DNV·GL

SURVEILLANCE NO. 3

Report for the Russian Federation Barents sea cod and haddock fishery

JSC Strelets, JSC Eridan and JSC Taurus ul. Shmidta 43, 183038 Murmansk, Russian Federation.

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Authors: John Nichols, Sandhya Chaudhury
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Objective:

The objective of this report is the third surveillance audit of the Russian Federation Barents sea cod and haddock fishery.

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John Nichols Principle expert MSC Fisheries	

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GLOSSARY

Abbreviations & acronyms

ACOM	(ICES) Advisory Committee
AFWG	(ICES) Arctic Fisheries Working Group
BBTU	The Barents and White Sea Territorial Administration of the Federal Fisheries Agency
CAB	Conformity Assessment Body
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CPUE	Catch per unit effort
CR	Certification Requirements
EEZ	Exclusive Economic Zone
ETP	Endangered, Threatened and Protected
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FFA	Federal Fisheries Agency of Russian Federation
FPZ	Fishery Protection Zone
HCR	Harvest Control Rule
ICES	International Council for the Exploration of the Sea
IMR	Institute of Marine Research, Norway
ISBF	Introduced Species Based Fisheries
IUCN	International Union for Conservation of Nature
IUU	Illegal, Unregulated and Unreported
JNRFC	Joint Norwegian Russian Fisheries Commission
JSC	Joint Stock Company
LTL	Low Trophic Level
MSC	Marine Stewardship Council
MSC	Marine Stewardship Council
MSE	Management Strategy Evaluation
NAFO	Northwest Atlantic Fisheries Organisation
NAMMCO	North Atlantic Marine Mammal Commission
NEAFC	North East Atlantic Fisheries Commission
NGO	Non - Governmental Organization
OSPAR	Oslo – Paris Convention. The Convention for the Protection of the Marine Environment of the North-East Atlantic.
PI	Performance Indicator
PINRO	Polar Research Institute of Marine Fisheries and Oceanography, Russia
PISG	Performance Indicator Scoring Guideposts
PSC	Port State Control
REZ	Russian Economic Zone
SG	Scoring guidepost
SSB	Spawning Stock Biomass
TAC	Total Allowable Catch
UK	United Kingdom
UNLOSC	United Nations Law of the Sea Conference
UoC	Unit of Certification
VME	Vulnerable marine ecosystems
VMS	Vessel Monitoring System
WWF	World Wildlife Fund
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_{pa}	Precautionary biomass below which spawning stock biomass (SSB) should not be allowed to fall to safeguard it against falling to Blim.
$B_{trigger}$	Value of SSB that triggers a specific management action
B_{targ}	Spawning biomass target reference point
F	Instantaneous rate of fishing mortality
F_{lim}	Exploitation rate limit reference point, often taken as Fmsy based on UNFSA
F_{max}	F where total yield or yield per recruit is highest
F_{msy}	Fishing mortality rate associated with the achieving maximum sustainable yield
F_{pa}	Precautionary buffer to avoid that fishing mortality at Flim.
F_{targ}	Fishing mortality target reference point
MSY	Maximum Sustainable Yield

1 GENERAL INFORMATION

Table 1 General information

<table>
<tr><td>Fishery name</td><td>Russian Federation Barents sea cod and haddock</td></tr>
<tr><td>Unit(s) of Assessment (UoA)</td><td>
UOA 1: Barents sea cod
<table>
<tr><td>Species:</td><td>Cod (Gadus morhua)</td></tr>
<tr><td>Stock:</td><td>Barents Sea cod</td></tr>
<tr><td>Geographical area:</td><td>ICES Sub-areas I and II. FAO 27. Primarily Norwegian EEZ and Svalbard FPZ</td></tr>
<tr><td>Harvest method:</td><td>Bottom trawl</td></tr>
<tr><td>Management:</td><td>Federal Agency of Fisheries (Russian Federation), Norwegian Ministry of Fisheries and Coastal Affairs (Norwegian EEZ and Svalbard FPZ) Joint Russian-Norwegian Fisheries Commission, NEAFC, PINRO, IMR and ICES.</td></tr>
<tr><td>Client group:</td><td>The clients responsible for coordination of full-assessment for this fishery are JSC Strelets and JSC Eridan .
The client group is represented (per 09.07.2015) by the following ship owners:
• JSC Strelets with vessel Strelets (M-0269)
• JSC Eridan with vessel Korund (M-0245)
• JSC Taurus with vessel Taurus (MK-0411)</td></tr>
<tr><td>Other eligible fishers:</td><td>As defined under section 3.1.7 of Public Certification Report</td></tr>
</table>
UOA 2 : Barents sea haddock
<table>
<tr><td>Species:</td><td>Haddock (Melanogrammus aeglefinus)</td></tr>
<tr><td>Stock:</td><td>Barents Sea haddock</td></tr>
<tr><td>Geographical area:</td><td>ICES Sub-areas I and II. FAO 27. Primarily Norwegian EEZ and Svalbard FPZ</td></tr>
<tr><td>Harvest method:</td><td>Bottom trawl</td></tr>
<tr><td>Management:</td><td>Federal Agency of Fisheries (Russian Federation), Norwegian Ministry of Fisheries and Coastal Affairs (Norwegian EEZ and Svalbard FPZ) Joint Russian-Norwegian Fisheries Commission, NEAFC, PINRO, IMR and ICES.</td></tr>
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</table>
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</table>

	Other eligible fishers:	As defined under section 3.1.7 of Public Certification Report	
Date certified	6 May 2014	Date of expiry	05 May 2019
Surveillance level and type	Surveillance level 2: reduced surveillance 2015: review of information 2016: off-site surveillance **2017: off-site surveillance** 2018: on-site surveillance		
Date of surveillance audit	9 & 10 August 2017		
Surveillance stage	1st Surveillance		
	2nd Surveillance		
	3rd Surveillance	**X**	
	4th Surveillance		
	Other (expedited etc)		
Surveillance team	Lead assessor: Sandhya Chaudhury Assessor(s): John Nichols		
CAB name	DNV GL Business Assurance		
CAB contact details	Address	Veritasveien 1 1322 HØVIK, Norway http://www.dnvgl.com	
	Phone/Fax	+ 47 404 00 404	
	Email	Sandhya.chaudhury@dnvgl.com	
	Contact name(s)	Mrs. Sandhya Chaudhury	
Client contact details	Address	ul. Shmidta 43, 183038 Murmansk, Russian Federation	
	Phone/Fax	+8152 994-890	
	Email	grekov@uk.msk.ru	
	Contact name(s)	Igor Grekov	

This report contains the findings of the third annual MSC Fisheries surveillance audit conducted for the Russian Federation Barents sea cod and haddock fishery during 17-21 July 2017

The purpose of this annual Surveillance Report is:

1. To establish and report on any material changes to the circumstances and practices affecting the original complying assessment of the fishery;
2. To monitor the progress made to comply with any Conditions raised and described in the Public Certification Report of 07.04.2014 and in the corresponding Action Plan drawn up by the client;
3. To monitor any actions taken in response to any Recommendations made in the Public Report;
4. To re-score any Performance Indicators (PI) where practice or circumstances have materially changed during the intervening year, focusing on those PIs that form the basis of Conditions raised.

The primary focus of this surveillance report is to review the changes occurred since the previous year. For a complete picture of the fishery, this report should be read in conjunction with the Public Certification Report available for download at www.msc.org.

2 BACKGROUND

2.1 Barents sea cod Stock Status

The Fishery

The total recorded landings of Northeast Arctic cod in 2016 were 849,422t. Norway took 348,949t (41%) and Russia took 394,107t (46.4%) The remaining 12.5% was shared between the Faroe Islands, France, Germany, Greenland, Iceland, Spain and the UK (ICES, 2017a,b).

Figure 1 shows the historical pattern of landings of Northeast Arctic cod over the period 1946 to 2016. Landings have steadily increased over recent years since reaching a low of 464,171t in 2008 to reach a peak of 986,449t in 2014. In the past there have been reports of unreported catches through discarding etc. However, the assessment working group now consider that the landings data, since 2009, are very close to the actual catches. This assumption is based on an analysis carried out by the Norwegian-Russian group on the estimation of total catch (ICES, 2015a).

Figure 2 shows the performance of the fishery in relation to the ICES advised catch and the eventual agreed TAC over the period 1987 to 2016. The agreed TAC for 2017 and the ICES advised catch for 2017 and 2018 are also shown. The advice given by the ICES advisory committee for the 2016 catch (ICES 2015b) was based on the agreed harvest control rule within the Joint Russian–Norwegian Fisheries Commission management plan and the resultant ICES advised catch of 805,000t The eventual agreed TAC was 894,000t (ICES, 2015b).

At the 46th meeting of the Joint Russian-Norwegian Fisheries Commission (JRNFC) in October 2016 the previous Management Plan, dating back to 2009, was amended and the new plan, endorsed by ICES as precautionary, was used for the advice on the fishery in 2017 (ICES, 2016a). The subsequent ICES advice was for a catch no greater than 805,000t. The eventual agreed TAC was 890,000t which was based on the new management plan agreed by the JRNFC in October 2016 (ICES, 2016a)

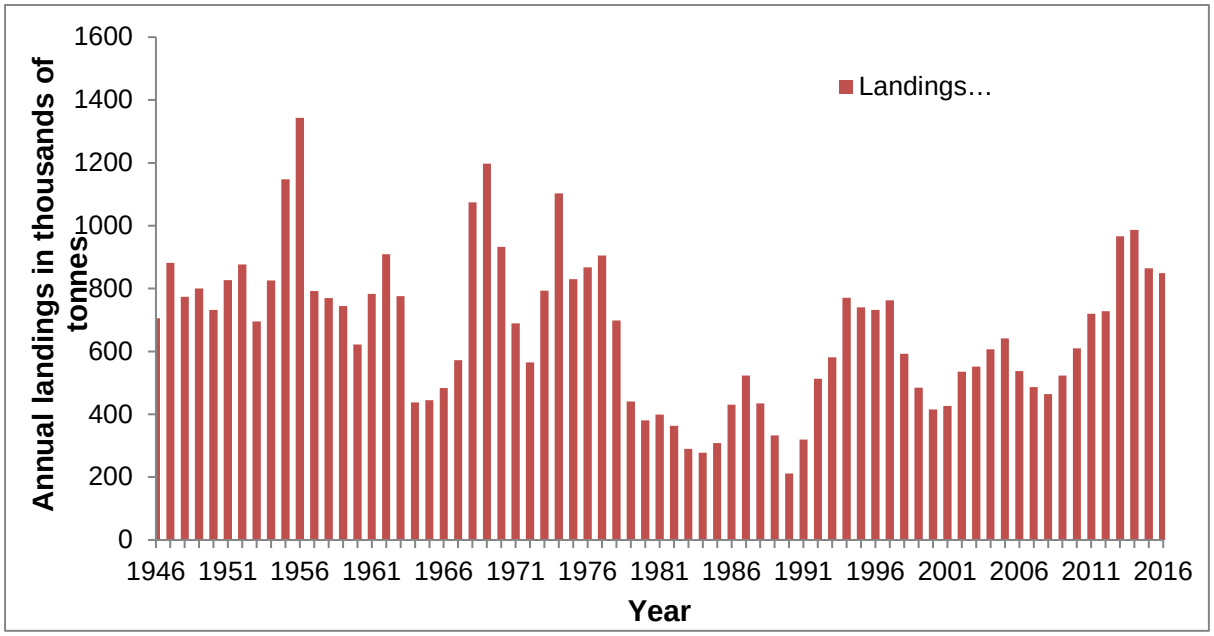

Figure 1. Annual Landings of Northeast Arctic Cod in thousands of tonnes over the period 1946 to 2016 (ICES, 2017a)

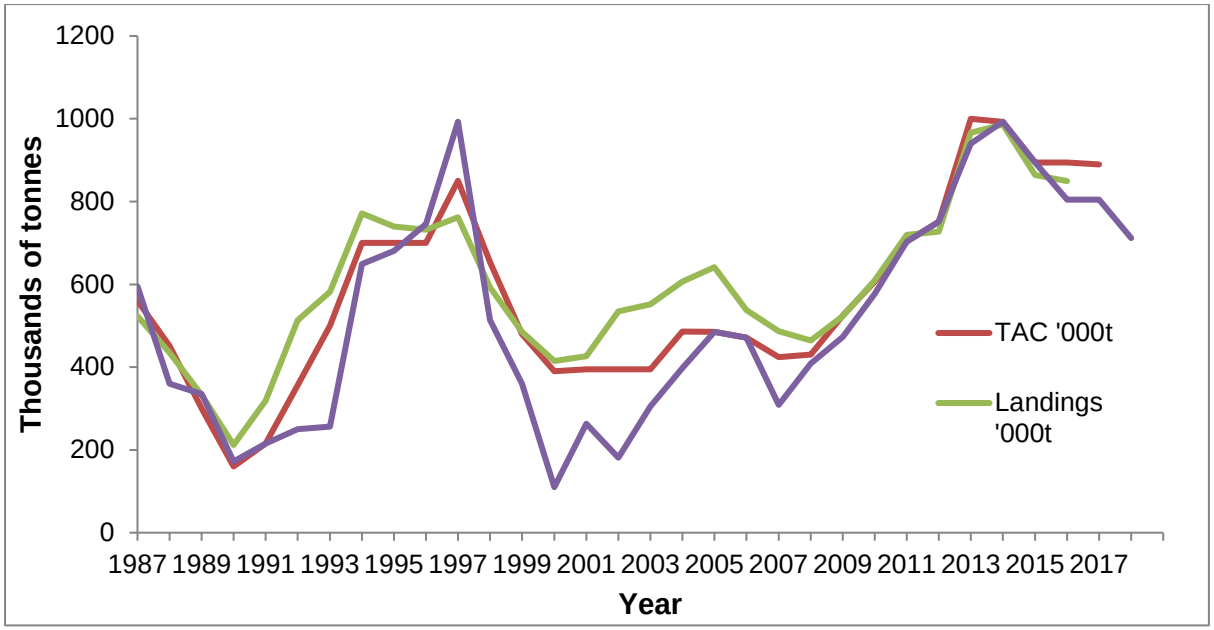

Figure2. Annual landings of Northeast Arctic cod in thousands of tonnes together with the ICES advised catch levels and the agreed TAC over the period 1987 to 2018 (ICES, 2017a)

Stock assessment

At an ICES Inter-Benchmark meeting in April 2017 the assessment model was changed from XSA to the State-space Assessment Model (SAM) (ICES, 2017c). The meeting also recommended a change in the Recruitment Model and the inclusion of a wider age range in the assessment. This resulted in a change in the perception of spawning stock biomass compared to the results of the 2016 assessment (ICES, 2016a). Figure 3 shows the comparison between the estimates of SSB in 2016 using the XSA model and 2017 using SAM. The major differences have been since 2012 as shown in the text Table below.

	Estimate of SSB in 2016 (XSA)	Estimate of SSB in 2017 (SAM)	Percentage difference
2012	1,910,354t	2,371,480t	+24
2013	2,134,044t	2,692,927t	+26
2014	1,866,445t	2,563,812t	+37
2015	1,383,398t	2,133,633t	+54
2016	1,069,881t	1,769,635t	+65
2017		1,835,962t	

The estimate of spawning stock biomass at spawning time in 2017 was 1,835,926t an increase of 66,291t since 2016 (ICES, 2017a). Figure 4 shows the estimate of SSB dating back to 1946 together with the 95% high and low confidence intervals produced by the new assessment model. The reference points for MSY B trigger / Bpa / Management plan and the biomass limit reference points are also shown (ICES, 2017a).

The retrospective estimate of spawning stock biomass shows that it has not been below the biomass limit level (220kt) since 1988 and has been above the MSY B trigger/Bpa/ Mgt level (460kt) since 2003. It is currently almost four times that upper reference level (ICES, 2017a)

Fishing mortality (F), based on ages 5-10yrs in the stock, over the period 1946 to 2016 is shown in Figure 5. The 95% high and low confidence intervals of the estimates are also shown together with the Fmsy/precautionary approach/Fmgt and the Flim reference points. Fishing mortality has been below the management plan / MSY level (F 0.4) since 2008 and has stabilised at around F 0.32 over the past three years. It has not been above the F limit level (0.74) since 2000 (ICES, 2017a).

