

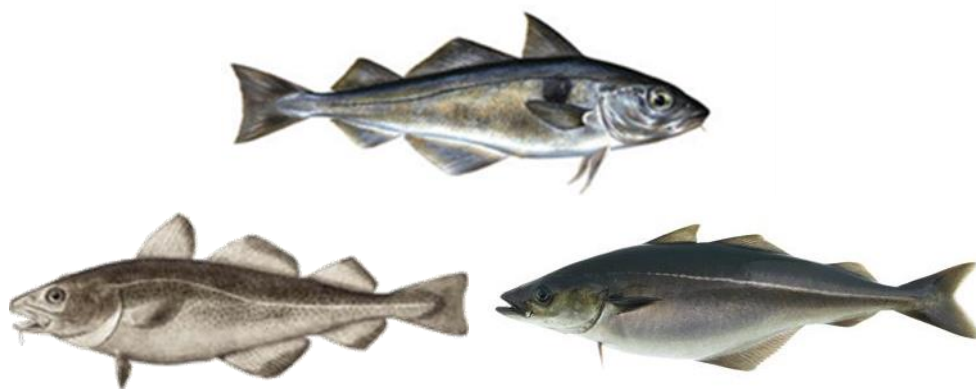


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Lloyd's Register

Barents Sea cod, haddock and saithe



Surveillance Review of Information

| | |
|----------------------------------|---|
| Conformity Assessment Body (CAB) | Lloyd's Register |
| Assessment team | Geir Hønneland, Hans Lassen, Johanna Pierre |
| Fishery client | Norebo Group |
| Assessment Type | Third Surveillance |



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1 Surveillance information

Table 1 – Report information

| | |
|---|---|
| 1 | Fishery name |
| | Barents Sea cod, haddock and saithe |
| 2 | Report title |
| | 3 rd surveillance report |
| 3 | Certificate code |
| | MSC-F-31266/7/8 |
| 4 | CAB |
| | Lloyd's Register |
| 5 | Author's names |
| | Geir Honneland, Hans Lassen, Johanna Pierre |
| 6 | Client name(s) |
| | Norebo Group |
| 7 | Date |
| | September 2019 |

2 General information

Table 2 – Surveillance announcement

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|--|---------------------------------|----------|-----------------------------|--------|----------------------|--------------------|--|-----------------|----------------------|---------------|--|-------------------------|------|----------|---|--------|--------------------------|--------------------|---|-----------------|----------------------|---------------|--|-------------------------|------|----------|-------------------------------------|--------|-------------------------|--------------------|---|-----------------|----------------------|---------------|---|-------------------------|------|
| 1 | Fishery name | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Barents Sea cod, haddock and saithe | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Unit(s) of Assessment (UoA) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <div>UoA 1</div> <table><tr><td>Species:</td><td>Cod (<i>Gadus morhua</i>)</td></tr><tr><td>Stock:</td><td>Northeast Arctic Cod</td></tr><tr><td>Geographical area:</td><td>ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and on the high seas (under international management).</td></tr><tr><td>Harvest method:</td><td>Demersal Otter Trawl</td></tr><tr><td>Client Group:</td><td>All member vessels of Ocean Trawlers Group targeting Northeast Arctic Cod in ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and International Waters using Demersal Otter Trawl</td></tr><tr><td>Other Eligible Fishers:</td><td>None</td></tr></table> <div>UoA 2</div> <table><tr><td>Species:</td><td>Haddock (<i>Melanogrammus aeglefinus</i>)</td></tr><tr><td>Stock:</td><td>Northeast Arctic Haddock</td></tr><tr><td>Geographical area:</td><td>ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and on the high seas (under international management)</td></tr><tr><td>Harvest method:</td><td>Demersal Otter Trawl</td></tr><tr><td>Client Group:</td><td>All member vessels of Ocean Trawlers Group targeting Northeast Arctic Haddock in ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and International Waters using Demersal Otter Trawl</td></tr><tr><td>Other Eligible Fishers:</td><td>None</td></tr></table> <div>UoA 3</div> <table><tr><td>Species:</td><td>Saithe (<i>Pollachius virens</i>)</td></tr><tr><td>Stock:</td><td>Northeast Arctic Saithe</td></tr><tr><td>Geographical area:</td><td>ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and on the high seas (under international management)</td></tr><tr><td>Harvest method:</td><td>Demersal Otter Trawl</td></tr><tr><td>Client Group:</td><td>All member vessels of Ocean Trawlers Group targeting Northeast Arctic Saithe in ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and International Waters using Demersal Otter Trawl</td></tr><tr><td>Other Eligible Fishers:</td><td>None</td></tr></table> | | Species: | Cod (<i>Gadus morhua</i>) | Stock: | Northeast Arctic Cod | Geographical area: | ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and on the high seas (under international management). | Harvest method: | Demersal Otter Trawl | Client Group: | All member vessels of Ocean Trawlers Group targeting Northeast Arctic Cod in ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and International Waters using Demersal Otter Trawl | Other Eligible Fishers: | None | Species: | Haddock (<i>Melanogrammus aeglefinus</i>) | Stock: | Northeast Arctic Haddock | Geographical area: | ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and on the high seas (under international management) | Harvest method: | Demersal Otter Trawl | Client Group: | All member vessels of Ocean Trawlers Group targeting Northeast Arctic Haddock in ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and International Waters using Demersal Otter Trawl | Other Eligible Fishers: | None | Species: | Saithe (<i>Pollachius virens</i>) | Stock: | Northeast Arctic Saithe | Geographical area: | ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and on the high seas (under international management) | Harvest method: | Demersal Otter Trawl | Client Group: | All member vessels of Ocean Trawlers Group targeting Northeast Arctic Saithe in ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and International Waters using Demersal Otter Trawl | Other Eligible Fishers: | None |
| Species: | Cod (<i>Gadus morhua</i>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stock: | Northeast Arctic Cod | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Geographical area: | ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and on the high seas (under international management). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harvest method: | Demersal Otter Trawl | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Client Group: | All member vessels of Ocean Trawlers Group targeting Northeast Arctic Cod in ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and International Waters using Demersal Otter Trawl | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other Eligible Fishers: | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Species: | Haddock (<i>Melanogrammus aeglefinus</i>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stock: | Northeast Arctic Haddock | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Geographical area: | ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and on the high seas (under international management) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harvest method: | Demersal Otter Trawl | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Client Group: | All member vessels of Ocean Trawlers Group targeting Northeast Arctic Haddock in ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and International Waters using Demersal Otter Trawl | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other Eligible Fishers: | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Species: | Saithe (<i>Pollachius virens</i>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stock: | Northeast Arctic Saithe | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Geographical area: | ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and on the high seas (under international management) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harvest method: | Demersal Otter Trawl | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Client Group: | All member vessels of Ocean Trawlers Group targeting Northeast Arctic Saithe in ICES Areas I and II, Barents & Norwegian Seas, & within Norwegian and Russian EEZ and International Waters using Demersal Otter Trawl | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other Eligible Fishers: | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Date certified | Date of expiry | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 20 th September 2016 | 19 th September 2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Surveillance level and type | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Level 1 – Review of Information | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Date of surveillance audit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Week commencing 29 th July 2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Surveillance number | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | |
|----|--|--|
| | 3rd Surveillance | ✓ |
| 7 | Surveillance team | |
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| 8 | CAB | |
| | Lloyd's Register | |
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| | Fisheries-ca@lr.org | Polly Burns |
| 10 | Client contact details | |
| | Sergey Sennkiov | Sennikov-sa@norebo.ru |

