0285G	NORDBAS
M0325H	HAVBRYN
M0328G	SVALEN
M0340HØ	SKAGEN
M0345A	STOREGG
M0350SM	SØRBØEN
M0359HØ	NORDØYTRÅL
M0393HØ	SKOGLIGUT
M0406H	KORALHAV
M0494HØ	SANDER
M0505HØ	LEINEBRIS
M0555HØ	LEINEBRIS
M0566HØ	VESLEPER
N0010H	HAVTIND
N0013F	NESHEIM
N0030H	VESTTIND
N0050SO	HOLMØY
N0087B	SJØGUTT
N0100A	ANDENESFISK I
N0100Ø	SUNDERØY
N0125VV	GADUS NJORD
N0176VV	KONGSFJORD
N0194VV	GADUS POSEIDON
N0445Ø	PRESTFJORD
R0021H	VIGDIS
R0040H	RADAR
R0071H	ØYMON
SF0001F	NEMO
SF0002F	J.R. MARITA
SF0003A	ALBACORE
SF0006A	SJØVÆR
SF0007F	SKJONGHOLM
SF0009V	ATLANTIC

N0012R	IVAR JUNIOR
N0012RT	TRØAN
N0012SF	MELITA
N0012SG	TOR HUGO
N0012V	KAMILLA
N0012VR	CELINE
N0012VV	STRANDFLÆSA
N0013G	HAVSKØY I
N0013H	MARTHE
N0013ME	JOHN-IVAR
N0013MS	BUNES
N0013R	ISAK OLAI
N0013SG	MONSBØEN
N0013V	PETRA
N0013VV	FJORDBØEN
N0013Ø	TOBIAS R
N0014A	KLÆVTIND I
N0014BL	RØINGEN
N0014DA	BÅREGUTT
N0014HR	KVIKKEN
N0014ME	SEBASTIAN
N0014MS	HELLVÅG
N0014SG	SPANTA
N0014V	SJARKEN JUNIOR
N0014VA	REMY
N0015A	MÅTIND
N0015B	SIRENE
N0015BØ	TUSSBØEN
N0015G	ISELIN
N0015HR	SPANSHOLMEN
N0015MS	MOT
N0015R	GANNFLÆSA
N0015TF	VESLA
N0015V	GAUTIND
N0015VA	SJÅVIKBUE
N0015VR	KRUSNING
N0015VV	JANNE
N0016AH	HØLAGUTT
N0016B	NYTIND
N0016F	ØYGUTT
N0016G	NORDNESFISK
N0016L	STRAUMEN

T0039K	DINA
T0039KD	ÅRØYBUEN
T0039LK	ØYANES
T0039S	SNØGGEN
T0039SK	ØYA
T0040K	CHUBBA
T0040KN	NYLAND
T0040S	ODA
T0040T	IDA THERESE
T0041L	ANNE-LISE
T0041LK	JOHAN MARTIN
T0041S	IDUNSON
T0041T	ÅRNES
T0042H	NORDBUEN
T0042LK	KVITHOLMEN
T0042T	ASBJØRN SELSBANE
T0043K	LARISSA
T0043LK	GULLFESKEN
T0043S	LOPPHAV
T0043T	IDA
T0044BG	SARI
T0044K	ODD YNGVE
T0044LK	SKREIGRUNN
T0044N	TOVE MARIE
T0044TN	SOLSIG
T0045H	STOREGUTT
T0045K	LYKKELITEN
T0045L	GULLFJELL
T0045LK	STUFUNES
T0045T	TÅRNØY
T0046BG	MAGNARSON
T0046H	AUNEGUT
T0046K	ADA-SOFIE
T0046LK	ØYFJORD
T0047BG	BRINGTIND
T0047K	JANNE-MARIE
T0047S	IDUN
T0047T	ÅMØY
T0049BG	MARITA
T0049K	EIRIK
T0049LK	FRANK
T0049S	OTELIE

SF0010V	HENDANES
SF0019B	LINEBAS
SF0022F	LINDSJØ
SF0025F	FANØYVÅG
SF0025S	ROSØY
SF0030B	STORMHAV
SF0048F	HETLEVIKING
SF0051V	HADRIAN
SF0060F	BREIVIK JUNIOR
SF0062S	STÅLHOLM
SF0071F	TAIFUN
SF0086S	HAVBRIS
SF0090S	FJELLMØY
SF0100B	SMÅSUND
SF0100V	SMÅSUND
SF0112V	HAVFLUD
SF0212V	HAVFLUD
SF0213S	ODIN
ST0001O	HEPSØHAV
T0001H	J.BERGROLL
T0002H	TØNSNES
T0002LK	ROLF ASBJØRN
T0005H	OLE-ARVID NERGÅRD
T0019H	KÅGTIND II
T0035I	LANGENES
T0095I	LANGENES
T0189T	NESHOLMEN
VA0001M	ANTILDE
VA0009K	BROSMA
VA0011F	FJORDBUEN
VA0011LS	BELL-ROCK
VA0015M	RISØY
VA0050S	LOTTA
VA0087LS	NESEJENTA
VA0134M	SKOGSØYJENTA
Ø0004R	ÅREFJORDFISK
Ø0112S	HAVFLUD JUNIOR
H0070AV	Aarfisk
H0138AV	Aarland
H0008B	Agøy
H0038AM	Almor
H0008ØN	Alvøy

N0016ME	POLARHAV
N0016MS	NIKLAS
N0016NA	ALSØYJENTA
N0016R	SØRVÅGSUND
N0016RT	RUNA ALICE
N0016SO	IDUN
N0016TN	NOAH ANDRE
N0016V	SULØY
N0016VR	KRISTIAN MICHEL
N0016Ø	TUVA
N0017AH	DØNNLAND
N0017BR	CASPER
N0017DA	MINA MARIE
N0017HM	DRONNINGA
N0017HR	FØYKEN
N0017ME	HELLØY
N0017RT	FLINK
N0017SG	BEATE
N0017V	LINN S
N0018B	NORDSTJERNEN
N0018BL	RIKO
N0018DA	HØLABUEN
N0018F	OCEAN
N0018FE	KRISTINA
N0018L	RISØYFJORD II
N0018LN	LYKKEN JUNIOR
N0018ME	VARANGERJENTA
N0018MS	KARI ANNE
N0018SG	ANETTE
N0018TN	BOYSEN
N0018V	RAMONA
N0018VA	KIRKØYBUEN
N0018VV	MARTHE
N0019AH	SIRIANNNA
N0019G	JAKOBSSON
N0019HR	MONIKA
N0019L	ORION
N0019ME	AMIGO
N0019MS	ANNA-SOFIE
N0019R	SOLBRIS
N0019RT	HAVSULA VEST
N0019SG	VERSLA

T0050K	TORSHAV
T0050L	THULE
T0050LK	SEGLA
T0050T	CARDINAL
T0051K	BURØY
T0051S	GRY JANNE
T0051T	FURBÅEN
T0052K	NINA MARI
T0052SA	JENS BERG
T0052T	SKARTIND
T0053BG	KIM ROBIN
T0053KD	FRAM
T0053SA	KALLEMANN
T0053T	TOM ARNE
T0054H	VÅGAR
T0054N	SJØPYNT
T0054S	VARDEN
T0054T	MORTENVIK
T0055BG	BREITIND 1
T0055H	ODIN
T0055I	STRAUMVÆRING
T0055K	DÅSA
T0055LK	HUSØY
T0055S	TUR
T0055T	KAPP LAILA
T0056K	ANNE-MERETE
T0056LK	SANDERMAN
T0056T	NONSTIND
T0058K	BURØYVÆRING
T0058LK	MARINA
T0058T	MARIUS
T0058TK	SENJAGUTTEN
T0059K	HAVSJØ
T0059L	VÅGAGUTT
T0059T	EMI
T0060H	CADO
T0060LK	EMILIE
T0060T	ØYVÆRING
T0061K	ELISE MARIE
T0061LK	LEAH
T0062LK	JENSEGUTT
T0062T	SOLSKJÆR

H0045B	Andrine
H0026BN	Anfield
H0300B	Anglevik
SF0096B	Anna
SF0142V	Anne Katrin
SF0037B	Annjo
SF0005FL	Aralden Junior
SF0020S	Argo Junior
SF0054V	Atina
H0022T	Austbris
H0049ØN	Austvåg
H0024ØN	Baracuda
SF0156V	Beate
H0117S	Berggylt
SF0017A	Bergøy
H0045K	Birger Jr
H0071S	Bogagutt
H0035K	Bonito
H0020FS	Borganes
H0021R	Bragd
SF0035B	Brem
H0099B	Brenning
H0009FS	Britt Evelyn
SF0174V	Brodd
SF0094A	Brufjord
SF0002SD	Bukken
H0038K	Bunesen
H0229B	Bærøyfisk
TAY0048	Campella
SF0083V	Caro
RAQ0620	Combi
SF0161F	Dagur

N0019TN	BLÅMYRA
N0019V	SOFIE
N0019VS	KEN-ELIN
N0019Ø	SEGLVIK
N0020A	TRONDGRUND
N0020BØ	GLIMØY
N0020F	SIRIUS
N0020G	FLEINBUEN
N0020HM	ØYGUTT
N0020L	NARGTIND
N0020MS	BERNT OSKAR
N0020R	SPUTNICK
N0020RT	STAMNESVÆRING
N0020SO	OCEAN
N0020TN	IDA KONTANSE
N0020V	SOLVÆR
N0020Ø	SJØTIND
N0021B	ELLEN C
N0021BR	MASTER
N0021BØ	KRASEN
N0021DA	OSKAR
N0021H	HANNE
N0021ME	LYNGØY
N0021MS	HELLODDEN
N0021R	KVALVIK
N0021RT	KAIA CILILIE
N0021SG	MÅKØY
N0021V	MAY
N0021Ø	NORDBØEN
N0022AH	SJØBLOMSTEN
N0022B	FJORDFANGST
N0022BØ	KRUSHOLMEN

V
N
F

SF0048V	Dan
SF0076S	Djupavik
SF0218V	Dragon
H0015O	Dybai
H0012F	Edvart
SF0168V	Ekko
H0087B	Elianne
H0052AV	Emil

N0022DA	LILLEGUTT
N0022F	VALKYRIEN
N0022G	OLASKJÆR
N0022HR	ISABELL
N0022ME	LENA
N0022MS	ANNE-METTE
N0022SO	LIV ODDNY
N0022VV	UREGUTT

T0063K	NYSTADBUEN
T0063LK	PIA
T0064K	PAUL KJETIL
T0064SA	AUD-JORUNN
T0064T	SANDVÆR JUNIOR
T0066K	ASTRID II
T0067T	VÅRBRIS
T0068I	MALOFISK
T0068K	SIMSON
T0068T	SKAGA
T0069KD	KÅFJORD
T0069S	APOLLO
T0070KN	DUNVIK
T0070LK	ARNØYBAS
T0070T	CONNY
T0070TN	ELRITA
T0071K	TUEBAS
T0071T	ANDREAS
T0072H	VARØYTIND
T0072KD	STRØNVIK
T0072S	OLDERFJORD
T0073B	VESLE-SISSEL
T0073LK	MALOGUTT
T0073T	ØYBAS
T0074H	HØKEN
T0074K	KAIA
T0075BG	SANDVIKBUEEN
T0075LK	LEX GRANDE
T0076BG	AKSELSON
T0076H	ELJAN
T0076K	AMATØR
T0076LK	PAX

T0076T	VILDE
T0077LK	JUVEL
T0078BG	TURID
T0078T	SIGVALDSON
T0079S	THINA IRENE
T0079TN	PER-IVAR
T0080H	SOLBRIS
T0080I	STRAUMVANG

SF0137A	Eva Karin
H0116B	Evengutt
N0056F	Fangtind
H0015AM	Fisk
SF0060B	Fiskaren
SF0014A	Fix
H0114B	Fjordbris
H0001KM	Fjordbris
H0001U	Fjorden
H0098O	Fjordglans
H0007BN	Flyfisk
H0005L	Fløssvik
RCB0336	Flåten
H0007AM	Fonnes Jr
SF0035F	Forsøk
H0009S	Frida
H0096K	Fritid
LG8397	Frøy
RCL0810	Frøya
SF0001S	Frøyanes
SF0014S	Frøyanes Senior
H0021AV	Furbas
SF0032V	Furen
SF0018B	Førde
RCK0808	Glimt
H0053B	Grimsøy
SF0088B	Grotle
H0027B	Gry Marita
H0102B	Gullbas
WAL0383	Gullfisk
H0108A	Gullskjær Jr.
H0110AV	Hallvard
H0105AV	Hammrabas
SF0008B	Hannah V
H0055AV	Hanne
LDVN0054	Hardsjø
SF0088V	Havbåra
H0266B	Havheld
H0095AM	Havleik
SF0012V	Havset
SF0042V	Havskåren
H0114S	Havsul

N0023A	SJØSTJERNA
N0023B	ROCKHOPPER
N0023BR	MUDDVÆRING
N0023F	GJØA
N0023H	MONICA
N0023HR	INGMUNDSON
N0023L	ØYGUTT
N0023LF	KENT-RUNE
N0023LN	LODEK
N0023ME	SEKA
N0023R	SVEBØEN
N0023RT	BUVÆR
N0023SG	POSEIDON
N0023SO	ERLAN
N0023V	ELISE
N0023VV	EGGLAND
N0024BR	LISA BELL
N0024DA	ØYNES
N0024F	SKARVHOLMEN
N0024H	OLE HARTVIG
N0024HR	EDITH HELENE
N0024L	ØYAN
N0024LF	KLUBBEN
N0024ME	SELVÅG SENIOR
N0024MS	KARIDA
N0024RT	VYTIS
N0024SO	ADINE
N0024TF	HAUKØY
N0025B	URHOLM
N0025BR	WEST COAST 1
N0025BØ	HEBE
N0025DA	JULIUS
N0025F	SNOP
N0025G	HAVBRYN
N0025H	BERDINE
N0025HM	SUKANYA
N0025L	MUSTANG
N0025ME	EINAR ERLEND
N0025MS	JUVEL
N0025R	ROSØY
N0025RT	HELLSKJÆR
N0025TN	HILDE HELENE