The annual pattern of recruitment at age three years, over the period 1946 to 2017 is shown in Figure 6. Estimation of recruitment is via a sophisticated modelling procedure using the surveys and which takes into account a number of ecosystem variables including predation and cannibalism. The new SAM stock assessment model provides 95%, high and low confidence estimates which are shown on Figure 6. The pattern of recruitment is a typical fluctuating one for this stock with the last big year classes produced in 2004 and 2005. The 2013 year class (3ysr old in 2016) is one of the lowest in the time series but recruitment is predicted to show a marginal improvement in 2017 (ICES, 2017a,b).

ICES currently consider the stock to be in full reproductive capacity and being harvested sustainably.

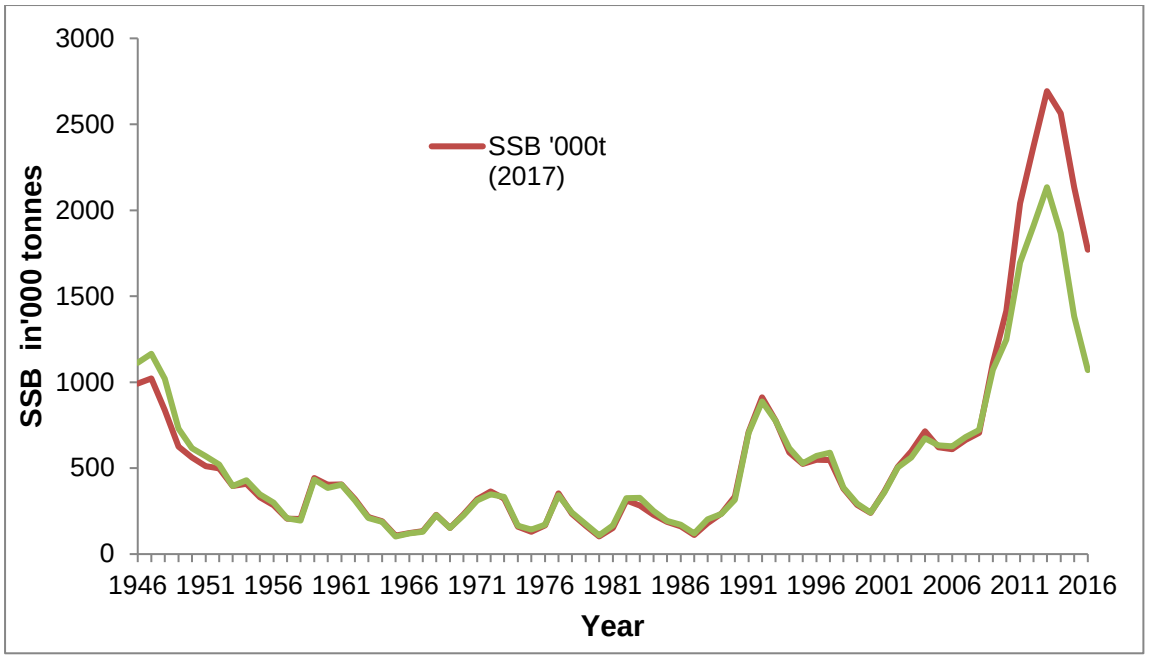

Figure 3. The annual estimates of spawning stock biomass of Northeast Arctic cod over the period 1946 to 2016. The green line is the estimate from the XSA assessment model used up to 2016 and the red line is the estimate in 2017 from the new State-Space Assessment Model (SAM) (ICES, 2017a).

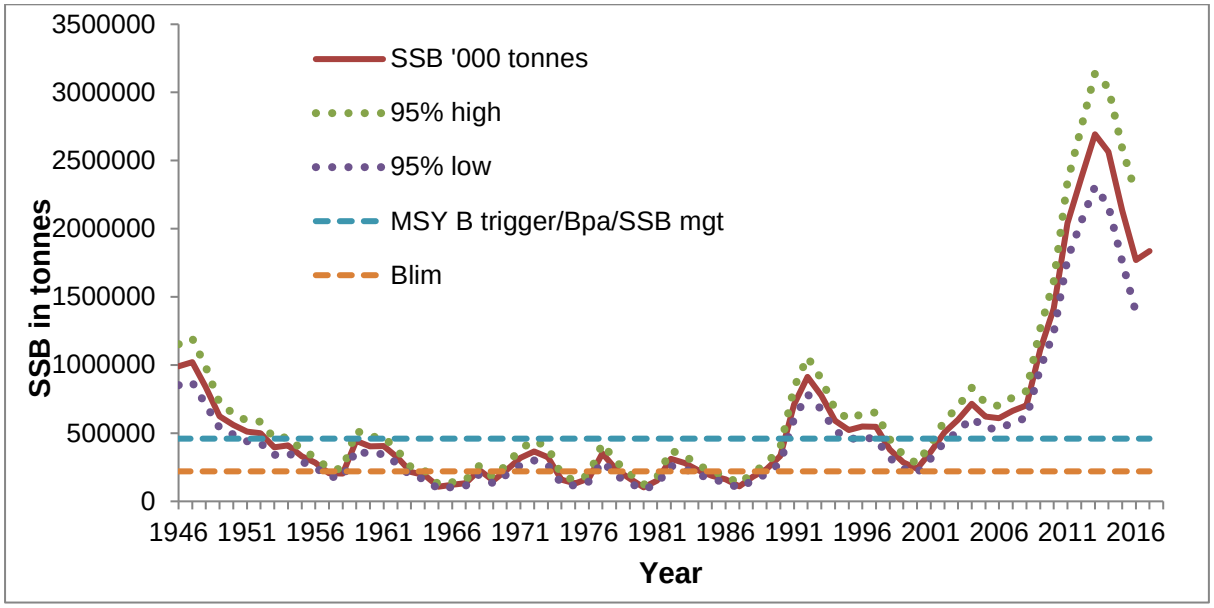

Figure 4. The annual estimate of Spawning stock biomass of Northeast Arctic cod over the period 1946 to 2016 (red line). The upper and lower 95% confidence intervals on the estimates are also shown. The biomass limit reference point and the reference point for MSY B trigger/Bpa and the SSB management level are also shown (ICES, 2017a).

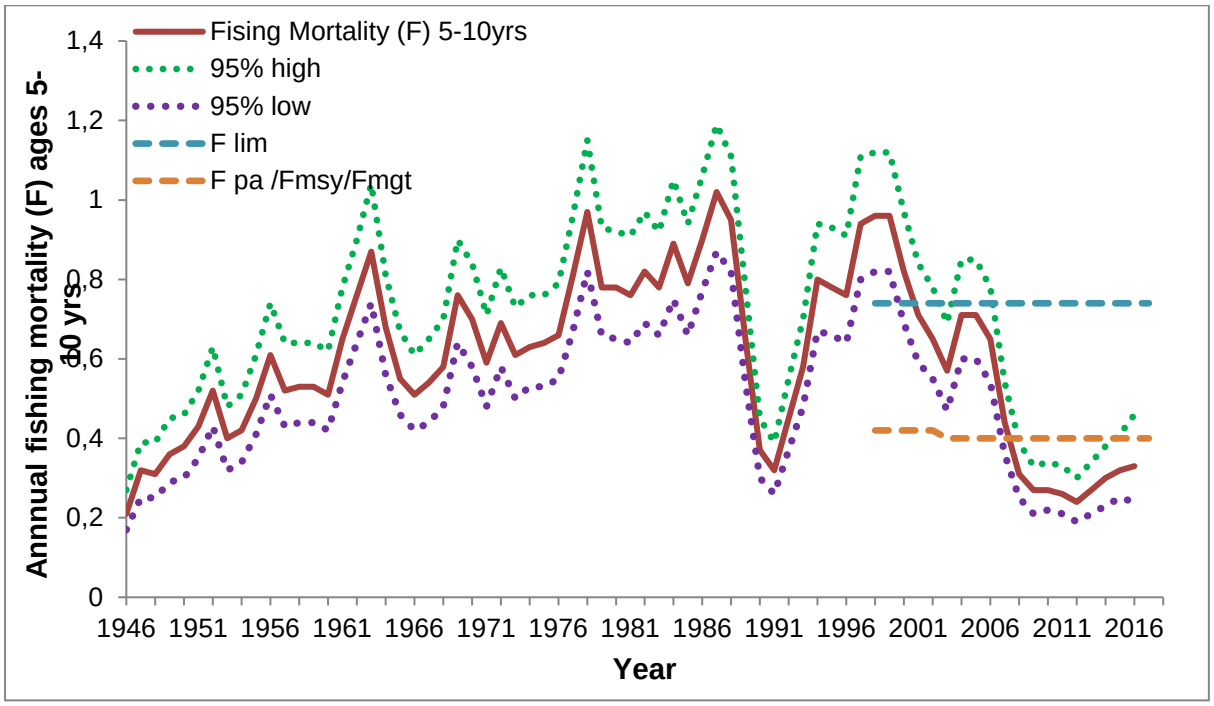

Figure 5. Annual fishing mortality (F), on Northeast Arctic cod, based on ages 5 to 10 years, over the period 1946 to 2016. The 95% confidence limits on the estimates, from the State Space assessment model, are also shown. The current limit (Flim), and the precautionary (Fpa) / maximum sustainable yield (Fmsy) / management (Fmgt) reference levels are also shown (ICES, 2017a.

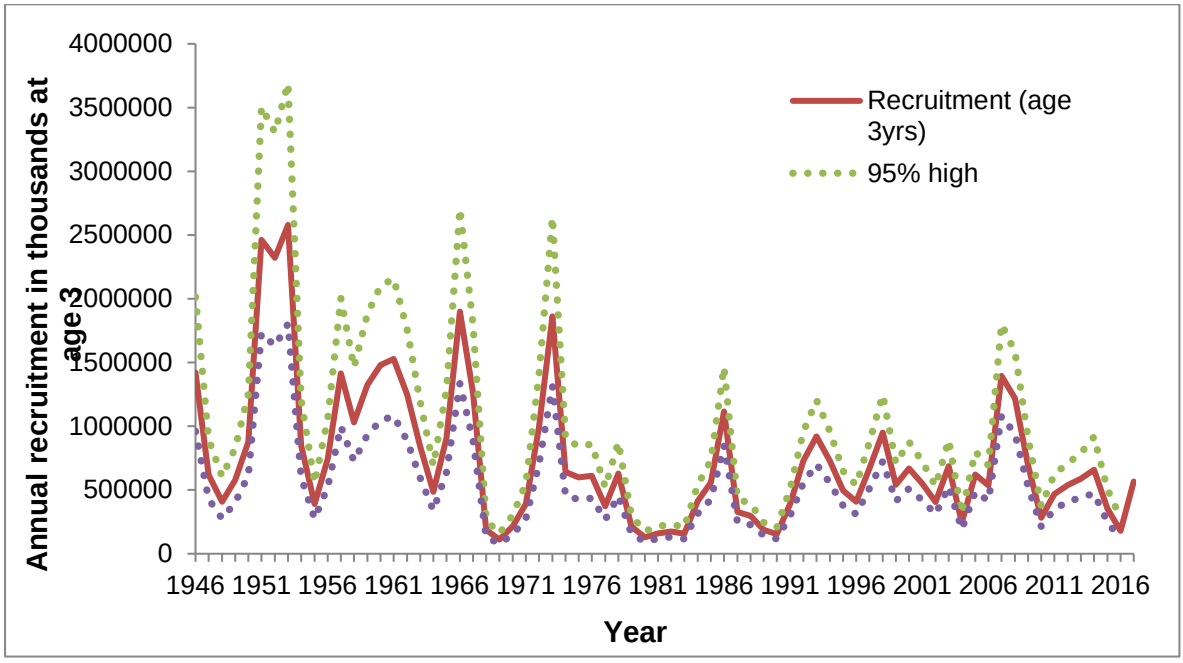

Figure 6. Annual recruitment at age 3 years, of Northeast Arctic cod, over the period 1946 to 2017. The 95% confidence limits on the estimates, from the State Space assessment model, are also shown (ICES, 2017a.

Management advice.

The ICES advisory committee (ACOM) continues to advise on the harvest rules resulting from the original JRNFC agreement in 2002 which was first applied for setting quotas in 2004 and evaluated by ICES as precautionary in 2005. In 2015 Norway and Russia made a request to ICES for the evaluation of alternative harvest control rules for Northeast Arctic cod, haddock and capelin (ICES, 2016b). For cod ICES investigated and evaluated a series of ten harvest control rules including the existing one. ICES concluded that they were all in accordance with the ICES standard that the annual probability of SSB being below the biomass limit level should be no more that 5%.

No changes in the harvest control rules for cod have yet been made and the advice for the fishery in 2018 has been made on the basis of the existing management plan harvest rule ICES, 2017a) 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 (F 0.44). Bycatch of coastal cod and golden redfish (*Sebastes norvegicus*) should be kept as low as possible. Other catch options provided by the ICES advisory committee (ACOM) were for the precautionary approach (Fpa 0.4) and Fmsy (F0.4) which would generate a catch in 2018 of 653,971t (ICES, 2017a).

Summary of stock status

In terms of the fishing pressure on the stock ICES considers the stock to be harvested sustainably with fishing mortality below the management plan level and below maximum sustainable yield (ICES, 2017a). In terms of the spawning stock status ICES considers the stock to be in full reproductive capacity with SSB above both the management plan and maximum sustainable yield level (ICES, 2017a)

2.2 Barents sea haddock Stock Status

The fishery

Haddock is mainly fished by trawl as a bycatch in the cod fishery. The total recorded landings of Northeast Arctic haddock in 2016 were 233,416t. Norway took 46.6% (108,718t) and Russia took 49.6% (115,710t) with the remaining 3.8% (9000t) shared amongst a raft of other countries (ICES, 2017d).

Figure 7 shows the historical pattern of landings of Northeast Arctic haddock over the period 1950 to 2016. Over recent years the landings steadily increased from a low 69,000t in 2000 to a high of 315,627t in 2012 which was the highest recorded since 1973. In the following year landings fell to below 200,000t but increased marginally in 2016 to 233,416t. In the past there has been an element of unreported catches. These were estimated and included in the assessment from 2002. Since 2009 the ICES assessment working group have considered the official landings statistics to be sufficiently close to the actual catches and no adjustments are made for the assessment (ICES, 2015a).

Figure 8 shows the performance of the fishery in relation to the ICES advised catch, the official landings, the ICES estimate of landings and the agreed annual TAC over the period 1987 to 2016. The agreed TAC for 2017 and the ICES advised catch for 2017 and 2018 are also shown (ICES, 2017d).

Since 2009 the ICES advised catch has been based on the joint Russian-Norwegian management plan. The advice for the fishery in 2016 was 244,000t with an agreed TAC of 244,00t (ICES 2016b). The eventual landings in 2016 were 233,416t (ICES, 2017d). The ICES predicted catch for 2017 based on the management plan advice was 233,000t and that was the eventual agreed TAC for 2017. The ICES predicted catch for 2018 based on the management plan advice is 202,305t (ICES, 2017d).

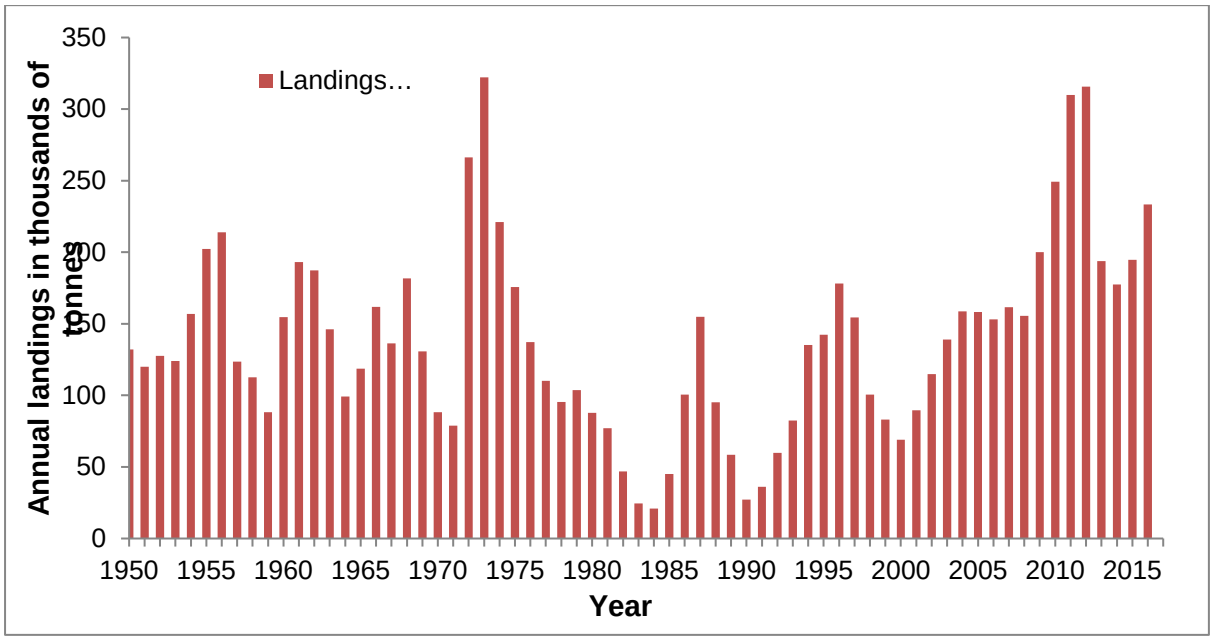

Figure 7. Annual Landings of Northeast Arctic haddock, in thousands of tonnes, over the period 1950 to 2016 (ICES, 2017d)

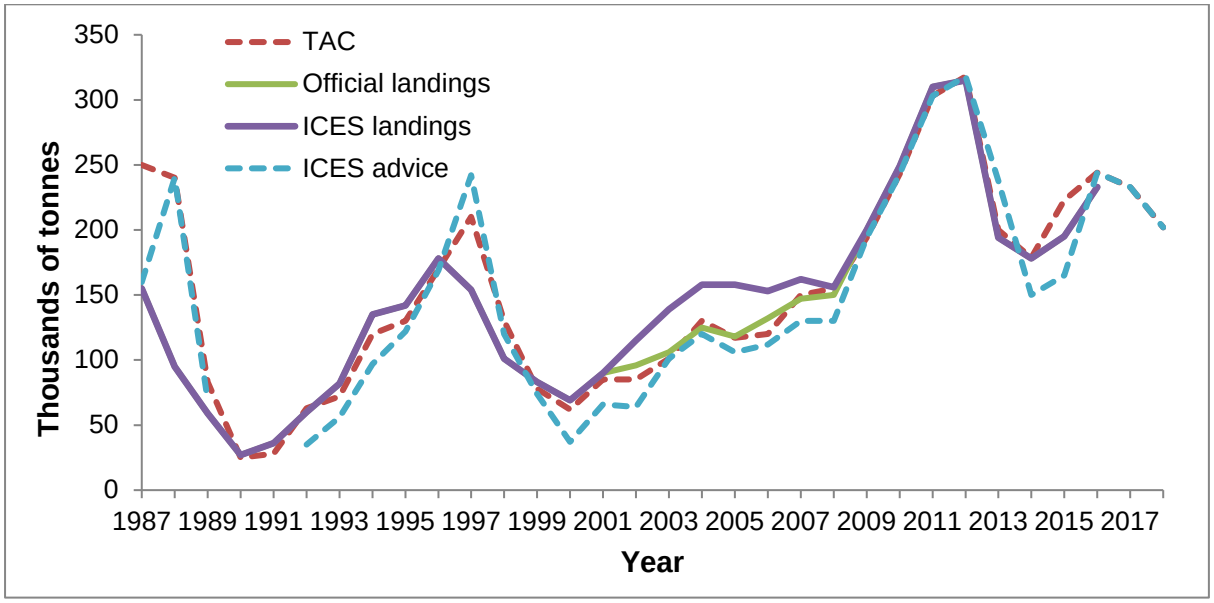

Figure 8. Annual landings of Northeast Arctic haddock, in thousands of tonnes, over the period 1987 to 2016. The ICES advised catch and the agreed TAC, from 1987 to 2018 are also shown. (ICES, 2017d)

Stock Assessment

At the Arctic fisheries working group meeting in 2013 (ICES, 2013) concerns were expressed regarding problems with the assessment of Northeast Arctic haddock using the existing XSA model. As a consequence, they considered it appropriate to investigate alternative approaches. At that time there were a number of other assessments carried out by ICES which were changing their assessment model to the State -space assessment model (SAM) (Lewy and Vinther, 2004; Neilsen and Berg, 2014; Payne, 2010). The 2013 working group recommended that the next benchmark workshop should investigate the possibility of a change to the assessment model. After a thorough investigation of the problems with XSA, which was tending to underestimate SSB and overestimate fishing mortalities, the benchmark workshop in 2015 (ICES, 2015d) decided to change to the more robust State -space model (SAM) for the assessment of Northeast Arctic haddock. One of the big advantages in using SAM is that all the estimated parameters are expressed with 95% confidence intervals

Figure 9 shows the annual pattern of change in the spawning stock biomass of Northeast Arctic haddock over the period 1950 to 2017 as estimated by the SAM model in 2017 (ICES, 2017d). The upper and lower 95% confidence intervals on the estimates are also shown. The 2016 estimate of SSB at spawning time in 2015 was 802,109t (+1,081,457t – 594,919t: 95% CI). The forecast estimate, in 2016, of SSB at spawning time in 2016 was 753,485 (ICES, 2016a). The 2017 retrospective assessment of the SSB at spawning time in 2016 was 675,068t (+909,423t – 501,105t: 95% CI). The forecast estimate, in 2017, of SSB at spawning time in 2017 is 537,865t (ICES 2017 advice). The ICES working group report provides then 95% confidence intervals on this estimate (+772,732t – 372,423t) (ICES 2017b)

Clearly there are retrospective issues in this assessment, apparent over recent years which are not solely related to the model change in 2015. The assessment Working group accepts that there is a problem of imprecise input data, in particular the catch at age matrix sand also incomplete spatial coverage in the surveys used to tune the assessment (ICES, 2017b). Clearly both these issues

affect the quality of the assessment. The text Table below highlights this retrospective issue back to 2011 in the assessments from 2014 (XSA model) to 2015 – 2017 (SAM model). Compared to the 2016 estimate the current estimates of SSB are much lower for the period 2015 – 2017.

Irrespective of the retrospective issues the dominating feature is that the stock increased steadily from 2009 to reach an all-time high of 675,563t in 2014. It is predicted to decrease slightly in 2018. The SSB is significantly above the MSY trigger / Management plan and Precautionary approach level of 80,000t. Fishing mortality, based on ages 4-7 years, over that same period has remained low varying between F 0.25 to F 0.15. This is well below the Management Plan and MSY reference level of F0.35 (ICES, 2017d).

SSB in Year:	2014 XSA Ass:	2015 SAM Ass:	2016 SAM Ass:	2017 SAM Ass:
2011	404,322t	506,358t	511,959t	487,852t
2012	399,921t	630,331t	627,187t	588,932t
2013	342,275t	722,881t	704,328t	651,494t
2014	254,451t	792,541t	764,517t	675,563t
2015	(241,000)	769,614t	802,109t	656,269t
2016			753,485t	675,068t
2017				537,865t

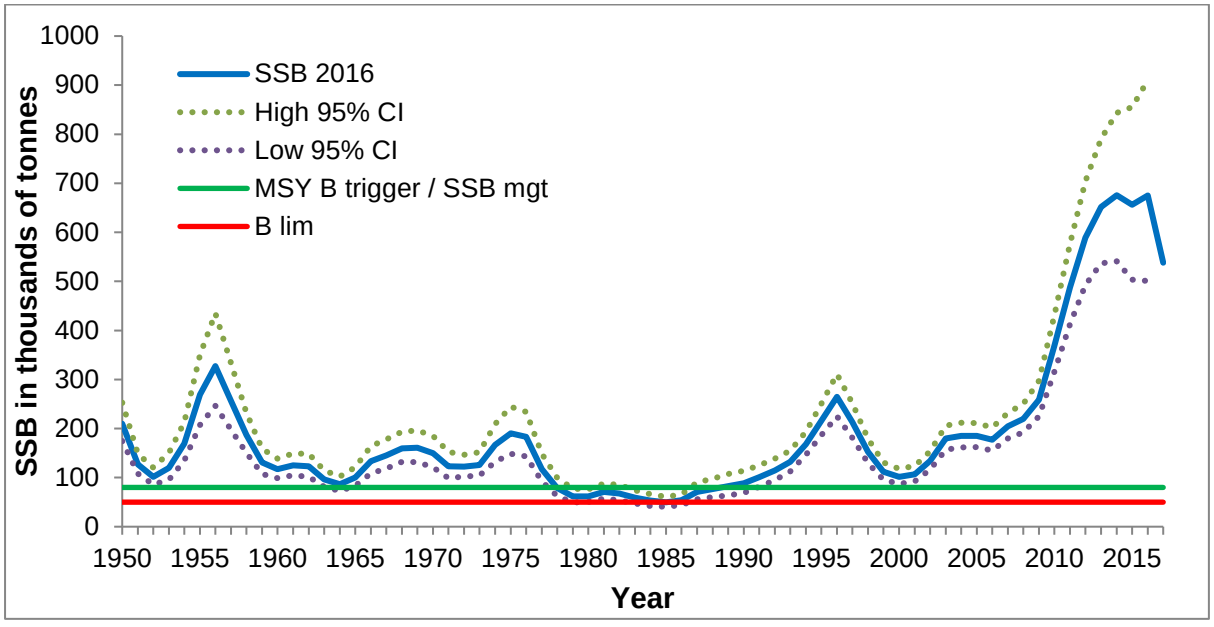

Figure 9. The annual estimates of Spawning stock biomass (SSB) of the Northeast Arctic haddock over the period 1950 to 2017. The 95% confidence levels on those estimates and the maximum sustainable yield, management plan and biomass limit reference levels are also shown (ICES, 2017d)

Figure 10 shows the trend in annual fishing mortality based on ages 4 to 7 years, over the period 1950 to 2016 including the upper and lower 95% confidence interval of those estimates. The maximum sustainable yield, Management plan and limit reference levels are also shown.

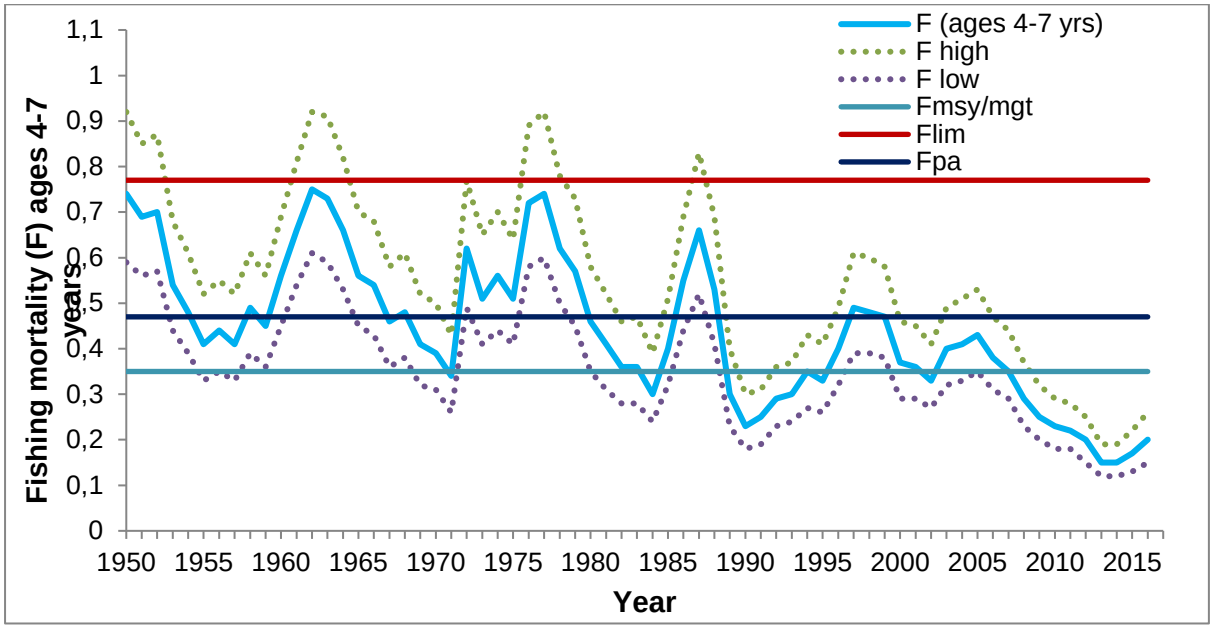

Figure 10. Annual fishing mortality (F ages 4-7yrs)) on Northeast Arctic haddock over the period 1950 to 2016. The 95% confidence intervals on the estimates of F are also shown together with the MSY / management and limit reference levels (ICES, 2017d)

Figure 11 shows the annual pattern of recruitment at age 3 years. This pattern of recruitment is fairly typical of haddock over its whole area of distribution. Year class strength of haddock is renowned for its volatility with periods of very good recruitment interspersed with periods of poor recruitment. As is the case for many teleost species the mechanisms generating varying survival rates remain largely unexplained. For Northeast Arctic haddock there is no apparent relationship between stock size and subsequent recruitment. In recent years the strong recruitment of the 2004, 2005 and 2006 year classes has been followed by a period where only the 2007, 2009 and 2011 year classes are above the long term average (ICES, 2017d)

The current high stock levels have been driven both by the sustainable exploitation of the stock, with low fishing mortalities (Figure 10) and also by the exceptionally strong year classes of 2004 to 2006 (Figure 11).

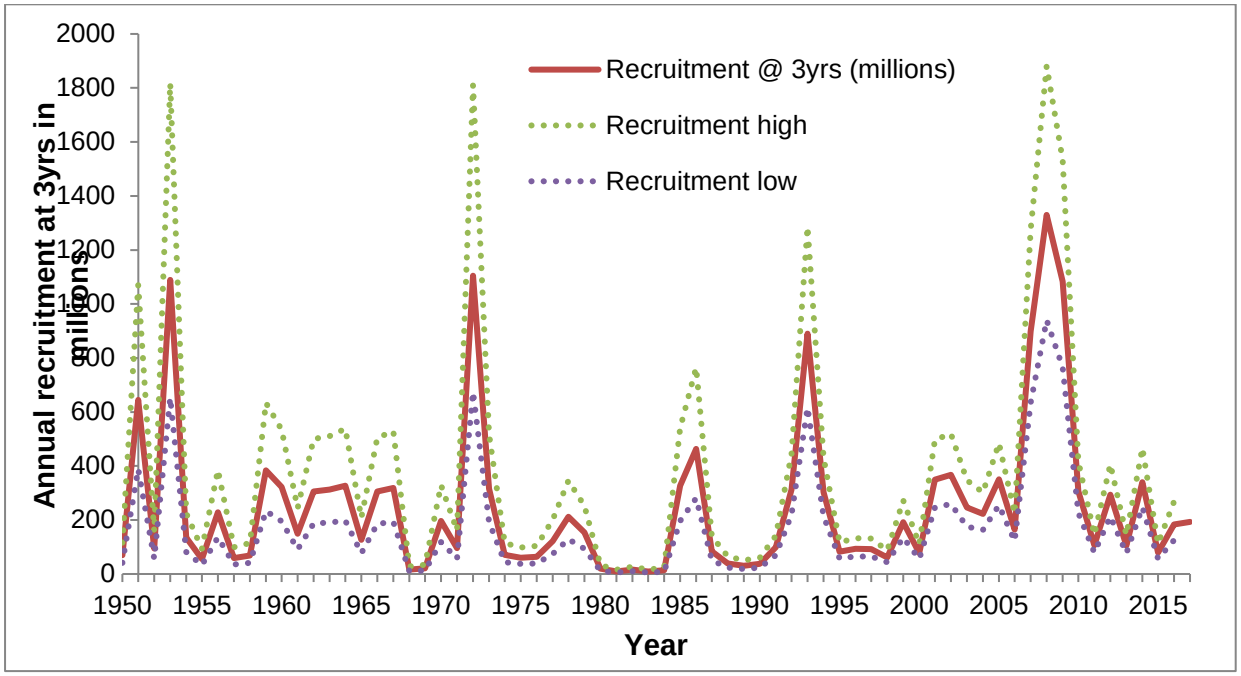

Figure 11. Annual recruitment of fish aged 3 years to the Northeast Arctic haddock stock over the period 1950 to 2016. The 95% upper and lower confidence intervals on the estimates are shown as dotted lines. The 2017 value is a predicted one (ICES, 2017d)

Management advice

The ICES advisory committee continues to advise on the basis of the Harvest Control Rule agreed by the Joint Russian–Norwegian Fisheries Commission in October 2011. At the 46th Session of the Joint Russian–Norwegian Fisheries Commission in 2016 it was decided to keep the existing HCR for haddock for the next five years (ICES, 2016b).
In 2014 the JNRFC decided that from 2015 onwards Norway and Russia could transfer to or borrow from the following year up to 10% of the country's quota. ICES evaluated this change to the HCR in 2016 (ICES, 2016b) and concluded that it is precautionary (ICES, 2016b).
The ICES advice in 2017 (ICES, 2017d) for the fishery in 2018 states that when the Joint Russian–Norwegian Fisheries Commission management plan is applied, catches in 2018 should be no more than 202,305 tonnes. The advice is based on the assumption that catches in 2017 are equal to the agreed TAC of 233,000t. However, the 2016 TAC of 244,000t was not fully taken up (landings: 233,416t) including transfers from 2015 where landings were approximately 28,000t below the agreed TAC. As a consequence, the total catch in 2017 could be higher than the agreed TAC although ICES considers that catches equal to the TAC are more likely (ICES, 2017d)

Summary of stock status

In terms of the fishing pressure on the stock ICES considers the stock to be harvested sustainably with fishing mortality below the management plan, maximum sustainable yield and precautionary approach levels (ICES, 2017d). In terms of the spawning stock status ICES considers the stock to be in full reproductive capacity with SSB well above both the management plan level and maximum sustainable yield trigger level since 1989 (ICES, 2017d). SSB is predicted to decline slightly in response to the current period of low recruitment with the 2013 year class being slightly below the long term average.