T0080K	ALISE
T0080L	FJORDHUNTER
T0080T	RANDI HELENE
T0081L	SVEBÅEN
T0081LK	FJORDFANGST
T0081T	ARCTIC OCEAN
T0082T	BJØRNES
T0083S	ÅRNES
T0084K	ESPEN
T0084T	FJORDFISK
T0085H	TOMMY
T0085I	SVANFJELL
T0085K	ØYBAS
T0085N	HÅREK
T0085S	SKOGNES
T0085T	H. LINDRUP
T0086H	MARIA
T0086I	ENGESVÆRING
T0086LK	SENJAFJELL
T0086T	MARION HELEN
T0087K	SUTIND
T0087T	VESLEMØY
T0088B	MAIKEN
T0088LK	HAVTERNA
T0088N	SOLVÆR
T0088T	K.AMALIE
T0089K	STANGNES
T0089LK	RUNDSKJÆR
T0089T	MAGNARSON
T0090N	TORNADO
T0090T	SOMMARØYBUEN
T0090TK	TOR HELGE
T0091K	VALAJENTA
T0091T	STIAN JR
T0092LK	KRAVIK
T0092S	BIRGERSON
T0093B	MALANGVAAG
T0093K	LUNDE
T0094K	EDEL VIND
T0094KN	RENATO III
T0094LK	MARIANNE
T0094T	M. JENSEN

SAN0312	Havørn	N0025V	KNUT P	T0095LK	JOPPE
H0121B	Havørn I	N0025VA	KVITHOLMEN	T0095T	FALKEN
SF0009F	Hedda	N0025VS	INGRID-KRISTINE	T0097K	NINA MARI
H0022AM	Hegmar	N0025VV	SKOLMEN	T0097T	LILLEBAKK
H0012AM	Heilo	N0026A	JAN OSKAR	T0098K	NOAH
SF0017V	Hendanes	N0026AH	ÅKERØYVÆRING	T0098LK	PER
H0140K	Hopholm	N0026BØ	RØSTVÆR	T0098N	STABBEN
H0055L	Hosøybuen	N0026L	LILL-GRETHER	T0098S	STØAGUTT
H0144AV	Hugin	N0026LN	BRATTLAND	T0098T	SVERRESOEN
H0004S	Høylandsgutt	N0026ME	MELØYTIND	T0098TK	KARIN
H0124AV	Ida	N0026SA	MARINAT	T0099K	GULLE
SF0008V	Ida Marie	N0026SG	BRANNØY	T0099LK	FJORDCAT
SF0175B	Igland	N0026SO	RÆKA	T0099T	TOR-HENRIK
H0089O	Isbjørn	N0026VA	SIGNAL	T0100K	KAROLINE
H0029K	Isobar	N0026VV	VIKSTJERNA	T0100L	STIAN-ANDRE
H0011O	Jaktavik	N0027AH	ANNE-MARIE	T0100LK	LISE-BEATE
H0282AV	Jane	N0027BØ	BØFJÆRING	T0100T	BÅRAGUTT
SF0019F	Janica	N0027DA	ELLA OLIVE	T0100TN	SENJAGUTT
H0222AV	Jojo	N0027MS	SVABERG	T0101K	OTTERN
SF0099G	Jomar	N0027R	NESØYFISK	T0101LK	SKJEGGESTEIN
H0015T	Juma	N0027RT	STAVØY	T0101T	HAVBÅEN
SF0007S	Kamaro	N0027SF	MARIA	T0103TK	LOKE
H0008A	Karina	N0027SG	VENUS	T0104LK	ROGER
H0055K	Karsten	N0027SO	KRISTINE	T0104T	HERSØY
H0008R	Karven	N0027V	EDMONSON	T0105L	RAMONA
SF0023V	Keltic	N0027VV	NY-GLIMT	T0105S	BRIS
SF0148F	Kjeholm	N0027Ø	MORGENSTJERNE	T0105TK	TRYGG
H0006ØN	Kompis	N0028AH	URTIND	T0106LK	FRYDHOLMEN
H0014S	Krossfjordfisk	N0028B	WANJA	T0106T	JUBÅEN
H0016B	Kvikk 2	N0028BR	PLUTO	T0107LK	RENNEBUEN
H0009B	Lady	N0028BØ	KIMA	T0108S	ÅRVIKGUTT
H0170B	Laila	N0028DA	TANJA KARIN	T0110K	SKOGARØY
H0179AV	Larius	N0028F	THAIFISK	T0111K	SNOKEN
H0038MF	Lasse	N0028G	JOHANNE	T0111S	ODIN
H0002A	Lea	N0028HM	NORDLYS	T0111T	SKULBAREN
H0018L	Leika	N0028L	HAZARD	T0112K	VALAGUTT
SF0222B	Lending	N0028LN	HESTEN	T0112S	JAN TORE
SF0055F	Lennart	N0028ME	VANGSBUEN	T0114T	FRUHOLMEN
SF0019S	Liko	N0028SG	RAYWAN	T0115LK	SENJAFJORD
H0006AM	Lill Beth	N0028TN	TRÆNAGUTT	T0115T	TRANØY
SF0051B	Linda	N0028V	AURORA	T0116K	AURORA
SF0001B	Lindholm	N0028VV	BALLSTADJENTA	T0116T	ANNE

SF0033S	Lindisfarne	N0028Ø	EMIL LEANDER	T0117K	VIKING
H0226B	Line	N0029A	EMMA	T0117T	CAMILLA
H0015FJ	Lobster	N0029AH	FJORDVÅG	T0118S	ISBÅEN
H0059K	Lotte	N0029BR	DAG-MONA	T0118T	ØYTIND
H0054AV	Lukko	N0029BØ	SJØGUTTEN	T0119KN	NYEGGA
H0052B	Luna	N0029F	SOLSKJÆR	T0119T	BENTSJORDTINDEN
SF0024A	Magnus	N0029HM	SPENNING	T0120I	MAJA IREN
H0030MF	Maren	N0029LN	ÅTA	T0120T	FRU JANNE
H0008MF	May	N0029ME	KAMERATEN	T0121TK	JOHAN F
H0028MF	Maya	N0029R	POLARVIND	T0122TK	AMANDA
SF0027F	Merkur	N0029SO	LAGUN	T0123K	VARØY
SF0015A	Milla	N0029TF	MAJA	T0124LK	DALGÅRD
H0164AV	Mio	N0029V	HORNSUND	T0125L	NJORD
LM7198	Monita	N0029VR	TORE GØRAN	T0125LK	BREIVIK SENIOR
H0569B	Mostein	N0030A	ANDØYFISK	T0126S	TOYA
H0021B	Mostring	N0030BR	BESTEFAR	T0126T	REBBENES JR
H0145AV	Munin	N0030DA	ÅKERSKJÆR	T0127L	BRIS
SF0152S	Myklen	N0030HM	ØYVÆRING	T0127T	SKOGØY
H0033R	Måken	N0030HR	FRYDHOLMEN	T0128S	FIA
H0028ØN	Nappen	N0030ME	SMARAGD	T0128T	OTERNES
H0117B	Nappholm	N0030R	RØDØYVÆRING	T0129LK	RAMPEN
SF0220B	Nigardsøy	N0030RT	HAVHESTEN	T0129T	SJÅBÅEN
H0025AV	Njåfisk	N0030SO	MATHEUS	T0130LK	HAVFLORA
H0142AV	Njåfisk II	N0030V	HAVPRYD	T0130T	ROBIN
H0076AV	Njågutt	N0030VR	SØRVIK	T0131T	ARIEL
H0285AV	Njåsund	N0030Ø	SOMMARØY	T0132K	SANDNES
SAN0025	Nordfjord	N0031A	MJØLNER	T0132T	MARJELLA
SF0227V	Nyken	N0031F	VEINES	T0133K	BURØYVÆRING
H0002E	Odin	N0031ME	LYSVOLD JR	T0134T	RØSNES
SF0110B	Ole Cato	N0031MS	TORILD	T0135K	LAUNES
SF0026F	Ole Erik	N0031R	MARITA	T0135N	MERETHE II
SF0021A	Ole Morten	N0031RT	HAVHESTEN	T0135S	ANITA
SF0133A	Oriana	N0031TN	TRÆLBØEN	T0136T	ANFIELD
SF0056F	Orion	N0031V	VÅGØYSKJÆR	T0137T	MAGGAN
H0010FS	Osing	N0031VR	HAVGLØTT	T0138LK	EMMA-SOFIE
H0002ØN	Osund	N0031VV	ALEXANDRA	T0138S	KATLA
SF0044A	Ottobas	N0031Ø	GÅSØY	T0139L	RUBIN
H0005O	Peragutt	N0032A	NORDENG	T0139T	KVITBJØRN
RCI0664	Perfekt	N0032B	MARGRUNN	T0140LK	HANS-LUDVIG
H0017A	Pixi	N0032BØ	ÅSAN	T0140T	KOBBA
LBP0877	PøbbåBasar	N0032DA	ØYVÅGEN	T0141K	LABAN
H0043KM	Ramona	N0032R	STORMOJENTA	T0141KN	SKIMRING

SF0038B	Randi	N0032SO	SKARTIND	T0141LK	ANNE SOFIE
H0071B	Rask	N0032VV	BRUTUS	T0141T	BREMSUND
H0166B	Rasken	N0032Ø	OLAFUR	T0142LK	STØBUEN
SF0024B	Raya	N0033B	HERR OLSEN	T0142S	RALINA
H0050FS	Reidar	N0033DA	KINE JOHANNE	T0142T	ARNT IVAR
SAD0141	Rita	N0033F	STJERNTIND	T0143K	ALANGEN
H0188AV	Rito	N0033L	MARKUS	T0143LK	VARNES
H0004AM	Rusken	N0033ME	BILISKNIIR	T0144T	JUNIOR
H0008BN	Ruth	N0033SG	TOBAC	T0146LK	HEKKINGEN
H0078B	Rymann	N0033SO	SANDRA	T0147K	VARNA
SF0008FL	Sandskjær	N0033VV	ÆRVIK	T0148T	MJØLNER
SF0285V	Saturn	N0033Ø	KRILEN	T0149LK	SMÅVÆR
SF0050S	Seljefisk	N0034A	TROLLTIND	T0150K	NINA MARI
SF0270B	Shanty	N0034AH	FRØGRUNN	T0151K	TROY ARON
H0009FJ	Siglevik	N0034B	SJØBRIS	T0151T	TENNHOLMEN
H0011FJ	Siglodden	N0034F	BRATTHOLMEN	T0152K	TERNA
H0006K	Silver Boy	N0034H	SVANEN	T0152T	VÅGAR
H0066BN	Sissel Alise	N0034HM	UTVÆR	T0154T	HEIDI
SF0016A	Sjøblomst	N0034RT	PASAT	T0155T	KVALØYGUTT
SF0046B	Sjøbrem	N0034V	ALINE	T0157K	SJØTUN
SF0139A	Sjøflu	N0034VA	ØYVÆRING	T0157T	LØKSTIND
H0054F	Sjøgutt	N0034VV	MADELEN	T0158L	SLETTENBERG
H0089AV	Sjøgutt	N0035A	MILIAN	T0160LK	STORMEN SENIOR
H0011B	Sjølivet	N0035AH	ANN-RITA	T0161LK	FORTUNA
SF0067A	Sjømann E	N0035G	SANDSØY	T0161T	HAVSOL
H0053AV	Skarten	N0035ME	CATHRINE	T0162T	PLUTO
SF0019SU	Skarøy	N0035RT	VERONICA	T0163K	STENALINE
SF0041S	Skjold	N0035SG	ENGELØYVÆRING	T0164T	MORTENVIK
SF0209B	Skom	N0035SO	RADI	T0165T	DRAGEN
ZZ1439ZZ	Skulebas	N0035V	MATHILDE	T0166T	ØYVÆRING
H0034S	Skårungen	N0035Ø	MARNA	T0167KD	BUKTAGUTT
SF0031F	Småen	N0036B	MACH I	T0167T	VARNES
SF0020F	Sol Mar	N0036BR	LANGNES JR	T0168LK	GUBBEN
H0008FS	Solbakken	N0036F	STRANDVÆRING	T0169LK	ELISE KRISTIN
SF0020SU	Solglytt	N0036G	ISELIN	T0170K	SKARSTEIN
SF0038SU	Sollys	N0036L	VIVI	T0172T	VESLEVÅG
H0012FJ	Solmai	N0036RT	MIKAEL	T0173LK	TROLLVIK
H0058MF	Solvik	N0036TN	HAVFRUA	T0173T	SKARSTEIN
H0028FJ	Soløybas	N0036V	ANNE MARIE	T0174T	KYSTBAS
SF0017B	Sonja	N0036VV	BØRRESEN JR	T0176B	LARS-ANDREAS
H0037B	Spring	N0036Ø	VÅGEN	T0176T	BJØRNES
N0555BØ	Stattegg	N0037BØ	NORDGRUNN	T0177K	VEST-TIND