2.3 Impact on the ecosystem

2.3.1 Retained species

The 2014 assessment report concluded that it was highly unlikely that there were any main retained species (comprising >5% of the total catch) taken in the UoCs (other than haddock in the cod UoC, and cod in the haddock UoC). Other retained species included saithe, Greenland halibut, wolffish (Anarhichas spp) and redfish (Sebastes spp).

For this surveillance audit the client has updated the Unit of Certification catch data for all retained species caught in the 2016 fishery and for the first six months of 2017. These data are listed in the two text Tables below. The 2016 data show no significant changes from the data in the original assessment. 2017 data indicate the same, but this data is not yet representative as it only covers the first six months of 2017 and the values may change once the fishing year is finished. In general, the audit assessment team considers that the client data are representative of the rest of the Russian fleet using demersal trawls to catch cod and haddock due to the nature of fishing operations. Fishing operators in the UoC operate with the similar bottom gear, fish in the same area and under the same rules and legislation, including discard ban. Therefore, they retain mainly the same species.

Retained species (2016). Data per year per vessel

Retained species (Common names)	Retained species (Latin names)	Strelets (M-0269)		Korund (M-0254)		Taurus (MK-0411)		Total
		t	%	t	%	t	%	t
Cod	*Gadus morhua*	12623,95	72,1	10400,12	82,4	13730,18	75,6	36754,54
Haddock	*Melangrammus aeglefinus*	3918,66	22,4	1763,16	14,0	3396,30	18,7	9078,12
Saithe	*Pollachius virens*	434,84	2,5	238,19	1,9	240,34	1,3	913,37
Greenland Halibut	*Reinhardtius hippoglossoides*	116,11	0,66	21,02	0,17	49,11	0,27	186,24
Redfish	*Sebastes spp*	167,66	0,96	62,49	0,50	531,95	2,93	762,10
Spotted catfish	*Anarhichas minor*	62,33	0,36	36,88	0,29	62,32	0,34	161,53
Northern Wolffish	*Anarhichas denticulatus*	112,55	0,64	52,56	0,42	93,39	0,51	258,50
Atlantic catfish	*Anarhichas lupus*	21,52	0,12	4,14	0,03	8,99	0,05	34,65
Common dab	*Limanda limanda*	0		0		0		0
Ling	*Molva molva*	6,05	0,03	4,40	0,03	1,69	0,01	12,14
European place	*Pleuronectes platessa*	55,99	0,32	35,40	0,28	45,62	0,25	137,61
Sole	Hippoglossoides platessoides	0		0		0		0
Tusk	*Brosme brosme*	0	0	2,68	0,02	2,94	0,02	5,62
Argentine	Argentina silus	0	0	0	0	1,97	0,01	1,97
Total		17519,66	100	12621,33	100	18164,80	100	48305,80

Retained species (01.01.2017-30.06.2017). Data per vessel for first six months of 2017.

Retained species (Common names)	Retained species (Latin names)	Strelets (M-0269)		Korund (M-0254)		Taurus (MK-0411)		Total
		t	%	t	%	t	%	t
Cod	*Gadus morhua*	6902,83	72,2	6437,15	71,95	7165,02	73,50	20504,99
Haddock	*Melangrammus aeglefinus*	1950,02	20,40	1891,40	21,14	2104,30	21,39	5945,72
Saithe	*Pollachius virens*	369,10	3,9	227,47	2,54	186,17	1,91	782,74
Greenland Halibut	*Reinhardtius hippoglossoides*	50,38	0,53	49,55	0,55	37,61	0,39	137,54
Redfish	*Sebastes spp*	144,7	1,51	247,24	2,76	116,18	1,19	508,12
Spotted catfish	*Anarhichas minor*	38,35	0,40	16,05	0,18	41,67	0,43	96,53
Northern Wolffish	*Anarhichas denticulatus*	47,79	0,50	37,82	0,42	28,39	0,29	93,36
Atlantic catfish	*Anarhichas lupus*	38,01	0,40	26,95	0,30	58,6	0,60	144,21
Common dab	*Limanda limanda*	0	0	0	0	0	0	0
Ling	*Molva molva*	6,19	0,06	4,44	0,05	0	0	10,63
European place	*Pleuronectes platessa*	7,17	0,08	4,95	0,06	9,98	0,10	22,09
Sole	Hippoglossoides platessoides	0	0	0	0	0	0	0
Tusk	*Brosme brosme*	0	0	2,7	0,03	0	0	2,7
Argentine	Argentina silus	0	0	0	0	0	0	0
Total		9554,54	100	8946,17	100	9747,91	100	28248,62

The 2013 assessment report detailed the management measures in place to reduce impact on non-target species. They concluded that the low levels of retained species in the client fishery were due to a number of factors, including:

- the use of large mesh sizes (140+ mm, above the minimum of 135 mm in Norway & 125 mm in Russia –harmonised to 130mm in all areas from 2011);
- discard bans in place for all key species in Norwegian, Svalbard and Russian sectors;
- use of separator grids (compulsory since 1997);
- move on rule / real time closures - to protect juveniles, or in event of high by catch (in Norwegian waters);
- permanently closed area to protect spawning / nursery grounds;
- the high concentrations of cod and haddock on the fishing grounds;
- experienced and knowledgeable skippers and crews, knowing where best to catch target species;
- the good recent availability of target stock quotas (reflecting good stock status), combined with increased trade in quotas reduces the incentive to 'high grade' catches.

Additional Russian fishing regulations for Northern Basin (RUS EEZ/ Barents Sea) include area closures; seasonal closures; a list of species which it is prohibited to target; catch-weighing equipment on board (must be certified, with an accepted "error margin" for declared weight of +/- 5%); reporting systems and requirements; by-catch levels for wolffish: max. 45% of total catch in 1 haul/ and max. 45% of landed catch, saithe: max. 49% of total catch in 1 haul/ and max. 49% of landed catch, Greenland halibut: max. 12% of total catch in 1 haul/ and max. 7% of landed catch, and redfish: max. 15% of total catch in 1 haul/ and max. 15% of landed catch. If by-catch is over any of these maximum levels, the vessel shall: release the catch into the sea, despite the condition of the catch, but with minimum damage possible, change position by a minimum of 5 nm, record this action in the relevant documents and inform relevant authorities. All allowable by-catch must be registered in log-books.

All of these measures remain in place and continue to be effective as evidenced by the retained species data list above.

2.3.2 By-catch species

As reported in the 2014 main assessment report the majority of fishing activity for the assessed fleet takes place in waters under Norwegian jurisdiction. In these waters, under section 15 of the 2009 Norwegian Marine Resources Act, there is a duty to land all catches of commercial species. Section 48 of the regulations includes a listing all species that must be landed. This covers cod and haddock as well as most species either reported for, or potentially relevant to the fishery under assessment, such as saithe, Greenland halibut, redfish and wolffish. When fishing in waters covered by Russian jurisdiction, discarding of by catch is also banned. These strong discard bans covering all waters of the assessed fishery, combined with the initiatives and management measures listed above, should mean that there is no discarding of fish in the fishery under certification. The audit team have reviewed the evidence and consider that this situation remains the same for this surveillance report.

The client has provided information on discarding (returned alive to the sea) for the three vessels in the UoC. For the whole period; 1 January 2016 to 30 June 2017. These data are listed in the text Table below.

Discarded species (2016 plus 01.01.2017-30.06.2017)

Discarded species (Common names)	Discarded species (Latin names)	Discarded or returned alive to the sea	Strelets (M-0269)		Korund (M-0245)		Taurus (MK-0411)		Total
			Pcs/kg	%	Pcs/kg	%	Pcs/kg	%	Pcs/kg
Common ling	*Molva molva*		Table 5, 5a		Table 5, 5a		Table 5, 5a		Table 5, 5a
Anglerfish	*Lophius piscatorius*		30	2	0	0	0	0	30
Skate	Not identified to species		870	44	459	62	360	11	1689
Atlantic halibut	*Hippoglossus hippoglossus*		21	1	0	0	0	0	21
Lumpfish	*Cyclopterus lumpus*		54	3	55	7	0	0	109
Grenadier	*Macrouridae spp*		0	0	0	0	0	0	0
Chimera	*Chimaera monstrosa*		0	0	24	3	0	0	24
Squid	Not identified to species		12	1	19	3	0	0	31
Molluscs	Not identified to species		6	0	0	0	0	0	6
Starfish	Not identified to species		304	15	176	24	1115	36	1595
Sponge	Not identified to species		555	28	4	1	1595	51	2154
Coral	Not identified to species		10	1	0	0	0	0	10
Greenland shark	Somniosus microcephalus		79	4	1	0	51	2	131
Arctic eelpout	Licodes reticulatus		10	1	0	0	0	0	10
Cucumaria	Cucumaria frondoza		14	1	3	0,4	14	0,4	31
Total			1965		741		3135		5841

2.3.3 Endangered, Threatened and Protected Species (ETP)

Russia is a signatory to a number of conventions on species protection and management, notably the Convention on Biological Diversity (CBD), which sets out a general framework and national strategy. More specific proposals on species protection are made under the regional and global nature conservation conventions, primarily the Convention on International Trade in Endangered Species (CITES), to which Russia is also a signatory.

Russia is not a member of the North Atlantic Marine Mammal Commission (NAMMCO), which provides a mechanism for cooperation on conservation and management for all species of cetaceans (whales and dolphins) and pinnipeds (seals and walruses) in the region. Russia does, however, cooperate as a partner on projects. For example, PINRO are actively involved in the Trans-north Atlantic Sightings Survey to estimate the summer distribution and abundance of cetacean populations in the North Atlantic, in particular in Arctic regions.

For this surveillance audit report the client was asked to provide information on the catches of ETP species by each of the three vessels in the client fleet. In the previous surveillance report there were no records of species discarded or returned to the sea live. The situation was the same for the fishery from 1 January 2016 to 30 June 2017.

The client reports that the situation regarding the by-catch of seabirds has not changed to report since the 2014 main assessment report.

ETP species

Discarded species (Common names)	Discarded species (Latin names)	Discarded or returned alive to the sea	Strelets (M-0269)		Korund (M-0245)		Taurus (MK-0411)		Total
			t	%	t	%	t	%	t
common or blue skate	Dipturus batis		0	0	0	0	0	0	0
angel shark	Squatina squatina		0	0	0	0	0	0	0
porbeagle	Lamna nasus		0	0	0	0	0	0	0
other species, if any									
Total			0	0	0	0	0	0	0

2.3.4 Habitat and ecosystem

The original assessment team addressed other potential impacts of the fisheries in relation to areas of high biodiversity value, vulnerable marine ecosystems (VME's) and protected areas. The measures in place to monitor and protect these areas remain in place and there are no changes to report.
There are no other changes to report on the overall ecosystem impact of these fisheries.

No significant changes to report in relation to habitat or ecosystem features or to fishery impacts on them since the 2014 assessment report.

2.4 Changes to the management system

There are no material changes to the management of this fishery since the 2014 assessment report. The function, roles and responsibilities including consultation and decision- making processes for management and science of the fishery remains unchanged. Control, surveillance and monitoring remains unchanged and the frequency of the inspection remains nearly the same as in in the assessment report of 2014. Fishermen's compliance with laws and regulations are as good as in previous years. Fishing pattern, gear used, fishing area and fishing season also remain largely unchanged.

2.5 CoC considerations

The status, with regard to the Chain of Custody has remained unchanged since the full assessment as was the case at the last surveillance audit in 2016.

Scope of certification is up to the point of landing and chain of custody for the client vessels commences following the sale of cod and haddock products and identifiable by-products, as specified in the PCR (section 5), at the point of landing (auction, cold/freezer store or processing plant) either directly from the client vessels or via transhipment. Land-based processing plants as well as cold/freezer stores that perform anything more than movement of product must have separate CoC certification.

The client has started production of canned cod liver products on board their vessels. These products are covered by their fishery certificate and can carry MSC logo, subject to logo-licencing agreement with the MSC.
Presently, the production of canned cod liver is sold to the Russian market and a small quantity to China with no requirement for certified products. Logo licencing agreement has, therefore, not been initiated yet.

2.6 Catch data

Catch data (Species/ Gear) – NEA Cod

Fishing Year	TAC (or Fishing days)	UoC share of the total TAC (or Fishing Days)	Client share of the total TAC (or fishing days)	Total green weight catch taken by the client group
2016	574206	394120	40397,890	**38788,962**
2017	325938	231293	38808,650	**23825,338**

Catch data (Species/ Gear) – NEA Haddock

Fishing Year	TAC (or Fishing days)	UoC share of the total TAC (or Fishing Days)	Client share of the total TAC (or fishing days)	Total green weight catch taken by the client group
2016	574206	115668	10614,350	**9762,078**
2017	325938	58395	9191,200	**6472,994**

2.7 Summary of Assessment Conditions

There are no conditions attached to the certification of these fisheries.

3 THE ASSESSMENT PROCESS

3.1 Scope of the assessment

The MSC Fisheries CR and guidance v2 define the Unit of Certification (UoC) (i.e., the unit entitled to receive an MSC certificate) as follows:
"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 fisheries covered by this certification are defined as described in Table and Table below.
There are no other eligible fisheries and the Unit of Assessment is therefore the same as unit of the certification.

Table 3a UoC –Barents sea cod fishery

Fishery name:		**Barents sea cod fishery**
Unit of certification	**Species:**	Cod (Gadus morhua)
	Stock:	Barents Sea cod
	Geographical area:	ICES Sub-areas I and II. FAO 27. Primarily Norwegian EEZ and Svalbard FPZ
	Harvest method:	Bottom trawl
	Management:	Federal Agency of Fisheries (Russian Federation), Norwegian Ministry of Fisheries and Coastal Affairs (Norwegian EEZ and Svalbard FPZ) Joint Russian-Norwegian Fisheries Commission, NEAFC, PINRO, IMR and ICES.
	Client group:	The clients responsible for coordination of full-assessment for this fishery are JSC Strelets and JSC Eridan . The client group is represented (per 09.07.2015) by the following ship owners: • JSC Strelets with vessel Strelets (M-0269) • JSC Eridan with vessel Korund (M-0245) • JSC Taurus with vessel Taurus (MK-0411)
	Other eligible fishers:	As defined under section 3.1.7 of Public Certification Report

Table 3b UoC –Barents sea haddock fishery

Fishery name:		**Barents sea haddock fishery**
Unit of certification	**Species:**	Haddock (*Melanogrammus aeglefinus*)
	Stock:	Barents Sea haddock
	Geographical area:	ICES Sub-areas I and II. FAO 27. Primarily Norwegian EEZ and Svalbard FPZ
	Harvest method:	Bottom trawl
	Management:	Federal Agency of Fisheries (Russian Federation), Norwegian Ministry of Fisheries and Coastal

		Affairs (Norwegian EEZ and Svalbard FPZ) Joint Russian-Norwegian Fisheries Commission, NEAFC, PINRO, IMR and ICES.
	Client group:	The clients responsible for coordination of full-assessment for this fishery are JSC Strelets and JSC Eridan . The client group is represented (per 09.07.2015) by the following ship owners: • JSC Strelets with vessel Strelets (M-0269) • JSC Eridan with vessel Korund (M-0245) • JSC Taurus with vessel Taurus (MK-0411)
	Other eligible fishers:	As defined under section 3.1.7 of Public Certification Report

3.2 History of the assessments

3.2.1 Summary of the original assessment

The intent of the Russian Federation Barents sea cod and haddock fishery to become MSC certified was announced on 21 March 2013, and the fishery received its certification on 6 May 2014.
Scope of certification is up to the point of landing and chain of custody for the client vessels commences following the sale of cod and haddock products and identifiable by-products, as specified in the PCR (section 5), at the point of landing (auction, cold/freezer store or processing plant) either directly from the client vessels or via transhipment. Land-based processing plants as well as cold/freezer stores that perform anything more than movement of product must have separate CoC certification.