N0055VR	Stattegg	N0037DA	JIM ROGER	T0177T	JOHN YNGVE
M0052AV	Stattegg	N0037F	KRABBEN	T0178K	TUNFISK
H0013K	Stauper	N0037HR	ISABELL	T0178SA	EMMA-MARI
SF0130A	Stavfjord	N0037LF	JADEN	T0179T	ALEXANDRA
SF0042S	Sterling	N0037LN	NYVON	T0180KD	HELENE
H0066S	Strilagutt	N0037ME	KOLBJØRN M	T0180LK	GRIM
H0012O	Strønøy	N0037MS	EVRO	T0180T	FIDEL
SF0205SU	Sulegutt	N0037TF	UNNI	T0181S	BROTT
SF0040SU	Sulingen	N0037TN	HAVFLORA	T0182BG	MEFJORD
H0003S	Sundfisk	N0037V	KARL-VIKTOR	T0182K	VÅGAR
SF0042B	Svanen	N0037VA	LISØYSUND	T0182T	TRÅLFISK
H0008O	Svinten	N0037VR	BUHOLMEN	T0183T	IRINA MARIE
H0015BN	Sølvberg	N0037VV	DYNSKJÆR	T0184K	VATNAN
H0002S	Sørvest	N0038A	NORSOL	T0186T	TINA
SF0001GR	Tea	N0038B	LING	T0188LK	VEBJØRN
H0087S	Teinegutt	N0038DA	JON-VIKTOR	T0188S	SØRHOLMEN
H0025FS	Tempo	N0038F	ODD-ARVID	T0188T	MARIT-KRISTINE
SF0018V	Terje Viken	N0038H	BENEDICTE	T0189LK	SENJAVÆRING
H0112B	Terna	N0038ME	BAS	T0190T	KLEIVA
H0035O	Terten	N0038RT	CONQUEST	T0192T	FRAM
SF0101A	Tet	N0038SG	LOMWI	T0193T	ISAC ALEXANDER
SF0011V	Tin	N0038SO	ARIEL	T0195LK	H LARSEN
SF0047F	Tom-Robert	N0038V	VITO	T0195T	TINA KRISTINE
H0007F	Tomina	N0038VR	LEISKJÆR	T0196S	MARTINE
H0005K	Tone	N0038Ø	SYNNØVE	T0196T	MIA
H0120B	Tor	N0039F	SJØNAPP	T0198K	ROLF-ÅGE
SF0131A	Tore	N0039H	MAJA	T0199K	MJØNES
SF0085V	Torill	N0039L	FINN-ERIK	T0199T	BAIAS
H0018O	Torstein	N0039MS	HARDHAUS	T0200K	SKOGSFJORDINGEN
H0129S	Torøy	N0039SO	ANNIE	T0200T	GIGGEN
H0023S	Trellevik	N0040A	STEFFEN	T0201K	DUSJA
H0011F	Tressnes	N0040B	KRISTIN-ANITA	T0202H	ADMIRAL F.
H0001E	Trixi	N0040BR	SALHUSVÆRING	T0202N	SKOGSHOLMEN
SF0055B	Trollgutt	N0040BØ	EVA SOFIE	T0202T	MJOSUND
SF0206A	Trone Heidi	N0040F	NORDTINN	T0203T	STEIN JIMMY
H0195AV	Trulte	N0040H	TERNA	T0205T	JORUNN B
H0096S	Turid	N0040HR	HUSVÆRSUND	T0212K	EINAR MAGNUS
SF0070SU	Tårnskjer	N0040ME	MELØYSUND JR	T0212T	VIKING
TAB0618	Ulla	N0040SO	SKAVIK	T0214T	AMIGO
H0013S	Uredd	N0040V	SANDER	T0215T	HOLMBØEN
H0152AV	Valutt	N0040VA	KILVÆRFJORD	T0218T	SLOGMÅSEN
SF0075F	Veibas	N0040VV	MATHEA	T0219T	GRØTØY

SF0072B	Verning	N0040Ø	RANTON	T0220T	MARKUS
H0008AM	Vestbris I	N0041B	NYBAS	T0221K	KARLO
SF0110V	Vester	N0041BØ	BITTE	T0221T	ÅRVIKSAND
SF0210V	Vester Junior	N0041F	MARIELL	T0222T	GRIMEN
T0003LK	Vestfisk	N0041L	KLEPPABAS	T0223T	LILLEFJORD
SF0170V	Vestgutt	N0041ME	MELØYSUND JR	T0224K	ANN TOVE
SF0005S	Vestliner	N0041R	STORM	T0226T	MINIBANKEN
H0083O	Vestrevåg	N0041VV	THEA	T0227K	ROHIT
H0096B	Vestskjer	N0041Ø	FLID	T0230T	SOLBU
SF0020B	Veststeinen	N0042B	NYHAV	T0231LK	PÅL-STIAN
SF0050B	Vestvær	N0042BØ	DYPINGEN	T0232T	RIVALEN
SF0221V	VI-2	N0042F	VIKTORIA	T0234T	STØDIG
H0017F	Vicky	N0042G	KORAL	T0241T	HAVGULL
H0022ML	Victoria	N0042H	MARGARET	T0248T	BAKKEBÅEN
SF0267V	Victoria May	N0042MS	BØLGEN	T0250TK	KRISTOFFER
H0001A	Vikingfjord	N0042RT	KAROLIUSSEN	T0251KN	PLUTO
H0028O	Viktor	N0042SA	NORBAS	T0253K	FRANKLIN
SF0034F	Vilde	N0042SG	GENERAL	T0254T	ØRNES
SF0220V	Vito	N0042SO	TERESA	T0255T	VÅGSTRAND
SF0022V	Vito II	N0042VV	ALEXANDRA	T0256T	VÅGSTRAND
H0032MF	Vågen	N0043B	WÅGØY JR.	T0258K	SOLGLIMT
SF0027G	Zico	N0043F	ELIDA	T0258S	FAVORITT
H0006O	Øien	N0043H	SELMA	T0260T	ØYVÆRING 1
H0048FS	Øyavåg	N0043RT	MARINA	T0266K	BRATTHOLMEN
H0006A	Øybas	N0043SO	TORBÅEN	T0269T	HAVBRIS
SF0007SU	Øygutt	N0043TN	SANNAGUTT	T0270K	KNOTTIND
H0028B	Øystrand	N0043V	SKARVEN	T0271S	RØDØY
SF0078B	Øyvind	N0043VV	KROGH SENIOR	T0271TK	HAVBUEN
WAU0273	Øyvær	N0043Ø	GUNNAR	T0275T	MARIE LIE
A0004F	SMÅEN	N0044A	HAVBRÅTT I	T0276K	LANGNES
A0005AS	Trygg	N0044BR	HARMFJORD	T0278K	LANGNES
A0005F	Tærna	N0044BØ	SYCLON	T0282T	TONEBØEN
A0010F	Constance	N0044F	NY-TROFAST	T0284T	BREMNES
A0011F	Fjellvik	N0044L	TUNSKJÆR	T0288T	NOATUN
AA0001A	Ålen	N0044ME	ENGØY	T0289L	UNNI
AA0003G	Bluepearl	N0044MS	PIA	T0290T	ALM
AA0003T	Sandøyjenta	N0044RT	AAGE STEINAR	T0294S	NORDFISK
AA0004R	DEPPA	N0044SO	VÅGSBUEN	T0297LK	HEIDI KRISTIN
AA0005R	LINA	N0044V	NICOLINE	T0299T	HUGIN
AA0006G	Kjetil	N0044VV	T. SIVERTSEN	T0300T	STORHOLMEN
AA0006R	Tiril	N0045B	HILMARSON	T0301T	SKAGØY
AA0007L	FARMANN	N0045BR	THEA	T0303T	MYRNES SENIOR

AA0008G	OSKAR	N0045F	TURBO	T0305T	TAIFUN
AA0009G	Valø	N0045H	INGVILD	T0311K	SNOKEN
AA0010G	SURTSEY	N0045ME	TINDVÆR III	T0311T	TOPPEN
AA0010R	Linn	N0045MS	KEN STIAN	T0313T	JARA
AA0012T	KARI	N0045SG	VIKSTJERNA	T0322T	DAGFINN
AA0015R	Luro	N0045VV	HAUGSJØ	T0330K	ERGO
AA0015T	Moby Dick	N0046B	VÅGAR	T0330T	REMO
AA0017G	Måsnes	N0046BL	DAG	T0338K	NOJUS
AA0017L	NEBB	N0046BØ	BASTUS	T0338T	RADIAN
AA0021G	MATHEA	N0046F	SPURVEN	T0343T	OTTERØY
AA0023A	Terna	N0046H	KORALL	T0350LK	MALANGSFJORD
AA0028L	Tøtta	N0046MS	VARIANT	T0350S	HAVÅL
AA0029R	Nils Erik	N0046RT	ORION	T0353T	TOROLV
AA0030L	Sabben	N0046SO	SOFIE	T0364K	GEIRONGEN
AA0035L	Guldfisken	N0046V	RAVNØY	T0371K	NIKE
AA0040L	Randi II	N0046VV	VILDE	T0373T	RENNEBÅEN
AA0050T	Teistholm	N0046Ø	MØYSALEN	T0378T	JON ÅGE
AA0055G	Astor	N0047B	FLØHAV	T0381S	KIMMEN
AA0056G	ATO	N0047F	SEGELSTEIN	T0384K	LOBO
AA0057A	Lise	N0047HR	SANDØY	T0390K	SJØHESTEN
AA0062A	Anfield	N0047SO	NIKE	T0392K	MALIN AMANDA
AA0063A	Jalito	N0047V	SKALLEBANKEN	T0395K	SKOGNES
AA0065G	MIDNATTSOL	N0047VV	TORGVÆRING	T0399K	LENA
AA0066L	Hedvig	N0048BR	SOLEY	T0400T	KURT-ENDRE
AA0066R	Jano	N0048HM	EGERDAL	T0404LK	BREITIND
AA0076G	Cielo Azul	N0048LN	RINØY	T0405T	BØLGEN
AA0085L	Dennis	N0048ME	LINAS	T0408T	LEIF HARALD
AA0091A	Kjelsvik	N0048MS	ELIAS	T0420LK	TOR-MORTEN
Ø0001RD	SJØPRINS	N0048SO	IDA	T0441K	TORGEIRSON
O0002O	Røynetassen	N0048V	JANN YNGVE	T0447LK	VÆRING
Ø0003M	Ringskjær	N0048VA	JUSIKA	T0464LK	YAMAHA
Ø0006HD	August	N0048VV	GRYTHOLM	T0475T	BERG SENIOR
Ø0006RD	BÅTSKJÆR	N0049L	LOVUNDGUTT	T0481K	BLÅTIND
Ø0007M	Kuling	N0049LN	PRIMA	T0490T	ALM
Ø0008F	Teddy	N0049ME	KASPER	T0499T	LANGØY
Ø0014F	Vigdis	N0049R	FJORDFISK	T0500LK	HALLVARDSON
Ø0022F	ELLEN	N0049RT	KINE MARTINE	T0501LK	HALLVARDSON
Ø0050H	Sonbas Senior	N0049SO	ELAN	T0507T	STINE MARLEN
Ø0123H	ANN SOFIE	N0049V	BLUE MASTER	T0531T	LØVENG
Ø0150H	Spjæringen Senior	N0049VV	IVERSEN JUNIOR	T0537T	NYTUN JUNIOR
R0003SK	Dani	N0050AH	ULVANGSØY	T0551T	ODD KRISTIAN
R0033SK	Sandsbuen	N0050BR	STIAN	T0610T	GLIMT

TK0001K	PANDAEN
TK0001P	Mi17
TK0002BL	Mostein
TK0017BL	SVANEN 2
TK0022BL	Jolla
TK0023BL	Orion
TK0025P	Barracuda
TK0028BL	Leo
TK0042K	Skomring

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TK0059BL	Lunik
TK0063BL	Vindrosa
TK0076BL	FABIAN
V0003HS	Obelix
V0003S	Stigar
V0005S	Nani B
V0007HS	Havduen
V0010S	Kazan
V0030S	Tarefrime
V0039L	Ulagutten
V0098L	SIGFRED I
VA0001K	Husvær
VA0002LS	SJØSKVETT
VA0003F	Linn
VA0003K	Musti
VA0003M	SIKO
VA0004K	Kvistholm
VA0004M	VALLØY
VA0005FS	Lene Mari
VA0005K	FLANDER SR.
VA0007F	HALLVARD
VA0007LS	Marie Emilie
VA0008LS	SJØSPRØYT
VA0009S	Neptun
VA0010M	Seiko

N0050DA	ENGEVIK JUNIOR
N0050F	TAMARA
N0050G	SVENDSEN SENIOR
N0050HR	SJØFISK
N0050RT	HAVØRN
N0050SG	RANDI HELENE
N0050TN	MATHILDE
N0050V	SKUUVINGEN
N0050VV	BALLSTADGUTT JR

N0050Ø	KAMILLA GRANDE
N0051A	VIKAFISK
N0051F	JOSBERG
N0051L	RELØYGUTTEN
N0051ME	MELØYFJORD
N0051MS	KYSTVÆRING
N0051VR	ODIN
N0051VV	GURATIND
N0051Ø	STABBEN
N0052A	ODD JUNIOR
N0052B	JAN ROBERT
N0052F	BJØRNSON
N0052G	PRIKKEN
N0052H	LINNEA
N0052ME	STORTIND
N0052R	HANNA CAROLINE
N0052SO	JULIANE
N0052V	VICKI
N0052VR	TORA
N0053A	MEA
N0053F	NORØY
N0053G	FAGERSKJÆR
N0053RT	SKOMVÆRFISK
N0053V	NO PROBLEM II
N0053VV	TATIND

T0657T	TYRIHANS
T0691T	EISTEBÅEN
T0701T	GODØNES
T0720T	BROR
T0734T	SØRVIK
T0758T	LINN-PIA
T0771T	ANNE GRETHE
T0825T	TERNA
T0845T	OLDERVIK

T0891T	VENGSTØYVÆRING
T0898T	BRUNVOLL
T0909T	HAVELLA
T0960T	ØYBÅEN
T0999T	SALTBÅEN
T1104T	STANGNES
T1129T	MILDRID
T1468T	BRIS
T2017UK	UNGDOMSKVOTE
T9000H	
T9000LK	
T9000T	
T9000TN	
T9300LK	SKOLEBÅT
T9300T	HELMER HANSSEN
T9301T	JOHAN RUUD
T9800T	
TAA154	
TAA335	
TAC530	
TAD080	
TAD962	
TAF605	
TAG825	
TAH260	

VA0011K	Pitbull	N0053Ø	KYSTFISK JR.	TAI028
VA0012K	Sjarke	N0054A	VILJAR	TAI313
VA0012LD	Agathe	N0054B	NORDLYS	TAI382
VA0012M	Lillekveita	N0054BR	ODIN SENIOR	TAI542
VA0013K	Cobra Fish	N0054F	SUNDMANN	TAJ458
VA0013M	Østvik	N0054H	NETTO	TAJ482
VA0013S	Tamara	N0054MS	RALLAREN	TAK911
VA0014F	Merethe	N0054RT	SJØTUN	TAL257
VA0014M	Hjelmen	N0054V	SEINGEN	TAL679
VA0015K	Streif	N0054VR	DAG-SENIOR	TAN634
VA0015LS	Romero	N0054VV	KONGSHOLM	TAO067
VA0016M	HENRIK	N0054Ø	NORLINER	TAS162
VA0016S	KARI	N0055BØ	JAN-TANITA	TAS542
VA0017K	Inger	N0055F	ERIKSEN SENIOR	TAT358
VA0017M	MARIELL	N0055HR	DELFIN	TAU295
VA0018F	Daniana	N0055ME	STINE MAYA	TAU380
VA0018K	Randøyjenta	N0055RT	RØSTVÆRING	TAU426
VA0018S	TEMPO	N0055SG	TORIL	TAV170
VA0020F	HAVSUND	N0055VV	GILL	TAV260
VA0020K	Karuna	N0055Ø	DALBUEN	TAV489
VA0021FS	Eggland	N0056BR	FJELL	TAV755
VA0021K	Lomvien	N0056BØ	ANNE	TAV790
VA0023M	BERTA	N0056ME	VARDAR	TAW281
VA0024F	Varnes	N0056V	VIKSKJÆR	TAW541
VA0025K	MARIE	N0056VV	BUKSNESSFJORD	TAW696
VA0026M	Ternen	N0057A	SEISKJÆR	TAW824
VA0027K	Kalimas	N0057BR	SANDRA	TAX189
VA0027M	FORABUEN	N0057F	FRYDHOLMEN	TAX266
VA0030M	Bolette II	N0057H	TRYGG	TAX415
VA0032M	Angell	N0057L	STRAUMVANG	TAX573
VA0034K	ALMA	N0057ME	BRUTUS	TAX860
VA0036K	Certina	N0057SO	KOMET	TAY030
VA0040K	Aase	N0057VR	LINE MARIE	TAY205
VA0041M	LOVISE	N0057VV	SJØBRIS	TAY362
VA0041S	Lillegutt	N0057Ø	ORION	TAY619
VA0042S	HAVLYS	N0058A	NORDFLU	TAY887
VA0043M	Pion	N0058BR	MÅSØYGUTT	TAZ168
VA0044M	Rosenvoll	N0058BØ	CHRISIDA	TAZ264
VA0045S	TURBO	N0058HR	KEVIN	TAZ396
VA0047M	Lillegutt	N0058L	HALDORSON	TAZ445
VA0049M	Munaas	N0058ME	POLAR ATLANTIC	TAZ621
VA0050K	Bøygen	N0058SO	TOR-KÅRE	TAZ645

VA0051S Sleipner
 VA0056K Iris
 VA0056M Trine
 VA0056S Bella
 VA0057K SILJANN III
 VA0066F Flubas
 VA0071M Brattholm
 VA0076K Trygg
 VA0076LS Lillehavn
 VA0077M KVEITA
 VA0078K Pålita
 VA0081F Måken
 VA0082K Havørn
 VA0083F Ramona
 VA0085S Sørland
 VA0086M Inger
 VA0087K Frieda
 VA0087M MERSEY
 VA0088M ANNA
 VA0088S Tobias
 VA0090M Hillesund
 VA0098K OLAGUTT
 VA0111K OLAGUTT
 VA0111M Knappen
 VA0111S BRIS
 VA0113K FISH HUNTER
 VA0114K Tomalie
 VA0116F Elfi
 VA0116K MALENA
 VA0118M Randi
 VA0135K Ringskjær Sør
 VA0138K MARIUS
 VA0148M Strandbuen
 VA0174FS Blue Bird II
 VA0180F Sabb
 VA0198FS Jølle
 VA0217K LYSEMA
 VA0256K Toya
 VA0269K Betzy
 VA0311F Tarzan
3YRI AMOR
A0001B HØGHOLMEN

N0058V NIKITA
N0058Ø MARTYNA
N0059A NORHAV
N0059B NYBRÅTT
N0059F OMEGA
N0059L HOLMSUND
N0059ME ICE
N0059RT KÅRE MARTIN
N0059SG ØKSSUND
N0059TN STERO
N0059Ø LANGNESVÆRING
N0060B SENIOR
N0060BØ LENØY
N0060DA KYSTFISK
N0060F ANGELSEN JUNIOR
N0060L HAFBJØRG
N0060R VALVÆRGUTT
N0060RT STINE HELEN
N0060V SVINØYVÆRING
N0060VA STORMLEIK
N0060VR NORDTIND
N0060VV SEBASTIAN
N0060Ø ØYLAND
N0061A SIGURD
N0061BØ ASKELADDEN
N0061F RONNY N
N0061R LAXEN
N0061SA EGON
N0061V ANN
N0061VV STRATOS
N0062A RENATE
N0062B SIRIUS II
N0062F TOMMY JUNIOR
N0062H FRITHJOFSON
N0062MS ARNE
N0062RT SANDRIAN
N0062VR NORDHAVN
N0062VV IJA
N0063AH SEA-LADY
N0063B J.A. SENIOR
N0063H VANJA ANITA
N0063ME VOGIN

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TBC260
TBC390
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TBC465
TBC483
TBC619
TBC733
TK0014P ELLINORA

A0001V	RØSTØY
A0002AS	BERINGHAV
A9000A	
AA0012A	HAVØRN
AA0021A	TALVI
AA0027T	OLAV
AA0081A	HAVSULA
AAJ216	
AAL172	
ABC521	
ABN040	
ABN771	
ABO184	
AK0738	ARKHANGELSK
AK0751	ACHINSK
AK0752	VETLUGA
AK0777	IZUMRUD
BAK166	
BAL140	
BBE703	
BBG524	ISMATHO
BBK585	
BBM068	
BD0001D	NORDHOLMEN
CAT022	
CAY311	
CBA606	
CBQ430	
CBT408	
CBU263	
EA312	BJØRGULFUR
EAA269	
EAD913	
F0001A	GURI MARIE
F0001B	HAVPRINS
F0001G	SOLRAND
F0001H	SEILAND
F0001KD	SJØGUTT
F0001LB	POLARLINER
F0001P	FJORDBUEN
F0001TN	JOHN ANDREAS
F0001V	NORDVÅG

N0063RT	GRIMSØYVÆRING
N0063SG	MHAUKØY
N0063V	FJORDBAKK SENIOR
N0063VV	SANDER
N0064BØ	HANNAH
N0064FE	ARIEL
N0064H	MEA
N0064V	ARIEL
N0064VV	ELIAS
N0065B	ØYLINER
N0065F	GJØA
N0065L	JULIE
N0065ME	ØYGUTT
N0065RT	JØRN-HARALD
N0065TN	SKAGEN
N0065V	PERLEN
N0065Ø	SVEIN JOHAN
N0066BØ	TOVE
N0066F	SCHELDROPSON
N0066MS	ROWENTA
N0066SO	TIRIL
N0067A	THEO
N0067F	SOLBUEN
N0067HR	FISKØY
N0067L	KATRINE
N0067LF	LEIRFJORDVÆRING
N0067MS	MARIO
N0067RT	RØSTHAVET
N0067SO	THEO
N0067VV	FISKØY
N0067Ø	MATS BØRGE
N0068A	BRAKEN
N0068BØ	LOKKØYVÆRING
N0068DA	SUNDSVÆRING
N0068F	DYVÅG
N0068H	TROLLHOLMEN
N0068L	FANGST
N0068MS	ELENA MARIE
N0068R	VARDEN
N0068RT	BELLA MARINA
N0068V	MB NJORD
N0068VR	ELLBØEN

TK0025BL	SANTOS
TR0001B	HAVFISK
TR0001NR	STORBÅEN
TR0001SK	BIRGSI
TR0001V	KJAPP
TR0001Ø	MÅNESTRÅLE
TR0003NR	LILJEN
TR0004NR	BENTE SENIOR
TR0005LA	LEKNESBUEN
TR0006T	AUKNES
TR0017AA	MANIN
TR0020V	RÅHOLM
TR0042F	KARI
TR0110V	SULAVÅG
TR0161V	AUNSKJÆR
TR0345V	LILLESKJÆR
TR9301F	SKOLEFARTØY FRU IN
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UAA467	
UAA550	
UAA558	
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UAC039	
UAC621	
UAE580	
UAE755	
UAF296	
UAF539	
UAF573	
UAG088	
UAG476	
UAI565	
UAI754	
UAM865	
UAP225	
UAP466	
UAQ529	
UAQ864	
UAR496	
UAS087	
UAS391	
UAS392	

F0002B NORBANKEN
F0002BD KOLLBEIN
F0002HV BRATTHOLMEN
F0002N VARJJAT
F0002NK TOMBA
F0002P HAVPRINS II
F0002SV ELISABETH II
F0002V VANGEN
F0002VS KAROLINE
F0003B ANNE G
F0003BD RUBIN
F0003KD ELIN
F0003M TROLLSUND
F0003P TVIBURDAR
F0003SV ÅRSTEINNES
F0003TN VASSANA
F0003V TERNEN
F0004B GUSTAV
F0004G MILTON
F0004H BJARNE NILSEN
F0004HV HAAGRUNN
F0004LB JAKOB
F0004M GULLSKJÆR
F0004SV VIKAN
F0004V SOLTIND
F0005B JOHANNE
F0005L GERD-ELI
F0005M KASPER
F0005SV BUGØYFISK
F0005TN SKARDHOLMEN
F0005VS MARTE
F0006B NEMO
F0006BD INGVALDSON
F0006G NARTIND
F0006H KJELL STEINAR
F0006HV HARVESTER
F0006M MARITA KATHRIN

N0068VV SEIBUEN
N0068Ø EVA MARITA
N0069B TENNSKJÆR
N0069ME EMILIE
N0069V JUNI
N0069VV BØRØY II
N0069Ø GLIMT
N0070A GRO-HEIDI
N0070L SIV
N0070MS PEDER B
N0070R SJÅVIKNES
N0070TN TOPAS
N0070VV BALLSTADVÆRING
N0070Ø MEA
N0071G M-SVENNSEN
N0071RT ROSØY
N0071SO EWA
N0071V LYKKENS PRØVE
N0071VR SKANTI
N0072BØ KRISTINA
N0072F RAMSEVIK
N0072H HANSVIK
N0072V ARNE-JOHANNE
N0072VV STAMSUNDEVÆRING
N0072Ø ELISABETH
N0073BR MONICA M
N0073H MAGNUSSEN
N0073ME JOHAN R
N0073MS TINDSBUEN
N0073SO MAGNUSSEN
N0073VV HØTTEN
N0073Ø HAVSULEN
N0074A JAN OSKAR
N0074B LYSTIND
N0074R HÅVARD
N0074SO FRIDA SOFIE
N0074V TOYA

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UAU059
UAU075
UAU091
UAU423
UAU427
UAU428
V0014L KVALVÅG
V0045S LØVEN
V0068L GULLIVER
V0088L GULLIVER
VA0005LS ØYSTEINSON
VA0007FS HAVBRIS
VA0010FS RØDLAND
VA0027LS SCANTI
VA0038FS SUSANN
VA0039FS FALCON
VA0040M ARCTIC

F0006N	AILIDA
F0006P	FJORDBRIS
F0006SV	FEIESKJÆR
F0006TN	AKOM
F0006V	LINN-TORRY
F0006VS	SARA
F0007B	VESTHAVET
F0007BD	TANJA
F0007G	CHARMI
F0007KD	UMA
F0007LB	ØRNTIND
F0007M	SANDNES
F0007N	VARANGERJENTA
F0007NK	KRISTIAN GERHARD
F0007P	PORSANGVÆRING
F0007SV	ESTHER
F0007TN	CLARA
F0007V	THEA DALWHINNIE
F0007VS	PARTNER
F0008A	KORSNESVÆRINGEN
F0008B	HAVSIY
F0008BD	HAFDIS
F0008HV	SKARVEN
F0008KD	REPPARFJORD
F0008M	STEINRYGGEN
F0008V	JUNE
F0008VS	DØNNING
F0009A	INGER LISBETH
F0009G	SØLVI
F0009L	BÅRABUEN
F0009NK	EMILY
F0009P	EMMA
F0009SV	CINDY
F0009V	LINDA SOFIE
F0009VS	SOLVARDEN
F0010A	SILJA
F0010B	DYPFJORD
F0010BD	MAY LIS
F0010G	MEA
F0010HV	NOVOS
F0010KD	LINDA MERETE