The default assessment tree, set out in the MSC Certification Requirements, version 1.2, was used for the initial 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. In the initial certification, the scores of the three Principles were:

Table 2 Principle scores – Original assessment:

Principle	Barents sea cod	Barents sea haddock
Principle 1 – Target Species	98.1	91.9
Principle 2 – Ecosystem	87.0	87.0
Principle 3 – Management System	89.9	89.9

The fishery did not achieve a score of below 80 against any scoring indicators, and no conditions were thus set for the fishery following the initial assessment. The assessment team set three recommendations for the fishery, which are presented in full in section 5 of this report.

3.2.2 First annual surveillance – 2015

The first surveillance audit was performed as a remote audit with a review of new information. The surveillance audit was conducted according to MSC CR v1.3. The default assessment tree as set out in the MSC CR v1.2 was used for this surveillance.

The surveillance was announced on the MSC website 24 March 2015 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 document review activities for the fishery were carried out by members of the original assessment team, DNV GL team leader and CoC expert Anna Kiseleva and Independent MSC Fisheries expert John Nichols during week 19 (4-5 May), 2015.

The assessment team gathered input from the various stakeholders, including the Federal Agency for Fisheries of the Russian Federation Barentsevo-Belomorskoe Territorial Department, Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO) and the client fishery. Details on information submitted by stakeholders in the assessment process can be found in Appendix 1.

3.2.3 Second annual surveillance – 2016

The second surveillance audit was performed as an off-site audit with a review of new information.

The surveillance 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) were followed in this audit. The default assessment tree as set out in the MSC CR v1.3 was used for this surveillance. The surveillance was announced on the MSC website on 7th June 2016 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 document review activities for the fishery were carried out by members of the original assessment team, DNV GL team leader and CoC expert Anna Kiseleva and Independent MSC Fisheries expert John Nichols during 8 -15 July 2016.

3.2.4 Third annual surveillance – 2017

The third surveillance audit was performed as an off-site audit with a review of new information.

The surveillance 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) were followed in this audit. The default assessment tree as set out in the MSC CR v1.3 was used for this surveillance. The surveillance was announced on the MSC website on 14th June 2017 followed by a supporting notice to stakeholders issued by 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 document review activities for the fishery were carried out by member of the original assessment team Independent MSC Fisheries expert John Nichols and DNV GL team leader and CoC expert Sandhya Chaudhury during 17 -21 July 2017.

3.3 Harmonisation

There are several fisheries targeting Barents Sea cod and haddock that are already MSC Fisheries certified or undergoing the assessment process.

Table 4 below presents a list of fisheries exploiting NEA cod and NEA haddock in the MSC programme. This fishery has been harmonised earlier with all the fisheries in the table except for the Arkhangelsk Trawl fleet Norwegian and Barents Seas cod & haddock fishery.
There is no material difference in scores in regards to P1 and P3 assessment of cod and haddock.

There are several materially different scores with regard to P2 evaluation of different fisheries. Principle 2 effects will differ between UoAs based on the areas fished, variations in timing and use of gear etc.

The Russian Federation Barents Sea cod and haddock fishery is therefore consistent in outcome with the other most recent assessment. The factors mentioned during the March 2016 harmonisation discussion would appear to account for most differences. Results of this harmonisation discussion were presented in the Surveillance 2 report last year.

Table 3

Fishery	Assessment status	FAO area	ICES area	Catch method	Decision on harmonisation
AGARBA Spain Barents Sea cod	Certified 2013	27	I & II	Bottom trawling	Applicable
Barents Sea cod and Barents Sea haddock (Ocean Trawlers)	Certified 2010	27	I & II	Demersal trawl	Applicable
Comapêche and Euronor cod and haddock	Certified 2012	27	I & II	Demersal otter trawl	Applicable
Faroe Islands and Iceland North East Arctic cod, haddock and saithe	Certified 2012 with some components in assessment	27	I & II	Demersal trawl	Applicable
Greenland cod, haddock and saithe trawl	Certified 2015	27	I & II	Demersal trawl	Applicable
Norway North East Arctic cod	Certified 2010 (offshore component) and 2011 (Inshore component)	27	I & II	Trawl, longline, gillnet, Danish	Offshore component applicable
Norway North East Arctic haddock	Certified 2010	27	I & II	Trawl, longline, gillnet, Danish seine and hook and line gears	Applicable
UK Fisheries/DFFU/Doggerbank Northeast Arctic cod, haddock and saithe	Certified 2012	27	I & II	Demersal otter trawl	Applicable
FIUN Barents & Norwegian Seas cod and haddock	Certified 2013	27	Ia, Ib, IIa and IIb	Demersal trawl and longline	Applicable

Arkhangelsk Trawl fleet Norwegian and Barents Seas cod & haddock	Certified 2016 with components in assessment	27	Ia, Ib, IIa and IIb	Demersal trawl	Applicable

4 RESULTS

Table 4 Recommendation 1

Performance Indicator(s) & Score(s)	Insert relevant PI number(s)	Insert relevant scoring issue / scoring guidepost text	Score
	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.	**SG80 Sia: NA / general recommendation** **Rational: Bottom trawl gear has the potential to cause habitat damage. Though the available information suggests that this is 'highly unlikely' in this fishery, due mainly to the way in which the fishery operates, management and mitigation efforts should be tailored accordingly.**	**80**
Recommendation	There are a number of potential approaches to further reduce the likelihood of serious or irreversible harm to habitats, and the clients are encouraged to actively pursue: • the possibility to switch to lighter / less impacting fishing gears, such as semi-pelagic gears for targeting demersal species or other models of trawls/parts of gear which can reduce the impact on benthos. • collect information on fishing patterns relative to habitat areas to help explore potential for further strategic closed areas – or fishing areas where lighter gears are possible. • continue using the navigation systems in order to completely avoid areas with sponges and corals.		
Progress on recommendation Year 1 - 2015	**Progress: on target.** The client has reported that they attempted to implement a new fishing gear in order to protect benthos, more specifically, they tried to use pelagic boards with the bottom trawl. The results showed that even though the pelagic doors are less traumatic for the sea bottom, they give such a small catchability rate compared to the usual bottom trawl gear, it represented an unacceptable economic impact on their fishing operations. Client is however committed to evaluate other possibilities in order to further reduce the likelihood of serious or irreversible harm to habitats.		
Progress on recommendation Year 2- 2016	**Progress: On target.** In order to reduce impacts on the habitats the client took several steps: Step 1: The client fishery together with the Barents Sea cod, haddock and saithe (Ocean Trawlers) fishery and FIUN Barents & Norwegian Seas cod and haddock fishery entered into an agreement to reduce the impact on the habitats by adopting the following measures: • Develop and implement the common registration system for benthos by-catch • Provide training to the crew on how to use this registration system • Use annually updated VME maps during fishing operations in order to avoid VMEs • Agree on how fishing should be conducted within VME areas which are not currently regulated by national legislation of Norway and Russia and establish thresholds for benthos by-catch in these areas Step 2:		

	The client fishery together with other MSC certified fisheries in Russia has contracted PINRO to develop a model of a bottom trawl gear which will minimise impact on the sea bottom. The delivery date is set to 20.12.2017. Step 3: The Russian fishing industry, including the client, have agreed that from the 2016 season the catching sector will not expand their Cod fishing activities with trawl gear into the new areas where regular fishing has not taken place before. This is a precautionary measure which will be voluntarily enforced by the client fleet until the knowledge about the new areas is improved and regulations on fishing activities in these areas are implemented by the authorities.
Progress on recommendation Year 3 - 2017	The North east Arctic ecosystem, in particular the habitat types, is probably one of the most comprehensively mapped and understood in the world. The fisheries in this area are also among the best regulated in the world. This has been achieved by international cooperation over many years but, in particular, through the joint Russian / Norwegian initiatives of the JRNFC. The Norwegian MAREANO project has provided comprehensive data on the distribution of habitat types and the identification of Vulnerable Marine Ecosystems (VMEs) As a consequence the potentially harmful impact of extensive bottom trawling is now well managed and improving all the time. For this surveillance audit the client has provided a comprehensive dossier on all the related activities over the past eighteen months. There has been a number of Workshops to review current information on habitat types and trawling impact. These workshops have been sponsored by both Russian and Norwegian Industry and the JRNFC with scientists and industry representatives attending. The driving force for these Workshops has been the MSC certification process with many certified fisheries impacting on the North East Arctic ecosystem. A Workshop in Oslo in April 2016, attended by MSC representatives, was targeted at industry and scientists looking forward beyond the ecosystem requirements for Principle 2 in CR version 1.3 to the more rigorous requirements of CR version 2.0. The Workshop also addressed the implications of Climate change and the potential extension of fishery activity northwards as the ice cap recedes. In that context the client has provided a document (see Appendix 1: Industry Group Agreement to Cod fishery in the northern part of North-East Atlantic, (FAO area 27, ICES division IIb2 and Ib*)) which commits the industry that from the 2016 fishing season the catching sector will not expand their cod fishing activities with trawl gear into those areas where regular fishing has not taken place before. The client has provided information on action to further investigate the impact of bottom trawl gear and reduce any detrimental effects. In particular there is a paper by Soklov, K. from the Polar marine research Institute of marine fisheries and oceanography (PINRO), Murmansk, Russia. Titled - Bottom Trawlings and Benthic Community in the Barents Sea. This was presented as part of the Oslo Workshop mentioned above and provides considerable detail on the distribution of trawling in relation to habitat types and closed areas within the Russian EEZ. The client has also provided evidence of action in relation to improving the performance of bottom trawls in relation to their potential for detrimental habitat effects. Again, this evidence comes for the Workshop in Oslo in April 2016 in the form of a slide presentation on the 'Actual Direction of improvement of Bottom Trawl Construction (see Appendix 1). We conclude that the client has provided ample evidence of relevant activity over the past twelve months to address the ongoing requirement s of the Recommendation. It is now obvious to the team that these issues are of concern to the

	industry, both in Russia and in Norway and that together they are addressing them. Undoubtedly the requirements of their MSC certifications has highlighted the need and in that context it is gratifying to note that they are already addressing and pre-empting the more rigorous requirements within Principle 2 of CR Version 2.0.
Status of recommendation	**On target**

Table 5 Recommendation 2

Performance Indicator(s) & Score(s)	**Insert relevant PI number(s)**	**Insert relevant scoring issue / scoring guidepost text**	**Score**
	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	SG80 Sia: NA/general recommendation Rational: The consultation process provides opportunity for all interested and affected parties to be involved; cf. information on the public chambers at different levels in a) and b) of this SG. Meetings are publicly announced and all interested parties can attend, including NGOs and the media. However, this stops short of management authorities encouraging and actively facilitating their effective engagement.	**90**
Recommendation	The client shall facilitate the communication between NGOs and organisations involved in the fishery management system.		
Progress on recommendation Year 1 and Year 2-2015-2016	**Progress: on target.** The client actions in regards to this recommendation included following: - they took part in several MSC seminars; - They signed an agreement with WWF on cooperation and mutual sharing of information; - They consulted WWF on processing technology for by-catch and fish offal; - In cooperation with PINRO research institute, they developed processing instructions for vessels on the size of catches and trawling time to preserve the best quality of raw fish; - They are currently working on a project to set up several MSC training workshops for their vessel's officers in cooperation with the Murmansk Technical State University		
Progress on recommendation Year 3-2017	**Progress: on target.** The client's commitment to facilitating communication between organisations involved in the fishery is substantiated by the number of workshops attended in the period since the last audit. MSC workshop in Oslo 05.04.2016 MSC seminar in Murmansk 08.12.16 MSC seminar in Moscow 24.03.17 MSC seminar in Murmansk 22.06.17 3 first mates from client vessels attended a MSC seminar in Murmansk on 08.12.16. In November 2016 the client participated with the industry in an agreement that commits the industry to not expand their cod fishing activities with trawl gear into those areas where regular fishing has not taken place to be effective from the 2016 fishing season.		
Status of recommendation	**On target**		

Table 6 Recommendation 3

Performance Indicator(s) & Score(s)	Insert relevant PI number(s)	Insert relevant scoring issue / scoring guidepost text	Score
	PI 2.2.3 Information on the nature and the amount of by-catch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage by-catch. **PI 2.3.3 Relevant information is collected to support the management of fishery impacts on ETP species including: Information for the development of the management strategy; Information to assess the effectiveness of the management strategy; and Information to determine the outcome status of ETP species.** **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.**	SG80 Sia: NA/general recommendation Rational: The vessels currently in the UoC have previously completed MSC logbooks under another Certificate, in which information on catches of ETP species, discarded by catch and other indicators of interactions with benthos and habitat is recorded that is not found in skippers' logbooks or landings declarations. This information is important when environmental and ecosystem impacts are being evaluated.	**2.2.3: 90** **2.3.3: 80** **2.4.3: 90**
Recommendation	The client shall continue to use or implement the use of MSC logbooks, specifically to collect information on ETP species, discards and habitat interactions.		
Progress on recommendation Year 1	**Progress: On target.** The client continues to use MSC logbooks and to collect information on ETP species, discards and habitat interactions. Relevant data collection is reported in Section 3.2 of this report		
Progress on recommendation Year 2	**Progress: On target.** The client continues to use MSC logbooks and to collect information on ETP species, discards and habitat interactions. Relevant data collection is reported in Section 3.2 of this report. The client fishery together with the Barents Sea cod, haddock and saithe (Ocean Trawlers) fishery and FIUN Barents & Norwegian Seas cod and haddock fishery entered into an agreement to reduce the impact on the		

	habitats by adopting the following measures: • Develop and implement the common registration system for benthos by-catch • Provide training to the crew on how to use this registration system • Use annually updated VME maps during fishing operations • Agree on how fishing should be conducted within VME areas which are not currently regulated by national legislation of Norway and Russia and establish thresholds for benthos by-catch in these areas
Progress on recommendation Year 3	The client continues to use MSC logbooks and to collect information on ETP species, discards and habitat interactions. Discarding of all key species is banned in Russian and Norwegian waters. The discard bans are rigorously enforced and this together with the management measures ensures that there is no discarding of fish in this fishery. The audit team have reviewed the evidence and consider that this situation remains the same for this surveillance report. The client has provided data on all by catch species discarded (returned alive to sea) for the three vessels in the UoC. The information provided covers the whole period 1 January 2016 to 30 June 2017. These data are reported in section 2.3.2 of this report which lists the quantities of all species taken by each of the three vessels. For ETP species the client has reported that there are no records of any species caught and discarded or returned alive to the sea. This information covers the three vessels for the period 1 January 2016 to 30 June 2017 and is reported in section 2.3.3 of this report. The client also reports that the situation regarding the by-catch of seabirds has not changed since the 2014 main assessment report. The last surveillance report described the agreement involving the client fishery and other companies to reduce the impact on the habitats by adopting a series of measures. These measures have remained in place. There are no significant changes to report in relation to habitat or ecosystem features or to fishery impacts on them since the original 2014 assessment report.
Status of recommendation	**On target.**

5 CONCLUSION

5.1 Barents Sea cod

The Principle scores for this fishery have not changed since the second surveillance and the certification.

The fishery continues to be within the scope of the MSC fisheries standard (MSC FCR v2.0 § 7.4) according to the following determinations (MSC FCR v2.0 § 7.4):

- 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 forced labour violations in the last 2 years;
- The fishery has mechanisms for resolving disputes, and disputes do not overwhelm the fishery;
- The fishery is not enhanced or based on an introduced species.

Table 7 Conclusion

Fishery	Status of certification	Comment
Russian Federation Barents Sea cod fisheries	Certified.	The assessment team concludes that the MSC Certificate for this fishery shall remain active, subject to the agreed annual surveillance schedule.

5.2 Barents Sea haddock

The Principle scores for this fishery have not changed since the first surveillance and the certification.

The fishery continues to be within the scope of the MSC fisheries standard (MSC FCR v2.0 § 7.4) according to the following determinations (MSC FCR v2.0 § 7.4):

- 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 forced labour violations in the last 2 years;
- The fishery has mechanisms for resolving disputes and disputes do not overwhelm the fishery;
- The fishery is not enhanced or based on an introduced species.

Table 8

Fishery	Status of certification	Comment
Russian Federation Barents Sea haddock fisheries	Certified.	The assessment team concludes that the MSC Certificate for this fishery shall remain active, subject to the agreed annual surveillance schedule.

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APPENDICES

Appendix 1. Stakeholder submissions

DNV·GL

SURVEILLANCE AUDIT N3 OF RUSSIAN FEDERATION BARENTS SEA COD AND HADDOCK FISHERY 2017

Information request form – JSC Strelets and JSC Eridan

Standard: Marine Stewardship Council sustainable fisheries
Certification body: DNV GL Business Assurance Norway AS

The primary focus of the surveillance audit is to review changes occurred since the previous year:

1. To establish and report on any material changes to the circumstances and practices affecting the original complying assessment of the fishery;
2. To monitor the progress made to comply with any Conditions raised and described in the Public Certification Report and in the corresponding Action Plan drawn up by the client;
3. To monitor any actions taken in response to any Recommendations made in the Public Report;
4. To re-score any Performance Indicators (PI) where practice or circumstances have materially changed during the intervening year, focusing on those PIs that form the basis of Conditions raised.

Table 1 Scope - Units of Certification (UoC)

Fishery	**Russian Federation Barents Sea Cod**
Species Common name(s):	Cod, Barents Sea cod, Atlantic cod
Species Latin Name:	Gadus morhua
Stock	Barents Sea cod
Geographical area	ICES Sub-areas I and II. FAO 27. Primarily Norwegian EEZ and Svalbard FPZ
Method of capture	Bottom trawl

Management	Federal Agency of Fisheries (Russian Federation), Norwegian Ministry of Fisheries and Coastal Affairs (Norwegian EEZ and Svalbard FPZ) Joint Russian- Norwegian Fisheries Commission, NEAFC, PINRO, IMR and ICES.
Client group	The clients responsible for coordination of full-assessment for this fishery are JSK Strelets and JSK Eridan. The client group is represented by the following ship owners: · JSK Strelets with vessel Strelets (M-0269); · JSK Eridan with vessel Korund (M-0254). · JSK Taurus with new-build vessel Taurus (MK-0411)
Other eligible fishers	As defined under section 3.1.7 of Public Certification Report

Fishery	**Russian Federation Barents Sea haddock**
Species Common name(s):	Haddock, Barents Sea haddock, Atlantic haddock
Species Latin Name:	Melangrammus aeglefinus
Stock	Barents Sea haddock
Geographical area	ICES Sub-areas I and II. FAO 27. Primarily Norwegian EEZ and Svalbard FPZ
Method of capture	Bottom trawl
Management	Federal Agency of Fisheries (Russian Federation), Norwegian Ministry of Fisheries and Coastal Affairs (Norwegian EEZ and Svalbard FPZ) Joint Russian- Norwegian Fisheries Commission, NEAFC, PINRO, IMR and ICES.
Client group	The clients responsible for coordination of full-assessment for this fishery are JSK Strelets and JSK Eridan. The client group is represented by the following ship owners: · JSK Strelets with vessel Strelets (M-0269); · JSK Eridan with vessel Korund (M-0254). · JSK Taurus with new-build vessel Taurus (MK-0411)
Other eligible fishers	As defined under section 3.1.7 of Public Certification Report

Table 2 Information requested

MSC Principle	Issue	Question (focus on changes since previous audit)	Yes / No / NA / quantity	Comment (if applicable) or link to information source
General	Changes in client group	Are there any changes in function, role, organisational structure and responsibility of the client group?	No	
	Fishery within MSC scope	Is the fishery conducted under a controversial unilateral exemption to an international agreement?	No	
		Are destructive fishing practices such as fishing with poisons or explosives used within the fishery?	No	
	Fishing operations	Provide updated vessel list (list here or add file)	M-0254 "Korund", M-0269 "Strelets", MK-0411 "Taurus"	
Principle 1: Status of the stock	TAC and catches for 2016-2017	Complete table 3 and 4 below.		
	Fishing operations	Are there any changes in fishing season, fishing areas and gear used?	No	
	Fishing operations	Provide data on current size of the Russian Federation fleet of Barents Sea bottom trawlers.		See addition 1
	Fishing operations	Are there any changes in recording of catch and effort data? (e.g. electronic log-books or paper log-books)	No	
	Harvest strategy	Any changes to the relevant legislation, regulations or objectives for the fishery ?	No	

MSC Principle	Issue	Question (focus on changes since previous audit)	Yes / No / NA / quantity	Comment (if applicable) or link to information source
Principle 2: Impact on ecosystem	Non-target species - recording	Are there any changes in recording requirements of non-target species (retained, bycatch, ETP species) including fish, shellfish, birds, marine mammals, elasmobranches, other? (e.g. electronic log-books or paper log-books).	No	
		Have statutory requirements to record interactions (fatal or otherwise) with seabirds or marine mammals been implemented?	Yes	
	Retained species	List all retained species: (species and quantities 2016-2017). Complete table 5 below		
	ETP species	List catch of marine mammals, ETP species, birds: (species and quantities). Complete table 6 below. Provide information on by-catch of Blue skate (Dipturus batis).		

MSC Principle	Issue	Question (focus on changes since previous audit)	Yes / No / NA / quantity	Comment (if applicable) or link to information source
	By-catch species	Are there any changes in discarding practices?	No	
	By-catch species	List commercial/non-commercial species that are generally discarded. If quantities are known, complete table 7 below.		
	Non-target species	Are there any new measures in place to minimize the catch of small fish and non-commercial species by commercial fishing vessels?	No	
	Non-target species	Do you have any concerns/data on level of non-target species in the fishery?	No	
	Habitats / vulnerable marine ecosystems	Are there any changes in the overlap of the fishery with sensitive habitats and closed and/or protected areas? If yes, specify and provide maps of habitats that the vessels avoid	No	
	Habitats / vulnerable marine ecosystems	Provide VMS maps for the last and current fishing season (2016-2017).	Yes	See addition 2
	Habitats / vulnerable marine ecosystems	Specify if there've been any incidents of loss of fishing gear, and if relevant, its recovery	No	
	Ecosystem	Are there any changes in the fishery's impact on ecosystem? Provide MSC log-books for the recent fishing years (2016-2017).	No	See addition 3

MSC Principle	Issue	Question (focus on changes since previous audit)	Yes / No / NA / quantity	Comment (if applicable) or link to information source
Principle 3: Management system	Governance and policy	Any changes to the Management regime at local or national level?	No	
	Fishery-specific management system	Details of any internal audits of the management system in 2016-2017.	No	
	Fishery-specific management system	Specify if the fishery has been a subject to sanctions and penalties (or cautions/warnings) in the most recent fishing years (2016-2017). If yes, provide records	No	
	Monitoring, control and surveillance	Specify if there've been any changes to control, surveillance and monitoring procedures/regulations applied to cod and haddock fisheries in ICES Divisions I and II (international waters of NEAFC, Norwegian EFZ, Russian EFZ, Svalbard FPZ)	No	
	Compliance and enforcement	Specify if the client group has been involved in any disputes with national and/or international authorities during the last year? If yes, provide records	No	
Traceability	Tracking and tracing	Are there any changes to the systems of tracking and tracing within the fishery?	No	
	Tracking and tracing	Have there been any changes in labelling of products or labelling routines?	No	

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MSC Principle	Issue	Question (focus on changes since previous audit)	Yes / No / NA / quantity	Comment (if applicable) or link to information source
	Fishing outside the UoC	Specify if any of the client group's vessels have been fishing for cod and haddock outside the Unit of Certification on a same fishing trip?	No	
	Risk of substitution	Specify if there've been any incidents of substitution of certified cod and haddock products with non-certified prior to or at landing or any fraudulent claims from within and outside the certified fishery?	No	
	At sea processing	Are there any changes related to at-sea processing activities?	No	
	Transhipment	Is there any transhipment activities?	Yes	2nd half of the year: Jan-June usually to Norwegian ports. July-Dec: Russian territory-transhipment.
	Landing of fish / fish products from UoC	Are there any changes in landing places for fish / fish products from the fishery?	No	
	First point of sale	Have there been any changes to the first point of sale? Provide example of sales note	No	
	Markets	Are there any changes in main markets for fish and fish products from the fishery?	No	
	Use of MSC logo	Do you use MSC logo on any of the products originating from this certified fishery?	No	

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MSC Principle	Issue	Question (focus on changes since previous audit)	Yes / No / NA / quantity	Comment (if applicable) or link to information source
Other	Other issues	Is there any other information relevant for this fishery which should be considered by the assessment team?	No	
Progress against conditions and recommendations	Recommendation	Fill inn tables 8-10 below and provide documentation confirming progress against recommendations		

Table 3 Catch data (Species/ Gear) – NEA Cod

Fishing Year	TAC (or Fishing days)	UoC share of the total TAC (or Fishing Days)	Client share of the total TAC (or fishing days)	Total green weight catch taken by the client group
2016	574206	394120	40397,890	38788,962
2017	325938	231293	38808,650	23825,338 (23 tonnes)

Table 4 Catch data (Species/ Gear) – NEA Haddock

Fishing Year	TAC (or Fishing days)	UoC share of the total TAC (or Fishing Days)	Client share of the total TAC (or fishing days)	Total green weight catch taken by the client group
2016	574206	115668	10614,350	9762,078
2017	325938	58395	9191,200	6472,994

Table 5 Retained species (2016). Provide data per year

Retained species (Common names)	Retained species (Latin names)	Strelets (M-0269) t	%	Korund (M-0254) t	%	Taurus (MK-0411) t	%	Total t
Cod	*Gadus morhua*	12623,95	72,1	10400,12	82,4	13730,18	75,6	36754,54
Haddock	*Melangrammus aeglefinus*	3918,66	22,4	1763,16	14,0	3396,30	18,7	9078,12
Saithe	*Pollachius virens*	434,84	2,5	238,19	1,9	240,34	1,3	913,37
Greenland Halibut	*Reinhardtius hippoglossoides*	116,11	0,66	21,02	0,17	49,11	0,27	186,24
Redfish	*Sebastes spp*	167,66	0,96	62,49	0,50	531,95	2,93	762,10
Spotted catfish	*Anarhichas minor*	62,33	0,36	36,88	0,29	62,32	0,34	161,53
Northern Wolffish	*Anarhichas denticulatus*	112,55	0,64	52,56	0,42	93,39	0,51	258,50
Atlantic catfish	*Anarhichas lupus*	21,52	0,12	4,14	0,03	8,99	0,05	34,65
Common dab	*Limanda limanda*	0		0		0		0
Ling	*Molva molva*	6,05	0,03	4,40	0,03	1,69	0,01	12,14
European place	*Pleuronectes platessa*	55,99	0,32	35,40	0,28	45,62	0,25	137,61
Sole	Hippoglossoides platessoides	0		0		0		0
Tusk	*Brosme brosme*	0	0	2,68	0,02	2,94	0,02	5,62
Argentine	Argentina silus	0	0	0	0	1,97	0,01	1,97
Total		17519,66	100	12621,33	100	18164,80	100	48305,80

Table 5a Retained species (01.01.2017-30.06.2017). Provide data per year

Retained species (Common names)	Retained species (Latin names)	Strelets (M-0269)		Korund (M-0254)		Taurus (MK-0411)		Total
		t	%	t	%	t	%	t
Cod	*Gadus morhua*	6902,83	72,2	6437,15	71,95	7165,02	73,50	20504,99
Haddock	*Melangrammus aeglefinus*	1950,02	20,40	1891,40	21,14	2104,30	21,39	5945,72
Saithe	*Pollachius virens*	369,10	3,9	227,47	2,54	186,17	1,91	782,74
Greenland Halibut	*Reinhardtius hippoglossoides*	50,38	0,53	49,55	0,55	37,61	0,39	137,54
Redfish	*Sebastes spp*	144,7	1,51	247,24	2,76	116,18	1,19	508,12
Spotted catfish	*Anarhichas minor*	38,35	0,40	16,05	0,18	41,67	0,43	96,53
Northern Wolffish	*Anarhichas denticulatus*	47,79	0,50	37,82	0,42	28,39	0,29	93,36
Atlantic catfish	*Anarhichas lupus*	38,01	0,40	26,95	0,30	58,6	0,60	144,21
Common dab	*Limanda limanda*	0	0	0	0	0	0	0
Ling	*Molva molva*	6,19	0,06	4,44	0,05	0	0	10,63
European place	*Pleuronectes platessa*	7,17	0,08	4,95	0,06	9,98	0,10	22,09
Sole	Hippoglossoides platessoides	0	0	0	0	0	0	0
Tusk	*Brosme brosme*	0	0	2,7	0,03	0	0	2,7
Argentine	Argentina silus	0	0	0	0	0	0	0
Total		9554,54	100	8946,17	100	9747,91	100	28248,62

Table 6 ETP species

Discarded species (Common names)	Discarded species (Latin names)	Discarded or returned alive to the sea	Strelets (M-0269)		Korund (M-0245)		Taurus (MK-0411)		Total
			t	%	t	%	t	%	t
common or blue skate	Dipturus batis		0	0	0	0	0	0	0
angel shark	Squatina squatina		0	0	0	0	0	0	0
porbeagle	Lamna nasus		0	0	0	0	0	0	0
other species, if any									
Total			0	0	0	0	0	0	0

Table 7 Discarded species (2016, 01.01.17-30.06.17)

Discarded species (Common names)	Discarded species (Latin names)	Discarded or returned alive to the sea	Strelets (M-0269)		Korund (M-0245)		Taurus (MK-0411)		Total
			Pcs/kg	%	Pcs/kg	%	Pcs/kg	%	Pcs/kg
Common ling	*Molva molva*		Table 5, 5a		Table 5, 5a		Table 5, 5a		Table 5, 5a
Anglerfish	*Lophius piscatorius*		30	2	0	0	0	0	30
Skate	Not identified to species		870	44	459	62	360	11	1689

Atlantic halibut	*Hippoglossus hippoglossus*	21	1	0	0	0	0	21
Lumpfish	*Cyclopterus lumpus*	54	3	55	7	0	0	109
Grenadier	*Macrouridae spp*	0	0	0	0	0	0	0
Chimera	*Chimaera monstrosa*	0	0	24	3	0	0	24
Squid	Not identified to species	12	1	19	3	0	0	31
Molluscs	Not identified to species	6	0	0	0	0	0	6
Starfish	Not identified to species	304	15	176	24	1115	36	1595
Sponge	Not identified to species	555	28	4	1	1595	51	2154
Coral	Not identified to species	10	1	0	0	0	0	10
Greenland shark	Somniosus microcephalus	79	4	1	0	51	2	131
Arctic eelpout	Licodes reticulatus	10	1	0	0	0	0	10
Cucumaria	Cucumaria frondoza	14	1	3	0,4	14	0,4	31
Total		1965		741		3135		5841

Table 8 Recommendation 1

Performance Indicator 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.**
Score	80
Rationale	Bottom trawl gear has the potential to cause habitat damage. Though the available information suggests that this is 'highly unlikely' in this fishery, due mainly to the way in which the fishery operates, management and mitigation efforts should be tailored accordingly.
Recommendation	There are a number of potential approaches to further reduce the likelihood of serious or irreversible harm to habitats, and the clients are encouraged to actively pursue: » the possibility to switch to lighter / less impacting fishing gears, such as semi-pelagic gears for targeting demersal species or other models of trawls/parts of gear which can reduce the impact on benthos. » collect information on fishing patterns relative to habitat areas to help explore potential for further strategic closed areas – or fishing areas where lighter gears are possible. » continue using the navigation systems in order to completely avoid areas with sponges and corals.
Action taken by client	See addition 4

Working with PINRO and other fisheries companies making new trawler which has less impact on benthos- contract with PINRO and records, agreement with several companies in the Barents sea on saving coral places.

Table 9 Recommendation 2

Performance Indicator 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**
Score	90

Performance Indicator 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**
Rationale	The consultation process provides opportunity for all interested and affected parties to be involved; cf. information on the public chambers at different levels in a) and b) of this SG. Meetings are publicly announced and all interested parties can attend, including NGOs and the media. However, this stops short of management authorities encouraging and actively facilitating their effective engagement.
Recommendation	The clients shall facilitate the communication between NGOs and organisations involved in the fishery management system.
Action taken by client	See addition 4

Communicate with www – projects with them. Waiting for their representative next week to write contract- collect data for the vessels and submit to PINRO.