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N0074VR	VÆRØYBUEN
N0074VV	OLE INGE
N0075A	RIKARDSON
N0075BØ	JUNO
N0075F	JENNY 2
N0075L	LYNGØYSKJÆR
N0075ME	KAROLIUS
N0075MS	LENNART
N0075SG	PÅLSTIKK
N0075SO	ANNIKA
N0075V	DENTAX SENIOR
N0075VR	ØYVÆR
N0076B	GLUNTEN
N0076BR	ANNA THERESE
N0076RT	HAVFRØKNA
N0076SG	BROTT
N0076SO	NEMINE
N0076TN	HEIDI ANITA
N0076V	SMÅEN
N0076VV	EGGUMSVÆRING
N0076Ø	TORAN
N0077BR	HUGIN
N0077BØ	PIRAYA
N0077LN	VESTFLU
N0077ME	CAROLINE
N0077R	ISBJØRN
N0077SG	SAGAGUTT
N0077V	MARITA-O
N0077VV	ULA
N0077Ø	HAVBÅRA
N0078B	NYHAV
N0078H	HARPAREN
N0078L	HAVBRIS
N0078MS	ELIAS
N0078SG	HAVELLA
N0078TN	SANDFLÆSA 2
N0078V	RAGNI MERETHE
N0078VV	STRØMØY
N0078Ø	CAPELLA
N0079BØ	NORDLYS
N0079F	BAASGRUNN

VA0066LD	ORION
VA0076M	SOLFUGLEN
VA0097FS	ELDORADO
VAA095	
VAB235	
VAB555	
VAB731	
VAC076	
VAC159	
VAD793	
VAE010	
VAE355	
VAE911	
VAE952	
VAF804	
VAG423	
VAG563	
VAG911	
VAH628	
VAI457	
VAJ191	
VAJ193	
VAJ542	
VAJ613	
VAJ718	
VAJ755	
VAJ805	
VAJ962	
VAK149	
VAK375	
VAK431	
VAK432	
VAK446	
VAK447	
VAK458	
VAK476	
VAK479	
VAK484	
VAK503	
VAK615	
VAK637	

F0010LB	JOHN-REIDAR
F0010N	LINNEA
F0010NK	STRØNSTADVÆRING
F0010SV	KLAR-SELIN
F0010TN	EMMY
F0010V	IDA-MARI
F0010VS	NOBEL
F0011B	REINBØEN
F0011BD	PER ROGER
F0011H	UNNUR
F0011HV	IEVA
F0011L	FISKETIND
F0011M	GRØTEN
F0011TN	JUNE
F0011V	RUNE
F0011VS	ANDFJORD
F0012BD	ENJA
F0012G	REMY
F0012H	ROALD JR.
F0012KD	NORODD
F0012M	INGØYVÆRING
F0012NK	SOA
F0012TN	STANGNESTIND
F0012V	BALDER
F0013G	CAVARO
F0013HV	HOLMEN
F0013VS	BIFANGST
F0014A	STEFJORD
F0014B	FISKESKJÆR
F0014L	VESLEMØY
F0014N	DIXI
F0014NK	KONFLIKT
F0014V	LARVIKGUTEN
F0015A	PER GUNNAR
F0015G	BØEN
F0015L	INGRID MARIE
F0015LB	BÅRDFJORD
F0015M	ROJOMA
F0015N	TROND
F0015NK	JUNE
F0015V	LØKKI
F0016A	MEA

N0079HR	MARIANNE
N0079MS	RASMUSS
N0079SG	FESTUS
N0079TN	SANDFLÆSA
N0079VR	VESTERBØEN
N0079VV	MARIANNE
N0079Ø	RICHARD
N0080B	RÅNES
N0080F	GISLØYVÆRING
N0080LN	KANSTADBUEN
N0080ME	HAUGHEI
N0080V	THEA 2
N0080VA	HOLMBØEN
N0080VR	SMÅHAUG SENIOR
N0080VS	KILBUEN
N0080VV	ØYBUEN JR
N0081ME	SOLØY
N0081SO	FRIDE SOFIE
N0081Ø	HAVBRYN
N0082A	TRITON
N0082B	NAUTIC
N0082BR	ERFJORDBUEN JUNIOR
N0082F	PILEN
N0082H	BREITIND
N0082RT	AURORA
N0082SO	CELINN
N0082V	SVERRE JUNIOR
N0083A	BERNT STEINAR
N0083BR	HARMONI
N0083BØ	WENCHE
N0083F	FJORDGUTT
N0083RT	FÆRØYFISK
N0083V	ANDENESVÆRING
N0083VV	HANNA
N0083Ø	FIRST
N0084A	MARIA
N0084B	HAGTIND
N0084F	BREITIND
N0084MS	SKJÆRBUEN
N0084V	LANGBÅEN
N0084VV	SPLEIS
N0084Ø	MÅKEN

VAK661
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WAB681
WAB753
WAB975
WAC124
WAC175
WAC315

F0016B	SIMEN
F0016BD	WIJAFISK
F0016H	HANNA INGEBORG
F0016HV	FELIX
F0016LB	STOKKVIK
F0016NK	HORNGRUNN
F0016SV	AKTIV 2
F0016TN	BØME
F0016V	KENNETH
F0016VS	ODIN
F0017B	KENNETH JOHAN
F0017G	CAROLINE
F0017M	ROY-ANETT
F0017VS	DOGGEN
F0018A	HERMANN
F0018G	HALLINGEN
F0018L	KORSHOLM
F0018N	HÅREK
F0018NK	SOLTIND
F0018P	TROLLABUEN
F0018V	VÅRSOL
F0019A	PILEN
F0019B	VAQUERO
F0019H	NORDLYS
F0019HV	VILKAS
F0019M	TIN
F0019NK	ISRYPA
F0019V	NITTAYA
F0019VS	NORDVÅG
F0020A	SAFIR
F0020B	TRIN EVEN
F0020BD	RONJA-MATHEA
F0020G	ALF-SIGMUND
F0020H	POLARSTJERNA
F0020HV	EVEN
F0020N	TOR EINAR
F0020NK	VILJEN
F0020P	CELINE
F0020SV	SJØSPRØYT
F0020V	FORTUNE
F0021A	THERESE
F0021BD	GRIMSHOLM

N0085A	LUDVIK
N0085F	PROPELLA
N0085L	HAZARD
N0085MS	NOREGG
N0085RT	HAVUR
N0085V	OLE OSKAR
N0085VV	AASHEIM
N0085Ø	RØSTAD
N0086AH	JUSTAD JUNIOR
N0086B	FUGLØYFISK
N0086BR	HELLEFISK
N0086HR	RAYON
N0086MS	REINEFANGST
N0086RT	ESPEN CATO
N0086SG	VALSVÆRING
N0086V	VATERFJORD
N0086VR	KIM RICHARD
N0086VV	JOKER
N0086Ø	JUSTAD JUNIOR
N0087BØ	OTTARSON
N0087L	DINABØEN
N0087ME	STRØMØYGUTT
N0087MS	MIRO
N0087SO	GO-LINER
N0087VV	MAJA 1
N0087Ø	SEGELSTEIN
N0088BR	FANGST
N0088F	BØRFJELL
N0088H	LAGUN
N0088L	HAVSTRAUM
N0088MS	WENCHE MERETHE
N0088RA	SYREN
N0088SO	FLØYFISK
N0088V	SPRUTEN
N0088VA	EIDEM SENIOR
N0089BØ	HAVBRYN
N0089F	JENNEGGA
N0089SO	ODDVAR JUNIOR
N0089V	LENE MARIE
N0089VV	MARINA
N0089Ø	BRASØY
N0090L	MARY JANE

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WAC333
WAC531
WAC648
WAC773
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WAE727
WAE767
WAE804
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WAF175
WAF269
WAF595
WAF815
WAG030
WAG112
WAG482
WAG775
WAG822
WAG907
WAG954

F0021G	LANGNES
F0021H	SULVÆRING
F0021KD	VÅRSOL
F0021LB	UTSIKTEN
F0021M	FISKUR
F0021N	JIM HÅVARD
F0021NK	ANITA
F0021SV	BUGØY
F0021TN	LAKSNES
F0021VS	SOLØY
F0022A	JAN BØRRE
F0022H	ELINE
F0022HV	PILEN
F0022N	POLARVIND
F0022NK	BØRNES
F0022P	RIINAKAISA
F0023A	TEIST
F0023BD	TOM LAURITZ
F0023LB	FJORDHEKSA
F0023TN	UNNUR
F0024BD	BJØRKÅSBUEN
F0024G	SEIVIKBUEN
F0024KD	LILLEGUTT
F0024NK	EWUNIA
F0024P	EDITH
F0024TN	VÅGEN
F0024V	SIRIUS
F0025BD	LEIKA
F0025H	STRØMSHAV
F0025HV	BÅRSELVFISK
F0025LB	KAROLINE
F0025M	NJORD
F0025N	BARSNES
F0025NK	RAPPEN
F0025TN	NORWASTERN
F0026B	TORSTEIN
F0026HV	KLO
F0026M	SONJA
F0026N	IDA
F0026NK	RAMBO II
F0026SV	INE MARITA
F0026V	MARCUS

N0090ME	HORNTIND
N0090MS	REINEBUEN
N0090V	RUTH KRISTIN
N0090Ø	HAVELLA
N0091BR	BJØRN
N0091F	NAPPSGUTT
N0091HR	BJØRNSVIK
N0091L	DENNIS OLAI
N0091MS	NORDHOLMEN
N0091V	MARLEN
N0091VR	ISLOMEN
N0091Ø	OPPMYRBUEN
N0092MS	LISS-EVA
N0092SO	TROND
N0092VR	KRISTIN MARITA
N0093A	JUNITA
N0093BR	PRØVEN
N0093F	HILMARSON
N0093ME	KJØNSKJÆR
N0093VV	IDA ANGELICA
N0093Ø	MØYSALEN
N0094A	WESTEGG
N0094BØ	NORDFLU II
N0094L	HÅLØYGER
N0094MS	HAAKON-JR
N0094V	NYBERG
N0094Ø	EIDSFJORD
N0095F	VIKSKJÆR
N0095HR	RAGNARSON
N0095V	VICTORIA
N0095VV	OLE-JOHAN
N0095Ø	VICTORIA
N0096A	STRAUMGUTT
N0096B	ØYASUND
N0096HR	SOLVÆRØY
N0096ME	HAVNÆRINGEN
N0096R	STEN TORE
N0096RT	NORDFANGST
N0096SO	ÅKERNES
N0096V	JYLDNER
N0096VV	MORTSUNDEVÆRINGEN
N0096Ø	DAINORA

WAH074
WAI293
WAI348
WAI668
WAI807
WAJ164
WAJ322
WAJ353
WAJ482
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WAK228
WAK254
WAK331
WAK508
WAK870
WAK953
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WAL383
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WAN082
WAN110
WAN131
WAN155
WAN583
WAN736
WAO175
WAO251
WAO310
WAO367
WAO399
WAO546
WAO875
WAO937

F0026VS	NEPTUN	N0097ME	GLITTERTIND	WAO958	
F0027M	HTIND	N0097MS	MAGNUS	WAP063	
F0027NK	OLASDATTER	N0097VA	AJAX	WAP394	
F0027V	SARTE	N0097VV	ROY-MAGNE	WAP496	
F0027VS	STEFFEN JUNIOR	N0097Ø	TULIPAN	WAP907	
F0028A	NORLYS	N0098B	EROS	WAQ021	
F0028G	GULLONGEN	N0098BØ	SJARK 1	WAQ244	
F0028N	AMANDA	N0098L	STRAUMØY	WAQ369	
F0028NK	EMMA-V	N0098VA	MINOR	WAQ545	
F0028SV	RIDDU	N0098Ø	HELLA	WAQ602	
F0028V	TOMMI MARI	N0099BØ	VIKSJÆR	WAQ758	
F0028VS	LUNA	N0099SG	FRØYTOR	WAR123	
F0029G	KVITNAKKEN	N0099SO	KARINE	WAR169	
F0029H	HAVØRNA	N0099V	HAVØRN	WAR311	
F0029L	SKJERM	N0099VV	BALLSTADØY	WAR818	
F0029LB	LUNHEIM SENIOR	N0100BR	BJØRNSON	WAR836	(tom)
F0029SV	TIIRA	N0100F	FALKEN	WAR960	
F0029V	HAVSULA	N0100L	LOVUNDEVÆRING	WAS236	
F0030B	MARGARETH	N0100R	ÆGIR	WAS472	
F0030BD	SOLHEIM	N0100SO	LANGØY	WAS507	
F0030G	BISPEN	N0100VV	OVESEN JR	WAS552	
F0030HV	POMOR	N0101B	NYHAV	WAS673	
F0030L	EINAR-ANDRE	N0101H	MØYSALFISK	WAT217	
F0030N	MYSTIC OCEAN	N0101HR	POLARGUTTEN	WAT300	
F0030NK	TORA B	N0101VV	VERONICA	WAT453	
F0030V	STØA	N0101Ø	STIG JUNIOR	WAT487	
F0030VS	VARANGERGUTT	N0102MS	KVALVIK JR	WAT573	
F0031A	HAVØRNA	N0102VV	TRINE	WAT689	
F0031G	ALDIS LIND	N0103MS	TINDSTØ	WAT816	
F0031H	BR. ISAKSEN	N0103VV	TØTTA	WAU237	
F0031LB	POSTNES	N0104MS	THOMAS ALEXANDER	WAU253	
F0031NK	LINN	N0104VV	HAVGULL	WAU316	
F0031P	BARJO	N0104Ø	LISE	WAU321	
F0032BD	GADUS POSEIDON	N0105A	STIG INGE	WAU576	
F0032G	TOR EIRIK	N0105MS	DAG VIGGO	WAU689	
F0032HV	SANDVIKNES	N0105V	HARINGBUEN	WAV062	
F0032L	KOMET	N0105VV	ROHOLMEN	WAV068	
F0032LB	VARFJELL	N0105Ø	BENTE	WAV077	
F0033A	VARGSUNDEVÆRING	N0106R	INGER-ANN	WAV173	
F0033G	AKSEL ANDRE	N0106V	FISKØRN	WAV303	
F0033H	FANGST	N0106VV	SJØTUN	WAV488	
F0033HV	NORA	N0106Ø	NESSIE	WAV544	