Table 10 Recommendation 3

Performance Indicators 2.2.3 2.3.3 2.4.3	**PI 2.2.3** Information on the nature and the amount of by-catch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage by-catch. **PI 2.3.3** Relevant information is collected to support the management of fishery impacts on ETP species including: Information for the development of the management strategy; Information to assess the effectiveness of the management strategy; and Information to determine the outcome status of ETP species. **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.
Score	2.2.3: 90 2.3.3: 80 2.4.3: 90

Performance Indicators 2.2.3 2.3.3 2.4.3	**PI 2.2.3** Information on the nature and the amount of by-catch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage by-catch. **PI 2.3.3** Relevant information is collected to support the management of fishery impacts on ETP species including: Information for the development of the management strategy; Information to assess the effectiveness of the management strategy; and Information to determine the outcome status of ETP species. **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.
Rationale	The vessels currently in the UoC have previously completed MSC logbooks under another certificate, in which information on catches of ETP species, discarded by catch and other indicators of interactions with benthos and habitat is recorded that is not found in skippers' logbooks or landings declarations. This information is important when environmental and ecosystem impacts are being evaluated.
Recommendation	The clients shall continue to use MSC logbooks, specifically to collect information on ETP species, discards and habitat interactions.
Action taken by client	See addition 4

Change MSC logbooks in technical way- digital collecting data automatically.

FEDERAL AGENCY FOR FISHERIES

FEDERAL STATE BUDGETARY SCIENTIFIC INSTITUTION

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(FSBSI «PINRO»)

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E-mail: persey@pinro.ru
http://www.pinro.ru

03.07.2017 ***No.*** **30-22/57**

to *No.* _____ of _____

DNV GL Business Assurance
Norway AS
Att. Sandhya Chaudhury

3 July 2017, Murmansk, Russia

Ref.: Surveillance audit N3 of Russian Federation Barents Sea cod and haddock fisheries for clients JSC Strelets and JSC Eridan

Dear Mrs. Chaudhury,

PINRO refers to the information made available to the DNV GL expert team conducted the MSC Fisheries assessment for the above-mentioned fisheries in May 2013 and to subsequent confirmations for audits N1 in 2015 and N2 in 2016, and confirms that this information is still valid and that PINRO does not have any new information of a material difference with regard to the previously provided data.

Updated information on the status of the stocks and the Barents Sea ecosystem is publicly available through ICES and JRNFC.

Sincerely yours,

Evgeny Shamray
Acting Director

ФЕДЕРАЛЬНОЕ АГЕНТСТВО
ПО РЫБОЛОВСТВУ
(РОСРЫБОЛОВСТВО)

БАРЕНЦЕВО-БЕЛОМОРСКОЕ
ТЕРРИТОРИАЛЬНОЕ УПРАВЛЕНИЕ
ФЕДЕРАЛЬНОГО АГЕНТСТВА
ПО РЫБОЛОВСТВУ
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FEDERAL AGENCY FOR FISHERIES
OF THE RUSSIAN FEDERATION
(ROSRYBOLOVSTVO)

BARENTSEVO-BELOMORSKOE
TERRITORIAL DEPARTMENT

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« 12 » 04 2017 г. № 03-30/2870

To: DNV GL Business Assurance Norway AS

Att: Mrs. Sandhya Chaudhury

Ref.: Surveillance audit N3 of Russian Federation Barents Sea cod and haddock fishery for clients JSC Strelets and JSC Eridan

Barentsevo-Belomorskoe Territorial Department of the Federal Agency for Fisheries (hereinafter Department) refers to the information base made available for the DNV GL expert team conducting MSC Fisheries assessment for above mentioned fisheries in May 2013 and subsequent confirmations for audits N1 in 2015 & N2 in 2016 and confirms that this information is still valid and that Department doesn't have any new information with a material difference to any previously provided data.

Department also confirms that it doesn't have any registrations of non-compliances with rules and regulations established for Barents Sea cod and haddock fisheries for the following companies:

- JSC Strelets with vessel Strelets (M-0269);
- JSC Eridan with vessel Korund (M-0254);
- JSC Taurus with vessel Taurus (MK-0411).

Best regards,

Acting Head of the Department Victor Moskalev

Industry Group Agreement to Cod fishery in the northern part of North-East Atlantic (FAO area 27, ICES division IIb2 and Ib*)

We acknowledge that climate change and the melting of the ice sheet in the above areas has caused concern related to fishing activities in the vast area around Svalbard.

We acknowledge Greenpeace's role in bringing attention to the region under these changing circumstances.

We understand that the marine area around Svalbard have been identified in several scientific programs as important.

We recognise that the fisheries in the northern Barents Sea and Norwegian Sea including the marine areas around Svalbard are amongst the best regulated fisheries in the world. Most of these fisheries are independently certified by the Marine Stewardship Council (MSC) as compliant with their standard for sustainable and well-managed fisheries. Additionally there are many protected areas already established around Svalbard to safeguard ecological biodiversity.

We have agreed that from the *2016 season* the catching sector will not expand their Cod fishing activities with trawl gear into those areas where regular fishing has not taken place before. This is a precautionary measure *until* through initiatives such as those mentioned below the fishing activity in future years will be determined by improved knowledge replacing the need for this precautionary approach.

We would like to state that the Industry Group has been successful in gaining agreement to have an action orientated High-Level Roundtable. The Roundtable will include the Norwegian Governmental Fisheries Management agencies and institutions and welcomes other interested public stakeholders to participate. The objectives of the High-Level Roundtable will be to establish a transparent process that will continue to enable Cod to be sourced from the area but also to meet the MSC independent sustainable fishery standard for activities beyond 2016.

We call for the governments to assist these efforts and ensure all measures are based on best available science, to properly assess and map the area for example but not exclusively the Mareano program.

In parallel with the High-Level Roundtable, the Cod catching industry ***will accelerate their work to meet the MSC condition regarding Vulnerable Marine Ecosystems (VME's)*** identified in the MSC re-certification process. Together with the scientists from the Norwegian Institute of Marine Research and other relevant institutions, we will use all available data:

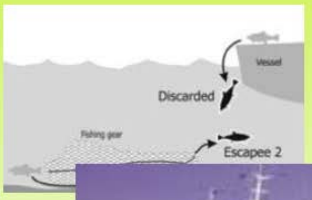
- To define areas that may be vulnerable to trawling.
- To develop effective and proportional measures that prevent environmental degradation in such areas.

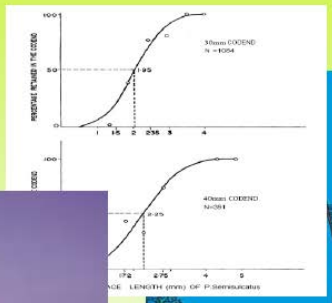
We are also committed to a voluntary agreement to avoid fishing in such areas on a precautionary basis, whilst the appropriate measures are under development. The voluntary agreement will be in place before the Cod fishing starts in the region in 2016.

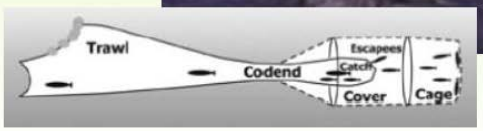
* the part of ICES Division 1b referred is West of the delimitation line as defined in the Treaty between Norway and Russia concerning maritime delimitation and cooperation in the Barents Sea and the Arctic Ocean 2010

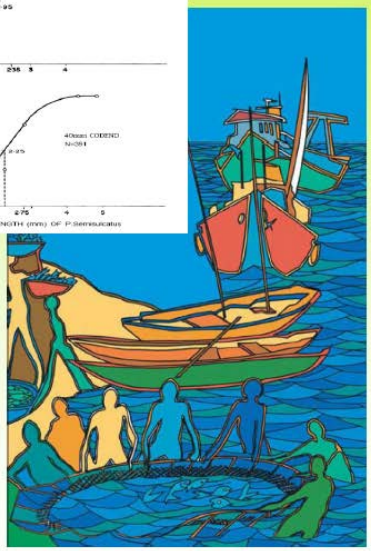
Updated 16.11.2016

Actual direction of improvement of bottom trawl constructions









05.04.2016 Fish capture division

Background of our activity is

CODE OF CONDUCT FOR RESPONSIBLE FISHERIES

The Code, which was unanimously adopted on 31 October 1995 by the FAO Conference, provides a necessary framework for national and international *efforts to ensure sustainable exploitation of aquatic living resources in harmony with the environment*.

(http://www.fao.org/docrep/005/v9878e/v9878e00.htm)

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Code of Conduct for Responsible Fisheries

……..
8.5 Fishing gear selectivity
8.6 Energy optimization
8.7 Protection of the aquatic environment
……..

Food and Agriculture Organization of the United Nations for a world without hunger

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8.6 Energy optimization of Bottom trawl fishing

Minimize of trawl drag force

- Minimize negative impact on the benthic habitat community
- Minimize fuel consumption per unit catch
- Minimize CO_2 pollution

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The trawl drag force of the trawl consist from two parts:

Hydrodynamic force + Force of friction

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The equations of these Forces

1 - Hydrodynamic force

Newton's equation

$$F_{hf} = C_x \frac{\rho v^2}{2} S_m$$

2- Force of friction, trawl-sea bottom

Law Amonton – Coulomb's equation

$$F_{ff} = \mu N$$

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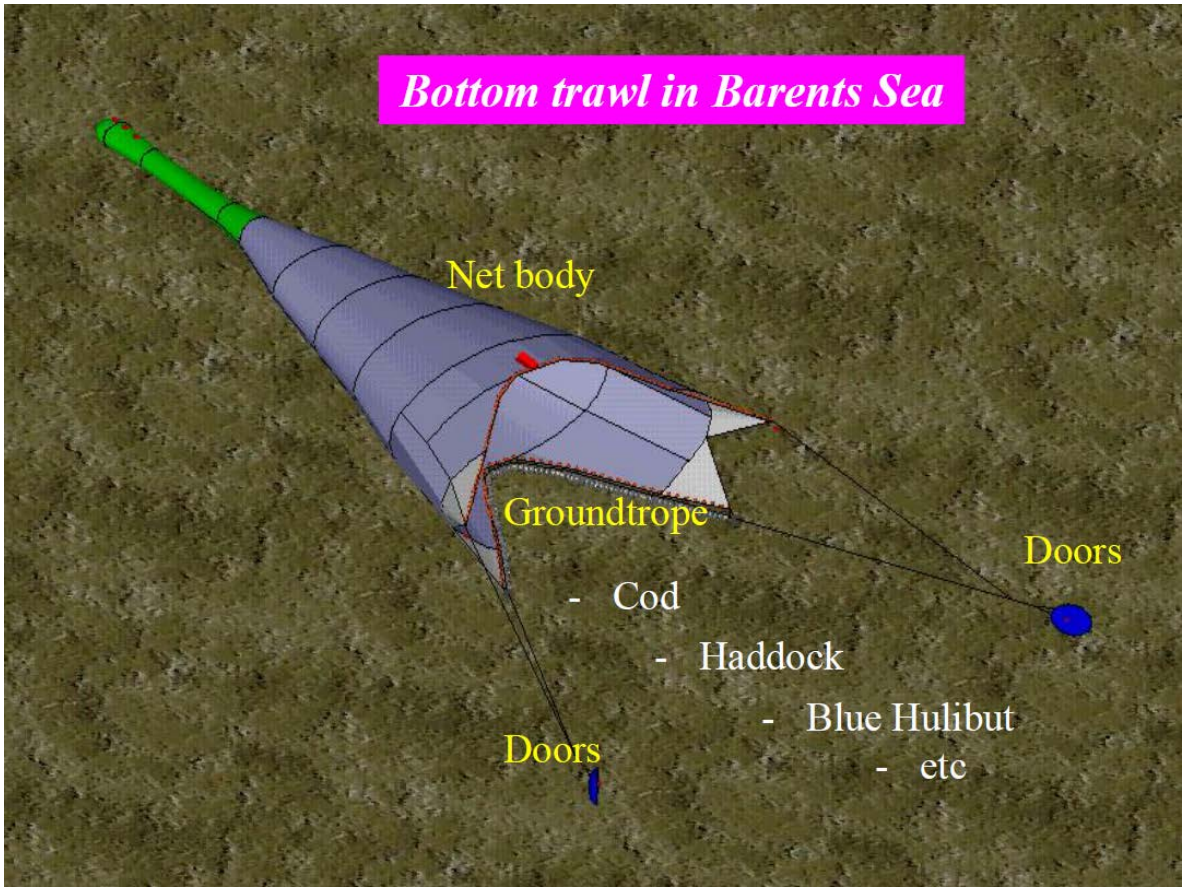
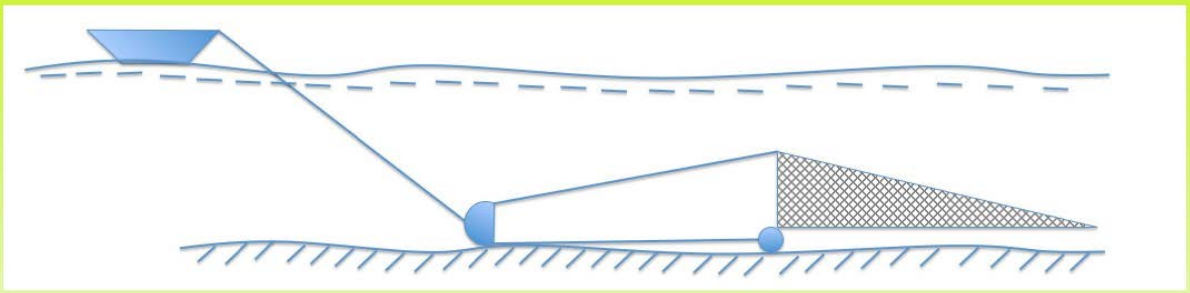


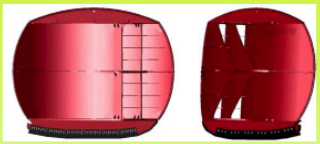


Principal Scheme of standard bottom trawling

05.04.2016 Fish capture division

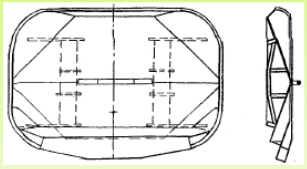
Trawl doors of bottom trawl

a



b

c



d

a – Injector Shark trawldoor; b – Injector Scorpion trawldoor; c – Tuboron type 7 trawldoor; d –Kudrin type

Main types of bottom trawls which used on fishing of demersal fishes in Barents Sea

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Bottom trawl doors in work on sea bottom

a)

b)

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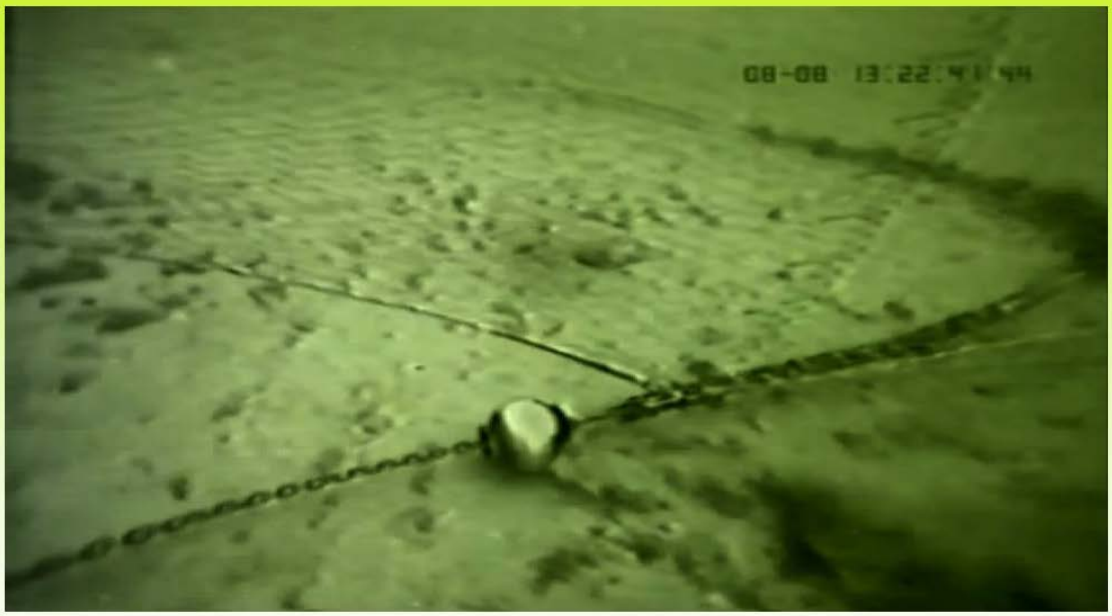
Groundtrope of bottom trawl is moving on the sea bottom