F0033M	ROLVSØYVÆRING
F0033N	FJORDBAS
F0033NK	LUNA
F0034BD	TORE
F0034N	JAN GUNNAR
F0034SV	STANGNES
F0034VS	TONE
F0035BD	ERNA
F0035G	NERO
F0035HV	SILHAV
F0035M	MARELIUSSON
F0035NK	LINEFISK
F0035TN	RAGNI ELISE
F0035V	MESKJÆR
F0035VS	DELFIN
F0036A	IDA
F0036B	TONJE
F0036BD	ARK
F0036HV	NORDLYSFISK
F0036LB	NENNIK
F0036NK	RONJA
F0036P	CHRISTINA
F0036VS	VÅRIN
F0037B	ERLEND
F0037H	VEROSY
F0037L	STENSØ
F0037M	TRELLEFISK
F0037NK	DELFIN
F0037SV	SKOGERØY
F0037V	LINDFISK
F0038G	SKJÅNES
F0038M	SEGLSTEIN
F0038NK	LANGSKJÆR
F0038TN	OSVIK
F0039A	FJELLTIND
F0039BD	KORSNES
F0039NK	LØNNEGGA
F0039V	KING MARCUS
F0040A	CARINA
F0040BD	FRØYA
F0040G	NORDSTJERNA
F0040LB	REMI

N0107SF	PLUGGEN
N0107VV	SKAGODDEN
N0107Ø	SAN MIDTBU
N0108VV	NOREGGA
N0109A	MATS-ERIK
N0109BØ	NYGRUNN
N0109V	OLAV-BØRRE
N0109VR	HAVGLIMT
N0110B	ERATO
N0110L	SLETHOLMEN
N0110Ø	OLAV NILSEN
N0111F	FREMTID
N0111ME	SIGRID
N0111R	HELØYGUTT
N0111VR	TINDSKJÆR
N0111VV	INGRID MARIE
N0112F	GULLFISK
N0112R	HELØYGUTT II
N0112VV	TROMFLU
N0112Ø	SØRHOLMEN
N0113F	SIW
N0113V	OLE EINAR
N0113VV	RUBY
N0114BØ	DØNNVÆR
N0114L	LURØYBAS
N0114MS	SKRINE
N0114V	SJØLEIK
N0114VV	TINA
N0115BØ	REMI ANDRE
N0115HR	OLE EINAR
N0115V	VESLA
N0115VR	GEIR MAGNE
N0115Ø	OSKAR S
N0116BR	KVÆRSTEIN
N0116V	ALBATROSS III
N0116Ø	BÅRHOLMEN
N0117B	FAGERTING
N0117VV	FJORDPRINS
N0117Ø	VILMA
N0118A	DRØM
N0118LN	RØDHOLMEN
N0118MS	SOLBJØRN

WAV551
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WAY703
WAY761

F0040M	KYSTFISK
F0040NK	SOLENG SENIOR
F0040SV	ANDREA
F0040V	CLEO
F0041G	VIKTORIA LIF
F0041HV	ØRNA
F0041LB	MARITA
F0041SV	DANSKEN
F0041V	SILEGG
F0041VS	MAGNHILD
F0042A	BIRK
F0042B	BERLEVÅGJENTA
F0042BD	SOLØY
F0042G	HELLØY
F0042HV	VEMA
F0042LB	KLUBBEN
F0042M	HJELMSØY
F0042P	RAMGRUNN
F0042V	ROBIN
F0042VS	BØLGEN
F0043B	KVALVIK SENIOR
F0043BD	ANDOPSVÆRING
F0043G	ELINA
F0043HV	PEIK
F0043LB	NORDMANNSET
F0043NK	BRITA
F0043P	SAIBMA
F0043TN	SAVE K
F0044BD	DADDI
F0044G	IRENE
F0044HV	RÅSA
F0044TN	SEIDA
F0044V	VÅGAR
F0044VS	HANS ROBERT
F0045A	VIGRUNN
F0045B	OLE HENDRIK
F0045G	SVERRIR
F0045HV	MANTAS
F0045N	GRETA
F0045NK	KARL VILMAR
F0045P	YVONN
F0045V	IDA SYNNOVE

N0118V	ALBATROSS
N0118VR	STAR VIKING
N0118Ø	NORDSILD
N0119F	LYSBØEN
N0119VV	SENJASUND
N0120BØ	MÅRSUND
N0120F	BJØRNTIND
N0120L	FRIDTJOF K
N0120MS	FJORDBRIS
N0120Ø	FRIDTJOF K
N0121B	NORDHAV
N0121ME	TULIPAN
N0121VR	VÆRØYBUEN
N0122F	ULVSTIND
N0122R	VÅGASKJÆR
N0122VA	LOMSØY
N0123BR	MARNA
N0123F	SKOTTIND
N0123VA	MÅØYSUND
N0123VV	ROKKAN
N0124B	NORDSUND
N0124BR	TINE
N0124ME	ROBIN
N0124V	LINDA
N0124VV	HAVSULA
N0124Ø	FALKEN
N0125ME	NEPTUN
N0125Ø	MYREFISK
N0126R	SMÅEN
N0127BØ	BØRINGEN
N0127F	LITJ SKJÆRET
N0127L	SIGVE
N0127MS	STJERNEN
N0127VV	TRYM-AKSEL
N0129V	SJØHEIM
N0130R	RISØYBØEN
N0130VR	HAVBØEN
N0131A	AMALIE
N0131B	VESTVARDEN
N0131BØ	SNARSETVÆRING
N0131F	VEINES
N0131VV	TERNINGEN

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F0045VS	BALDER
F0046A	VARGEN
F0046BD	HAVSULA
F0046HV	ZIKU
F0046KD	SANDERGUTT
F0046P	MARELLA
F0046SV	LUSKIN
F0046V	ELLA
F0046VS	JOFFRE
F0047A	CHRISTINA
F0047BD	ORIGO
F0047HV	SIRIUS
F0047P	VITO
F0047V	GLUECIFER
F0048BD	SOLEY
F0048LB	SJARKE
F0048M	JENNI SOFIE
F0048N	SÆTERBØEN
F0048P	FORTUNA
F0048V	MAIKEN-JENTA
F0049BD	BRYNDIS
F0049HV	ANN-FRIDA
F0049P	FRAMMEN
F0049SV	SUNNIVA
F0049VS	HOLMEN
F0050A	POMOR
F0050H	T.A SENIOR
F0050HV	TENNESSEE
F0050L	KNERTEN
F0050LB	SVAVIK
F0050N	MEA
F0050NK	STIG ARILD
F0050TN	ASTRID
F0050V	SAMANTA
F0051BD	MÅRNES
F0051VS	LENA-ELIAS
F0052HV	AURORA J
F0052LB	TØMMERVIK
F0052M	VÅRLINER
F0052P	DRONNINGA
F0052TN	TORHOPJENTA
F0052V	FAKTURA

N0132A	ANDHELLA
N0132Ø	OLAFUR II
N0133VV	HAVBRIS JR
N0134B	VESTVARDEN
N0134BØ	SNARSETVÆRING
N0134LN	SVENSGAM
N0134V	BÅRSKJÆR
N0134VV	NORPYNT
N0134Ø	RAINER
N0135F	NY-TERJE
N0135SO	LAILA V
N0135VV	HAVJO
N0136VV	LOBO
N0136Ø	VORNESVÆRING
N0137VV	TOMINE
N0138L	KVITBJØRN
N0138VV	ANDERSSON
N0140B	ØYVIKING
N0140V	KRANEGUTT
N0141BØ	BØTIND
N0141HR	KARI
N0141V	SVANEN
N0141Ø	BJØRNSTEIN
N0142L	SØRHOLMEN
N0142RT	SJARM
N0142SO	TRYGVE B
N0142Ø	HAVBRIS
N0143B	ROS
N0143SG	FIX
N0143V	IDA BEATE
N0144MS	VALTIN JR
N0144V	INGO
N0144VV	LAGUN
N0145H	NYGRUND
N0145VR	JOHAN BERG
N0145VV	JIM-ROGER
N0146F	JUVEL
N0147MS	ODD ROGER
N0147VR	VICTORIA
N0147VV	BORGVÆR
N0147Ø	LANGNESVÆRING
N0148SG	AKTERØY

WAZ151
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F0053H	FANGST
F0053HV	FURØY
F0053LB	RISVIK
F0053NK	BASTUS
F0053P	ADA MARIE
F0053V	KAJA
F0053VS	LAGERTHA
F0054A	HELLVÆRING
F0054HV	HOLMEN
F0054V	NETTO
F0055A	KEESIE
F0055HV	GUNN-RANDI
F0055M	BIRTU-LIAS
F0055P	STRØMSNES
F0055V	VILJA
F0055VS	VARANGERBUEN
F0056BD	RAGNAR LODBROK
F0056HV	LINA
F0056LB	SKAGANES
F0056TN	TONY
F0057G	FJORDBUEN
F0057H	JUNI
F0057HV	KARINA
F0057LB	DÆNG
F0057M	LEANDER
F0057NK	ROY MAGNE
F0057TN	VILDE
F0057V	LINDFISK
F0058A	FRAM
F0058G	TARDIS
F0058LB	REYNIR
F0058N	BELLA MARI
F0058NK	TRONDALSON
F0059LB	MÅRØYSUND
F0059M	ROLVSØYHAV
F0059NK	KJETIL
F0059V	TIN
F0060A	ASTRID
F0060G	BISPEN
F0060H	SJØGUTTEN
F0060LB	PARTNER
F0060P	ODIN

N0148V	AGNETHE
N0148VV	UNSTAD JUNIOR
N0148Ø	AURORA
N0149VV	LEO
N0150A	FREDRIK
N0150V	KYSTEN
N0151B	LENE K
N0151BØ	SOLSTRÅLEN
N0151L	ØYBUEN
N0151MS	NY-MÅTIND
N0151VV	KLOGRUNN
N0152A	HEIDRUN
N0152MS	DEMURING
N0152VA	FLATSKJÆR
N0152Ø	SKUMRING
N0153V	ARIADNE
N0153VV	FESKARGUTTEN
N0155VV	MONICA
N0155Ø	BRUTUS
N0156B	SJØBRIS
N0156MS	IVI
N0156V	ANNE
N0156Ø	ELIAS
N0157F	NYBØEN
N0157MS	ODDNY
N0157V	LINE
N0158V	STRANDVÆR
N0158VV	KLOBUEN
N0159MS	CARINA
N0159V	KJARTAN K.
N0160DA	EMILIE
N0160MS	VESTHOLM
N0160VV	VESLA
N0160Ø	ØKSNEVÆRING
N0161BØ	SNARSETVÅG
N0161V	JUNI
N0161Ø	EKKO
N0162BØ	REINSBÅEN
N0162V	HÅVARD
N0162VR	VÆRØYGUTT
N0162VV	STRAUMEN
N0164B	ØRA

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WBB046

F0061G	AUSTHAVET
F0061LB	SARA
F0061NK	JR SENIOR
F0061P	HÅTIND
F0061SV	NORDSTRAND
F0062BD	ANDUNGEN
F0062G	REIPNAKKEN
F0062NK	KLAUDIA
F0062TN	SWONA
F0063G	DØNNING
F0063NK	STIG-RUNE
F0063V	MARIE BANG
F0064G	RYSTADBUEN
F0064HV	SUNNIVA
F0064M	ODD-EGIL
F0064NK	KRISTINE
F0065G	VIKAJENTA
F0065M	BASNES
F0065NK	FISKESKJÆR
F0066BD	KILDIN
F0066TN	VAGGE
F0066V	KRISTJAN
F0067B	ROSA JADE
F0067LB	OKSEFJORD
F0067NK	STÅL TROND
F0068G	MULAN
F0068HV	BAILOTT
F0068N	SOLGLØTT
F0068NK	ANDANTE
F0068SV	HAVBRIS
F0069BD	TARVIKBØEN
F0069NK	STAR
F0070BD	HAVØY
F0070G	SANDØRA
F0070VS	NOBEL
F0071G	CESAR
F0071HV	LAGUN
F0071LB	HAMNØY
F0071N	KLØVNESJENTA
F0071VS	LEODEGAR
F0072BD	ØYTIND
F0072H	JOAKIM

N0164BØ	KIM RUNE
N0164VA	LILJA
N0164VV	EMMA GISKE
N0165H	STRANDEGGA
N0165MS	SANDVÆR
N0165VV	NIKKO
N0165Ø	OLINE
N0166F	SKJELHOLM
N0166MS	SOLVANG
N0166VV	MATHIAS
N0167A	OLE ELVAN
N0168Ø	MYREBUEN
N0169F	ASTRID MARIE
N0169Ø	MYREBAS
N0170V	SIRO
N0170VV	SANDHOLMEN
N0171L	BRINCA
N0171R	NESØYVÆRING
N0171VV	HAVGUTT I
N0172F	BØLGEN
N0173A	THERESE
N0173Ø	SILJE
N0174ME	FLØSKJÆR
N0174VV	MORTSUNDEVÆRING
N0175B	REMSKJÆR
N0175VV	RØAGUTT
N0175Ø	LEX GRANDE
N0176V	EIEVÆRING
N0176Ø	DAINORA
N0177F	SIMAR
N0178VV	K.R. SENIOR
N0178Ø	EMMY
N0179H	ALF MARTIN
N0179Ø	VIVA
N0180B	REMI
N0180F	SUNDMANN
N0180MS	ERIK ANDRÉ
N0180V	CECILIE
N0180VV	NONSTIND
N0180Ø	SKOGSØYBUEN
N0181BØ	VARDEN
N0181H	LILLEGUTT