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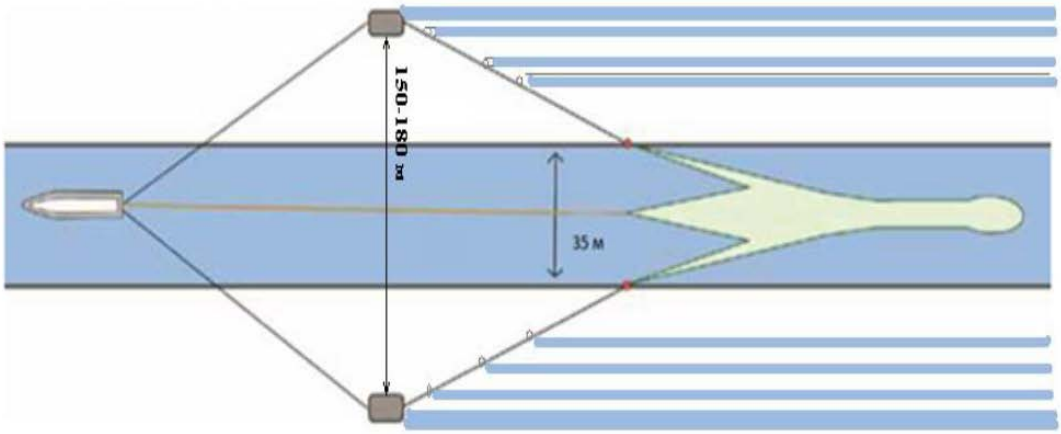
Fishing process of bottom trawl groundrope (rockhopper type)

05.04.2016 Fish capture division



Area of trawl contact on the sea bottom of standard bottom trawl
(is shown by blue line on the picture)

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Proposed solutions for decrease Drag force of the bottom trawl:

1. Lift trawl doors over bottom;

2. Reduce area contact trawl groundrope with bottom;

3. Reduce friction force of groundrope with replacement of sliding friction by rolling.

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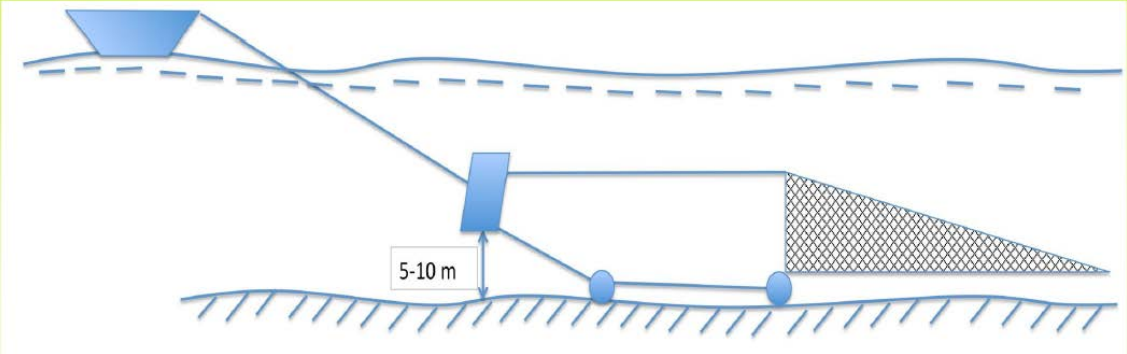
1. Lift trawl doors over bottom



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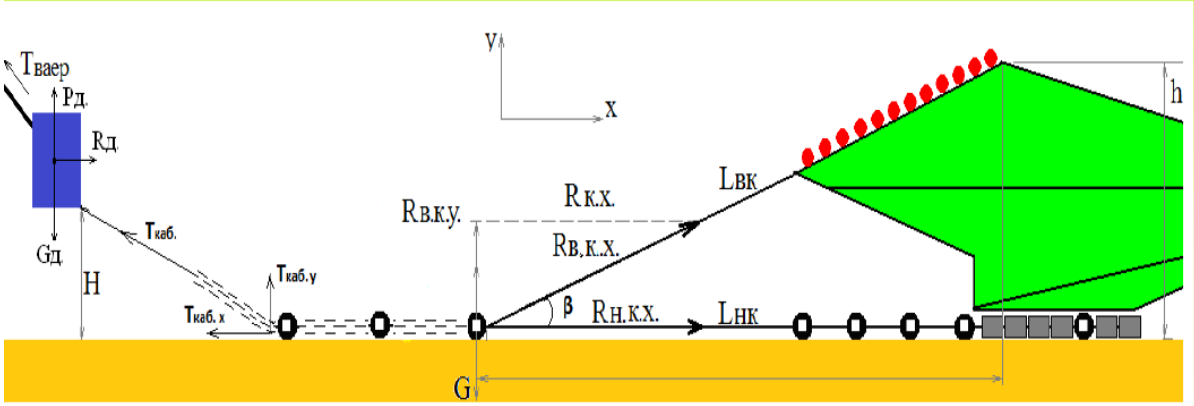
Calculation scheme of the load of trawl for ensure lifting doors above the ground. It was tested by test stand.



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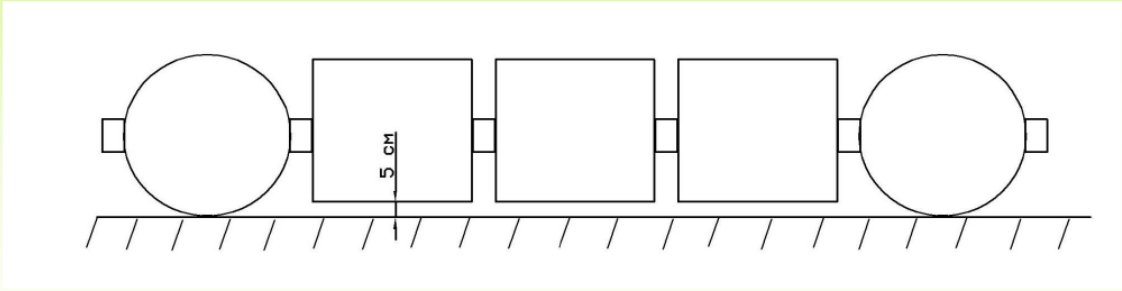
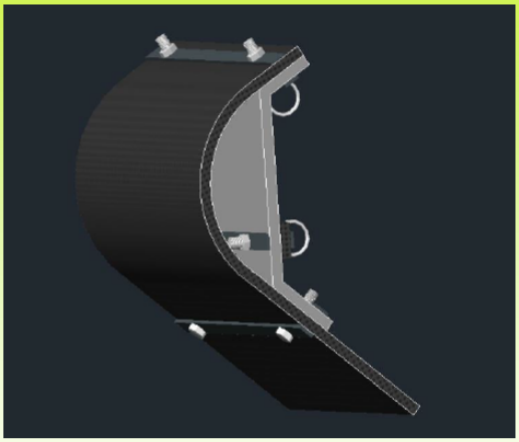
2. Reduce area contact trawl groundrope with bottom

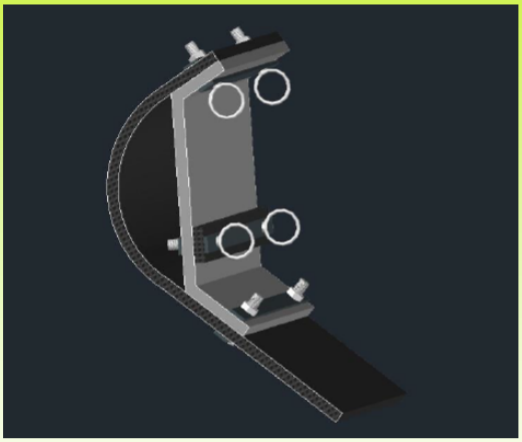
Change footrope construction, reduce its point of contact with the ground



05.04.2016 Fish capture division

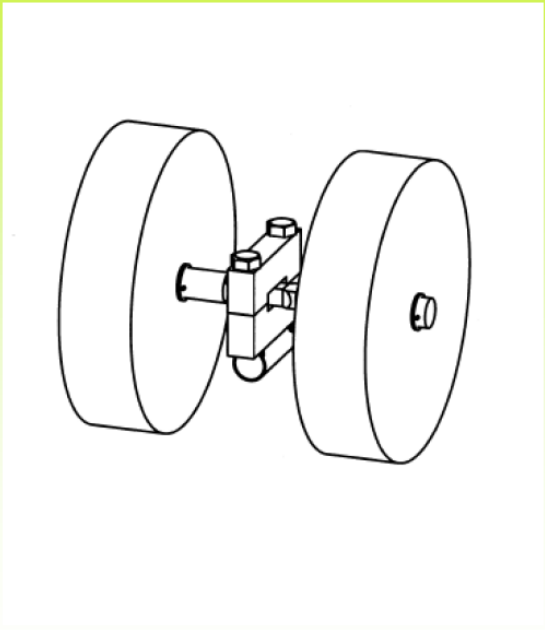
Modified footrope construction. Flexible plate.





05.04.2016 Fish capture division

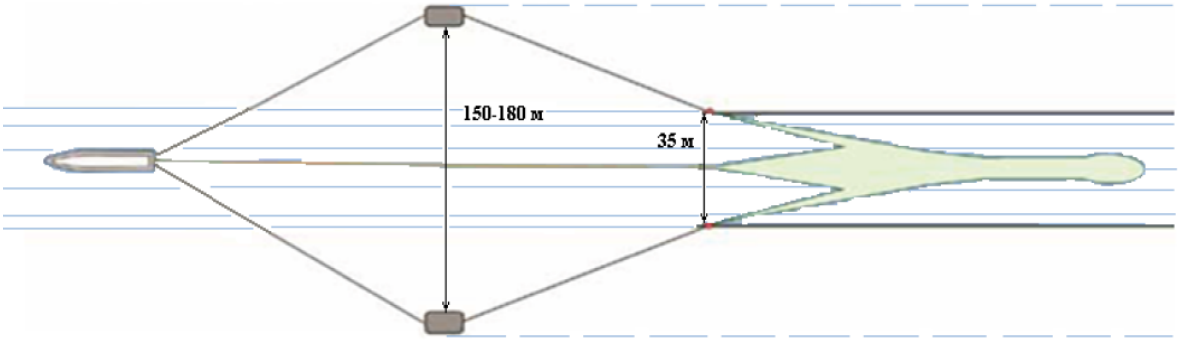
3. Reduce friction force of groundrope with replacement of sliding friction by rolling.



Twisted bobbinets footrope is an element that provides him rolling friction instead of sliding friction.

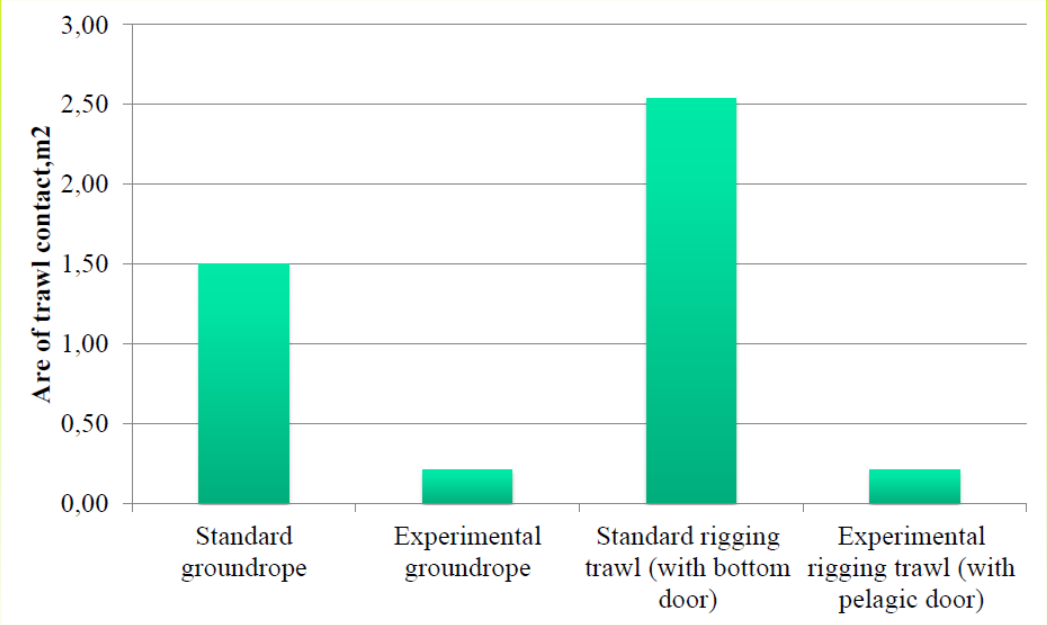
$$F_{\text{rolling friction}} < F_{\text{sliding friction}} = 250\text{-}300\%$$

05.04.2016 Fish capture division



Area of experimental trawl contact on the sea bottom of standard bottom trawl (is shown by blue line on the picture)

05.04.2016 Fish capture division



Area of standard and experimental trawl contact with bottom, м2

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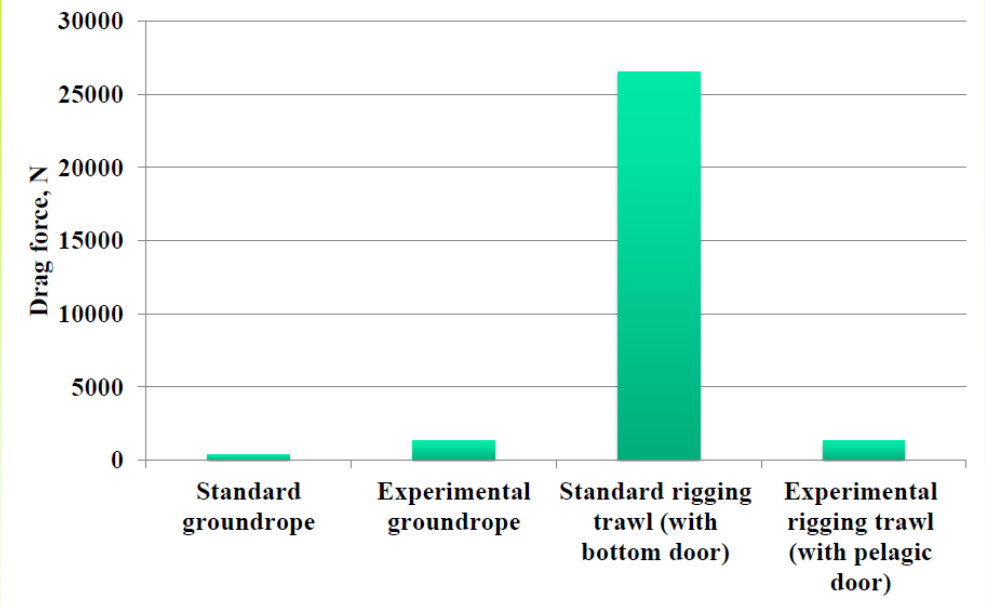

Drag force standard and experimental rigging of bottom trawl

05.04.2016 Fish capture division

Conclusion

It expected that the development and application of New experimental rigging for bottom trawl lets will make:

- ✓ **Reduce the area of the adverse impacts of bottom trawl to *92%*;**
- ✓ **Reduce the drag force of bottom trawl to *95%*;**
- ✓ **Reduce fuel consumption per unit catch by fishing fleet in *25-30%*;**
- ✓ **Reduce CO_2 pollution *25-30%*.**

05.04.2016 Fish capture division

Appendix 2. Surveillance audit information

First surveillance audit for this fishery was conducted in May 2015 and carried out as a review of new information.
The second surveillance audit for this fishery followed the assessment process defined in MSC FCR v2.0 and new requirements to surveillance audits applied.
Since the fishery has no conditions attached to the certification and the assessment team is able to carry out the assessment activities and information gathering remote, the reduced surveillance option (Surveillance level 2) is adopted.

Surveillance level 2 programme is established as follows:
2015: review of information
2016: off-site surveillance
2017: off-site surveillance
2018: on-site surveillance

This third surveillance audit was therefore conducted off-site.

The timing of the third surveillance audit was postponed with 2 months (2 months later than the certificate anniversary date of 6 May) in order to align the audit activities with the publication of the most recent ICES advice.

Appendix 3. List of member vessels

Table 9

Owner	Vessel name	Registration number
JSC Strelets	Strelets	M-0269
JSC Eridan	Korund	M-0254
JSC Taurus	Taurus	MK-0411

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.