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F0072HV	ØYFJORD
F0072N	MISS CROSBY
F0072NK	BENONI
F0073A	LINN-JOHANNE
F0073H	FRIDA K
F0073HV	KNUT M
F0073LB	KASPARA
F0073M	FRIDA K
F0073V	OLUF
F0073VS	HAVBRIS
F0074A	KRISTINE
F0074BD	DUKAT
F0074G	FOMA
F0074V	KRISTIAN
F0075BD	WILFREDSON
F0075G	KROSSANES
F0075HV	RUBICON
F0075M	HAVØY
F0075V	FLIPPER
F0076LB	OKSEVÅG II
F0076NK	BORGAFELLI
F0076V	HAVELLA
F0077A	RAGNHILD
F0077LB	SIMON
F0077M	KEILA
F0077NK	KAROLINE
F0077VS	HELLEGUTT
F0078A	RAMSKJÆR
F0078M	STAUREN
F0078NK	FLIPPER
F0078SV	BUGØYVÆRING
F0079G	SUNNA
F0079HV	SANO
F0079V	SOLVÆRGUTT
F0080A	BRATTHOLMEN
F0080BD	JILL HEGE
F0080LB	STORMSKJÆR
F0080M	VOLDNES
F0080NK	NYTIND
F0080TN	MARTIN
F0081A	HELLVÆRING
F0081LB	JUVEL

N0181ME	GRØNØYTRÅL
N0181VV	NYBAKK SENIOR
N0182ME	MIRA
N0182Ø	NORHAVET
N0183VV	EMIL ANDRE
N0183Ø	MIRA
N0184F	ANGELSEN SR.
N0185Ø	BÅR-SAMUEL
N0187VV	BRITT
N0188F	BØRFJELL
N0188ME	MELØYBAS
N0188V	FRANK INGAR
N0189VV	SANDØY
N0190BR	MÅKEN
N0191A	SOLTIND
N0191SO	SENHOLMBUEN
N0195VV	ASIA
N0196B	BARSKIÆR
N0196Ø	TORBÅEN
N0197B	GIVÆR
N0197V	SARAH
N0197VV	VÅRBRIS
N0198A	SANDVÆR
N0200A	ANDØYGUTT
N0200BØ	SNARSETVÆRING
N0200ME	ØRNA
N0200MS	HIMMELTIND
N0200N	GENERAL`N
N0200V	HESTHOLMEN
N0200VV	HIMMELTIND
N0200Ø	LIVE ELISE
N0201DA	ARNE JOHAN
N0202ME	ØYGUTT
N0202SO	KETHO
N0202V	GUNN-LOTTE
N0202VV	LOFOTVÆRING
N0203F	RINGSKJÆR NORD
N0205R	HAVBRIS
N0206BR	TORGARNES
N0206DA	REFORM
N0206F	MINIBANKEN
N0206MS	OLSTIND

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WBC211
WBC223

F0081NK	SKIPPY
F0081TN	SVANANES
F0082LB	SLETTVOLL SENIOR
F0082M	DYPFJORD
F0082NK	GEIR
F0083B	JIM LENNART
F0083BD	NY-VIKING
F0083NK	SHARA
F0083V	TANAFJORD
F0084G	TORSTIND
F0084H	SANDNESBUEN
F0085N	DRAVN
F0086BD	SENJAFANGST
F0086G	ELLI KETILS
F0086L	EIRIN
F0086M	HAVLINER
F0086NK	DORADO
F0087NK	ODD INGE
F0087SV	DRUEN II
F0087V	SKUMNISSEN
F0088G	NOREGGA
F0088LB	TROTTVIK
F0088M	LILLEBÅEN
F0088V	ORION
F0089LB	BRANDØYBUEN
F0089NK	ISICA
F0089V	MONSNES
F0090A	YLVA MARIE
F0090BD	HAVDUR
F0090H	DANIEL
F0090M	FJORDSNURP
F0090VS	MEBAS
F0091G	STEINFJORD
F0091N	ØRJAN
F0092A	RANDI
F0092NK	ANETTA
F0092SV	SOLENG
F0092V	SOLENG
F0093V	MILDA
F0094BD	HELLA
F0094G	NYTIND
F0094LB	VIKING 2

N0207MS	PEON
N0207V	AUSTNESFJORD
N0208VR	VESTRI
N0208VV	VESTRI
N0210A	ELISE
N0210SF	MARINA
N0210VV	PEDER
N0211BØ	SØRBÅEN
N0211MS	PEDER
N0213A	SANDRA MARIE
N0214VV	LINDA-MARI
N0216VR	TRIO
N0217ME	NATHANIEL
N0219VV	NORDHAUG SENIOR
N0220F	LOFOTFISK
N0220MS	REINEFJORD
N0220VV	HEMMINGODDEN JR
N0221V	FISKEBØEN
N0222V	MORILD
N0223BR	ODIN
N0223Ø	NORDGRUNN
N0225Ø	VÅJE
N0226BØ	OSKAR
N0226Ø	SKREIEN
N0231A	LINNEA
N0232B	KARLSØYVÆR
N0232MS	KVALVIKVÆRING
N0232V	SJÅBØEN
N0232VV	SENJATUN
N0233ME	MARIE
N0233Ø	LYNGØYBUEN
N0235A	MAJA
N0236Ø	SOLBU
N0237VA	VESTHAV
N0238Ø	ASTRID CHRISTINA
N0240B	HORISONT
N0240F	NORDEGG
N0240Ø	RYVINGEN
N0242V	SKOGNES
N0246Ø	GUNNAR K
N0248B	CAKO
N0250F	GUNN

WBC224	
WBC225	
WBC236	
WBC253	
X0517	MYS SLEIPIKOVSKOG
X0519	MYS KORSAKOVA
X0522	MYS CHIKHACHEVA
X0524	MYS SHELTINGA
XAA007	
XAA076	
XAA270	
XAA331	
XAA439	
XAA754	
XAA989	
XAB268	
XAB410	
XAC298	
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XAJ038	
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XAJ482	
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XAJ859	

F0094NK	PLUTOS
F0095G	STEF
F0095H	INGVARDSON
F0095HV	SILBØEN
F0095NK	MAGNUS
F0095VS	NORDAFØRR
F0096A	VARHOLM
F0096G	ASTERIX
F0096M	LEISUND
F0096V	INESA
F0098G	ARK
F0098LB	ADELEN S
F0099BD	JENS EILERT
F0099G	LAMOJENTA
F0099H	VARULV
F0100A	FRØYA MARIE
F0100B	SOYA
F0100BD	MIKKELSEN
F0100G	THANI
F0100M	KAMILLA KATRINE
F0100NK	RAMBO I
F0100P	KAMILLA KATRINE
F0101BD	SYLVIA
F0101G	JUNO
F0101HV	STELLA POLARIS
F0101LB	FLATVÆR
F0101NK	RICHARD J
F0101VS	EDEL M.
F0102NK	PONTOS
F0103NK	THOMAS
F0104G	KUNTZEGUTT
F0104LB	ÅSVIC
F0105NK	KRISTINA
F0106NK	ULF-DANIEL
F0107H	ØYVÆRING
F0107NK	STENSØY
F0108M	ADELEN S
F0108TN	ELIAS
F0109NK	BEKKVIK JUNIOR
F0109V	MARIANN
F0110G	POLARJO
F0110LB	SATURN

N0250V	LAUPSTADVÆRING
N0251B	VILMA
N0251V	EA
N0253F	NY-KVIKK
N0253MS	ØRNA
N0253V	SVATIND
N0253VV	LEIF OLE
N0254VV	JOHAN MARTIN
N0255Ø	ISABELL
N0257BØ	SIGURDSON
N0258BØ	JENNY
N0258V	TRYGG III
N0260MS	SØRVÅGVÆRING
N0260V	SØRVÅGVÆRING
N0260Ø	RYVARDEN
N0262ME	HAVSULA
N0263VV	NORØY
N0264Ø	LILL RAINER
N0265V	ARNE
N0270B	LAKSHMI
N0270SF	MARINA
N0270VR	SKOGSØYVÆRING
N0272MS	FRØYBANKEN
N0277V	RAFN
N0282VV	LINE MARI
N0285Ø	INGRID
N0289B	ARGUS
N0298MS	ANN BRITA
N0300B	RÅNES VIKING
N0300F	IDA AMALIE
N0300MS	NY-PERLON
N0300V	SIVERTSEN JR
N0300VV	BALLSTADVÆRING
N0300Ø	ØYVÆR
N0302Ø	LANGENES
N0304V	VOLLEN
N0307LN	M.YTTERSTAD
N0310SG	TERNA
N0311V	EGILSON
N0320Ø	LYKKEN
N0321A	ALVESTAD
N0323ME	EDVIND OLAI

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XAM724

F0110M	NIPEN
F0110NK	TORSTEINSON
F0111L	AQVARIUS
F0111TN	VASSANA
F0113NK	STINA
F0113V	RUBY
F0114BD	NESBUEN
F0114LB	STIG ROAR
F0115NK	SMILER
F0116NK	GABRIELLE
F0117H	CARIANE
F0118NK	JÅNSKY
F0119TN	SELMA
F0120A	FLATVÆR
F0121A	CAROLEVA
F0121L	BJØRNVIKVÆRING
F0121NK	EKVATOR
F0122NK	EDEL MARIA
F0123LB	CAROLINE
F0123TN	ALEXANDRA
F0124A	JENNY OLIVE
F0124NK	LILJEN
F0125H	HANNA MARIE
F0125NK	SALARFISK
F0126A	KVALØY
F0126L	IDA-MOR
F0126M	NEPTUN
F0127VS	MÅKEN
F0128LB	INGA HAFDIS
F0128NK	LERO
F0128V	TOR JOHAN
F0130A	NORDTIND
F0130NK	DØNNING
F0133HV	STORMHAV
F0133NK	LUSIU
F0134NK	FLIPPER
F0135NK	VIKJENTA
F0135VS	SJØBLOMST
F0136NK	GRUNNBØEN
F0136V	SANDFJORD JENTA
F0137G	KARL-TORGEIR
F0138M	NESSODD

N0325MS	BREISUND
N0325VA	TVERRØY
N0325VV	NYGRUNN
N0326Ø	SKIPNES
N0328A	FUGLØYBUEN
N0328ME	LARS-GØRAN
N0330VV	LOFOTHAV
N0335VV	STRAUMVÆRING
N0337SG	PER-EGIL
N0340V	MÅKEN
N0340VV	MEFJORD
N0349V	RISVÆR
N0350V	MIA
N0354Ø	ANN KARIN
N0360VV	AMORIN
N0361H	ØYULF
N0364V	VIKING
N0372ME	STRØMTIND
N0372Ø	SANDER
N0376ME	VAARHEIM
N0380B	ANNE HEIDI
N0382VR	SENNHOLMEN
N0400V	O. SOLEM
N0400VV	ANNE-GRETHER
N0400Ø	ODANE
N0404A	TOM ROGER
N0417B	KARIANNE
N0431Ø	KLOEGGA
N0438V	FISKHOLMEN
N0440ME	MELØYVÆRING
N0443Ø	SPUTNIK
N0444ME	MAGNY
N0450MS	VIKING
N0450V	S JOHANSEN
N0450VR	ØYASKJÆR
N0454R	LIV GERD
N0465V	NESODD
N0466VV	ODD
N0470B	RUBICON
N0472A	HAVBRIS
N0474Ø	ØYABUEN
N0475VV	STORFJORDVÆRING

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F0138NK	CASPER
F0139NK	LANGNES
F0140M	NORFJELL
F0140NK	TIKO
F0141NK	MARLOV SENIOR
F0142NK	HARDY-GUTTEN
F0143L	HÅBRAND
F0143NK	MATHILDE
F0146NK	SARNESJENTA
F0148H	OSVALDSON
F0149H	KAJA MARIE
F0149NK	THEO MIKAL
F0150A	ELLINORA
F0150NK	BRAKAR
F0150V	LEAH MARIE
F0151A	VIKAJENTA
F0151NK	SOLENG
F0153NK	VÅGEN
F0154SV	ESKIL
F0155NK	TROND YNGVE
F0155VS	ELSE-K
F0156NK	KENT ARE
F0157LB	SOLØY
F0159A	SJØBLINK
F0159NK	SKYTTE
F0160NK	NY HURTIG
F0160V	HAVBLIKK
F0161NK	NORDTUR
F0162NK	LYRA
F0163NK	ARSBUE
F0164NK	R. VEGAR
F0165NK	SJØBUE
F0165V	VARDØYFISK II
F0167A	SJØPIA
F0168NK	RODIAN
F0169NK	REVEN
F0170L	KAY-ERLEND
F0171NK	ISBJØRN
F0172NK	NYBAKKEN
F0173NK	MARTIN
F0174G	HOPSFJORD
F0174NK	KNOTTEN

N0477ME	NORDLYS
N0479ME	NORDLYS
N0487V	BREMVÆRING
N0500Ø	HALLVARDSON
N0555VV	TROND-ANTON
N0566F	ALF SIGMUND
N0568HR	SKJÆRBUEN
N0619V	MAGNA
N2017UK	UNGDOMSKVOTE
N9000A	
N9000B	
N9000G	
N9000LN	
N9000R	
N9000TF	
N9000Ø	
N9300G	SALTHAMMER
N9300VV	SKOLEBÅT
NT0001I	MAY VANJA
NT0001L	GUNBJØRG
NT0001V	VESLEPER
NT0001VN	JAN IVAR
NT0002L	NYHOLM
NT0003LA	MAJA
NT0003VN	TERNA
NT0004LA	RØINGEN
NT0005FA	TRYGVASON
NT0005LA	LEKNESBUE
NT0005NR	BIRGER JOHAN
NT0005V	LIBU
NT0006NR	RASKEN
NT0007F	VIKAGUTT
NT0008V	BALA
NT0009SD	BRAVOUR
NT0010F	BIG BOSS
NT0010L	MEHAV
NT0010NR	GULLFISK
NT0010S	PEGASUS
NT0010V	ELDORADO
NT0011N	SILD
NT0011NR	TRIO
NT0011S	JONAS

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F0175A	HØIVIKBAAEN
F0175BD	SKARBERG
F0175NK	KAMØYFJORD
F0176NK	LILJO
F0177NK	JAN-TORE
F0177V	HANNA B
F0178BD	UNN KRISTIN
F0178NK	VESLEMØY
F0180NK	CAMP
F0181HV	GORM III
F0182BD	SUNDSBØEN
F0182P	SHAKIRA
F0182V	NYBROTT
F0183NK	KLAKKEN
F0184L	MEVÆR
F0184M	INGRID MAJALA
F0184NK	EINAR
F0185NK	VALDIMAR H
F0186H	EIDVÅGFISK
F0186M	TUBØFISK
F0186NK	OSTAD SENIOR
F0187NK	ANNE-K
F0188G	RAYA
F0188M	ARNBORG
F0188NK	JUNE
F0189H	STEIN O
F0189NK	LILLEBÅEN
F0190NK	VÅGEN 1
F0190V	VARDØJENTA
F0191NK	HELØYGUTT
F0192NK	HELØYGUTT II
F0193A	RANDI HELENE
F0193NK	SVANEN
F0194NK	SULAGUTT
F0194P	ØYVÆR
F0195NK	ØYFJELL
F0196A	SKARVTIND
F0199NK	BEKKVIK JUNIOR
F0200H	EMMA
F0200LB	STORMEN SENIOR
F0200NK	JAN EGIL
F0200V	LIVE ELISE

NT0011V	SULAVÅG I
NT0012NR	SILVER
NT0013V	NATALIE
NT0015V	HOPEN
NT0016F	ARINA
NT0016N	NYDØNNING
NT0016NR	TIKA
NT0016V	SANDER
NT0016VL	THORALF
NT0017NR	NORVEIG
NT0018F	VALCO
NT0018NR	BØLGEN
NT0018SD	ROCKMANN
NT0019NR	SANDER
NT0019V	HYDRA
NT0020FA	LISBETH
NT0020V	VIKING
NT0020VN	VALENTIN
NT0022V	REMY
NT0024V	KVALØYFJORD
NT0025NR	ARNØYVÆR
NT0026V	HAVBLOMST
NT0027F	ARINA
NT0028F	FOLLABUEN
NT0028NR	KNØTTE
NT0029NR	FLAMINGO
NT0029V	LISSBUEN
NT0030NR	ARNØYFJORD
NT0031NR	KIO
NT0033V	NOGVAGUTT
NT0034V	INGER
NT0035V	GRIMSBØ
NT0036V	BRUSØYSKJÆR
NT0037LA	HAVSØLV
NT0040F	SAFIR
NT0040V	HÅVTIND
NT0041NR	BREIVIK JUNIOR
NT0041V	ANTON JUNIOR
NT0045V	STRØMVÆRING
NT0046V	VESLEMØY
NT0048N	ARON
NT0049V	TRØNDERFISK

XAN981
XAN987
XAN990
XAN992
XAN995
XAO000
XAO019
XAO020
XAO022
XAO031
XAO038
XAO058
XAO062
XAO063
XAO079
XAO083
XAO111
XAO113
XAO127
XAO133
XAO162
XAO191
XAO208
XAO279
XAO351
XAO355
XAO367
XAO397
XAO406
YAA033
YAD427
YAD516
YAD879
YAF306
YAG085
YAG322
YAG572
YAG584
YAG610
YAG621
YAG646
YAG693

F0201LB	STRIPTIND
F0202NK	CRYSTAL
F0202P	KORSNESJENTA
F0204NK	UKINAMEN
F0205H	TOR E
F0206M	SÆTERGUTT
F0207H	ODDGEIR JR
F0210NK	FREIDIG
F0211NK	MATHILDE
F0218NK	KAPPA
F0219NK	STILIAN
F0236V	NORDTIND
F0240A	LISA
F0243BD	SUNDSBØEN
F0243L	KANES
F0247NK	VÅRBUEN
F0250NK	ERIK ANDRE
F0251NK	SKJÆRBUEN
F0257L	KAMILLA
F0258NK	SILJE
F0260H	STORMFUGLEN
F0263L	THEA-EMILIE
F0294A	VÅRLEIK
F0328L	KURT-VIDAR
F0333A	STORM
F0333H	JOSEFINE
F0335LB	FJORDFISK
F0348NK	ROY-TONY
F0356M	LINE
F0365L	SENIORITA
F0380A	SILVER
F0400NK	THOR-ARILD
F0420G	VESTBÅEN
F0444NK	KING NORDKAPP
F0484M	ØRNTIND
F0500BD	INGER VICTORIA
F0500H	SOMMARØYVÆRING
F0500M	GULLHOLMEN
F0500NK	HENRIETTE E
F0600NK	TRIO
F0610V	LIVE ELISE
F0666NK	SJØBRIS

NT0051NR	SILJE
NT0052V	STEFAN
NT0055NR	HEGE
NT0056V	RASKEN
NT0058LA	LEKABUEN
NT0058V	SETTER
NT0064NR	ØRNSKJÆR
NT0064V	LYNN MARY
NT0069F	MERLIN
NT0070V	WILLIKSEN SENIOR
NT0071N	ALTEBUEN
NT0072NR	MARØYSKJÆR
NT0073V	PILEN
NT0076V	HARALD BERGE
NT0077NR	REAL
NT0081NR	OTTESEN-JUNIOR
NT0081V	BAKKEVÆRING
NT0082NR	ALBING
NT0082V	JULIAN
NT0088V	MALO
NT0093V	JULIE
NT0094V	SNEFJELL
NT0096V	ØYVÆR
NT0098V	GRIMSHOLM
NT0100V	STIG HARRY
NT0112V	BAKKETIND
NT0120V	VESTHAV
NT0121LA	LEKAVÆRING
NT0124V	STORVIK
NT0125NR	OLE J
NT0129NR	NORDLYS
NT0129V	SANNAJENTA
NT0130NR	STEINSØY
NT0130V	NYHAV
NT0138V	SATURN
NT0141V	SIGNAL
NT0151V	SØRØYA
NT0157V	NORDLYS
NT0161V	AUNSKJÆR
NT0164V	ANDERØY
NT0169V	SNEFJELL
NT0175NR	HAVBUEN

YAG785	
YAG915	
YAG950	
YAG991	
YAG994	
YAH016	
YAH021	
YAH025	
YAH038	
YAH142	
YAH166	
YAH208	
YAH225	
YAH306	
ZAA614	
ZAE177	
ZAQ478	
ZAQ938	
ZAY468	
ZBB260	
ZBG010	
ZBG412	
ZBG443	
Ø0001M	GLAD
Ø0020S	NELLA
Ø0022S	MISTRAL
Ø0025F	MORILD
Ø0161F	IDA

F0700H	JSF-SENIOR
F0700NK	VÅRBUEN
F0777NK	SAGA K
F2017UK	UNGDOMSKVOTE
F9300NK	SKOLEBÅT
FAD051	
FAO001	
FAS324	
GR6500	SISIMIUT
GR654	POLAR PRINCESS
H0001V	ELINA
H0002R	IDEFIKS
H0002T	AUSTBRIS
H0003MF	ALFEN
H0004BN	TRYM
H0004K	SJOHAV
H0004T	IRENE
H0006B	NERA
H0006S	EIRIK
H0007S	RANDI
H0007T	VÅGAR
H0010KM	VIKING
H0011K	ØYSOL
H0013B	BRANDASUND
H0014F	JONE
H0015K	HARTHO
H0016BN	KODIAK
H0018S	EIRIK
H0019B	VIKAFJORD
H0020BN	HERFINDAL
H0020K	NORDLYS
H0021BN	GULLVIK
H0021S	BOGASUND
H0024B	VIKA
H0029R	BRAGD RADØY
H0029S	TRELLEVIK
H0030K	NORDLYS
H0034AV	GARDAR
H0036K	LANDAVÅG
H0036S	NYHAV
H0039AV	APOLLO III
H0039K	TORISON

NT0181V	BAKKETIND
NT0200V	TRØNDERKARI
NT0208V	HAVLINER
NT0226V	LANGHOLMSUND
NT0233V	ODIN OLIVER
NT0242V	SULATIND
NT0246V	VITO
NT0255V	KRISTIN
NT0260V	JANNE-LISE
NT0300V	STIG HARRY
NT0338V	RÅSAGUTT
NT0346V	BRATTSKJÆR
NT0364V	BALDUSKA
NT0369V	VIKNABUEN
NT0400V	EMMA
NT0401NR	LOPPA
NT0401V	SØRSTEIN
NT0413NR	KJELL
NT2017UK	UNGDOMSKVOTE
NT9000S	
NT9000V	
NT9000VN	
O0004O	LEIK
O0025O	BUKKØY
PAC353	
PAC356	
PAC370	
PAC373	
R0001SO	KURTI
R0002F	SELVÅGBUEN
R0002FD	ÅS SJØEN
R0002SK	BUEN
R0002SO	CARISA
R0003K	VIKINGBANK
R0003SO	HAVDUR
R0004HM	SLOEKSPRESSEN
R0004ST	KRISTINA
R0005SO	ROTTFISK
R0007S	ÅSGUTT
R0007SO	SOLAGUTT
R0012K	KRISTIN
R0014S	COYGFISK

H0040AV	FLIPPER
H0043AV	ZANDER
H0047BN	SKYE
H0051K	BENJACO
H0055FE	SØRØY
H0058S	SANGOLT
H0059B	VESLEFRIKK
H0060S	STORSTRIL
H0065AV	RABBAGUTT
H0065B	STARIS
H0065FJ	OLAUG
H0067BN	TINUS
H0068AV	TRIO
H0074B	NORMANN
H0080AV	SELBJØRNSFJORD
H0081AV	MYLING
H0081B	KYRHOLM
H0084B	KASTEVIK
H0086AV	KALSØYJENTO
H0087BN	TIME BANDIT
H0087K	SVERDFISK
H0097AV	KALSØYBAS
H0116AV	HEVRØY
H0125BN	HAVMANN
H0126BN	TARA
H0127B	HAVØRN 2
H0131AV	TOR MAGNUS
H0146AV	EMMA OLAVA
H0149AV	MORILD
H0150AV	ASTRID
H0180K	TUNFISK
H0214AV	HAVBRIS
H0225AV	HAVMANN
H0240B	SØRWAAG
H0265AV	RABBAGUTT
H0288B	HAVLEIK
H0402AV	MORTEN EINAR
H9300AV	SKOLEFARTØY
HAI629	
HAT091	
IAK060	
IFAR060	

R0017K	DRISTIG
R0020V	STRAUMBAS
R0021ES	RITA S
R0022ST	SELVÅGBUEN
R0025S	BELLSUND
R0038SO	BOIE
R0048U	DIMANN
R0050K	QUO VADIS
R0056K	MANNESBUEN
R0066SK	SALONICA
R0068H	CONVOY
R0178K	HELENA
R0180K	LOBSTER
RAE306	
RAM396	
RAN633	
RAP208	
RAY932	
RBA219	
RBF920	
RBS859	
RBX240	
RBX162	
RBX205	
RBZ236	
RCC684	
RCC954	
RCL785	
RE70	KLEIFABERG
SAC642	
SAE192	
SAH156	
SAI890	
SAK354	
SAL479	
SAL523	
SAL974	
SAM059	
SAM417	
SF0001A	VESTERHAV
SF0001FD	ROXY
SF0001G	FRØYBAS

IAV901

IAX401

IAX638

KBD179

LAE862

LAI131

LAI161

LAI307

LAP398

LBB343

LBE307

LBM885

LBP427

LBP813

SF0001H VÅGHOLM

SF0001SU LENDING JUNIOR

SF0003ST KEIKO

SF0006H ÅFJORD

SF0006S BRIMØY

SF0010B FRØYHAV

SF0015SU LYNØY

SF0016F ALDA

SF0017SU SJARMØR

SF0025SU LEIK

SF0033G VIBEKE HELENE

SF0041F ÆSØYBUEN

SF0044SU SOLBRIS

SF0045A BUEFJORD

SF0052B SMØYSUND

SF0052E HAVSULA

APPENDIX 8 CLIENT AGREEMENT

On behalf of Norges Fiskarlag, I accept the Publication Certification Report for the Norway North East Arctic saithe fishery with the terms and conditions of certification detailed therein. I also confirm that information on fishing activities and scope of certification is up to date and correct.

Name:
Tor Bjørklund Larsen

Signature:



Place:
Tromsø

Date:
03.06.2018



About DNV GL

Driven by our purpose of safeguarding life, property and the environment, DNV GL enables organizations to advance the safety and sustainability of their business. We provide classification and technical assurance along with software and independent expert advisory services to the maritime, oil and gas, and energy industries. We also provide certification services to customers across a wide range of industries. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping our customers make the world safer, smarter and greener.