3 Background

Table 3 - TAC and Catch data

| Species 1: Cod (Atlantic) (<i>Gadus morhua</i>) | | | | | |
|--|---------------------------------|------|--------|---------------------|--|
| TAC | Year (Most recent fishing year) | 2018 | Amount | 775,000.0 MT | |
| UoA share of TAC | Year (Most recent fishing year) | 2018 | Amount | 95,765.6 MT | |
| UoC share of TAC | Year (Most recent fishing year) | 2018 | Amount | 95,765.6 MT | |
| Total green weight catch by UoC | Year (Most recent fishing year) | 2018 | Amount | 95,764.7 MT | |
| | Year (second most recent) | 2017 | Amount | 110,763.0 MT | |
| Species 2: Haddock (<i>Melanogrammus aeglefinus</i>) | | | | | |
| TAC | Year (Most recent fishing year) | 2018 | Amount | 202,305.0 MT | |
| UoA share of TAC | Year (Most recent fishing year) | 2018 | Amount | 24,052.5 MT | |
| UoC share of TAC | Year (Most recent fishing year) | 2018 | Amount | 24,052.5 MT | |
| Total green weight catch by UoC | Year (Most recent fishing year) | 2018 | Amount | 24,050.5 MT | |
| | Year (second most recent) | 2017 | Amount | 27,381.0 MT | |
| Species 3 - Saithe (<i>Pollachius virens</i>) | | | | | |
| TAC | Year (Most recent fishing year) | 2018 | Amount | 172,500.0 MT | |
| UoA share of TAC | Year (Most recent fishing year) | 2018 | Amount | n/a (bycatch only)* | |
| UoC share of TAC | Year (Most recent fishing year) | 2018 | Amount | n/a (bycatch only)* | |
| Total green weight catch by UoC | Year (Most recent fishing year) | 2018 | Amount | 1,490.8 MT | |
| | Year (second most recent) | 2017 | Amount | 1,623.6 MT | |

* Saithe is an exclusive Norwegian stock, fished mostly in the Norwegian EEZ. Saithe fishery in the Russian EEZ is not regulated with TAC; small amounts are taken as bycatch. In 2018 Russia had 12,000 MT of saithe in the Norwegian EEZ, of which no more than 3,000 MT could be taken in direct fishery. All Norebo's catch of saithe both in Norwegian EEZ and in Russian EEZ was taken only as bycatch.

Table 4 - Days at Sea 2018. Russian MSC certified fishing vessels targeting cod, haddock or saithe in the Barents Sea. Source: PINRO 2019

| Year | Economic Zone of Norway | Spitsbergen maritime area | Exclusive Economic Zone of Russia | NEAFC area in the Barents Sea | |
|---------------------------|-------------------------|---------------------------|-----------------------------------|-------------------------------|---------------|
| 2017 | 1112 | 1060 | 1694 | 1 | 3867 |
| 2018 (Days at sea) | 43826 | 41988 | 46335 | | 132150 |
| 2018 /div 24 | 1826 | 1750 | 1931 | 0 | 5506 |

Russian MSC certified vessels 2018

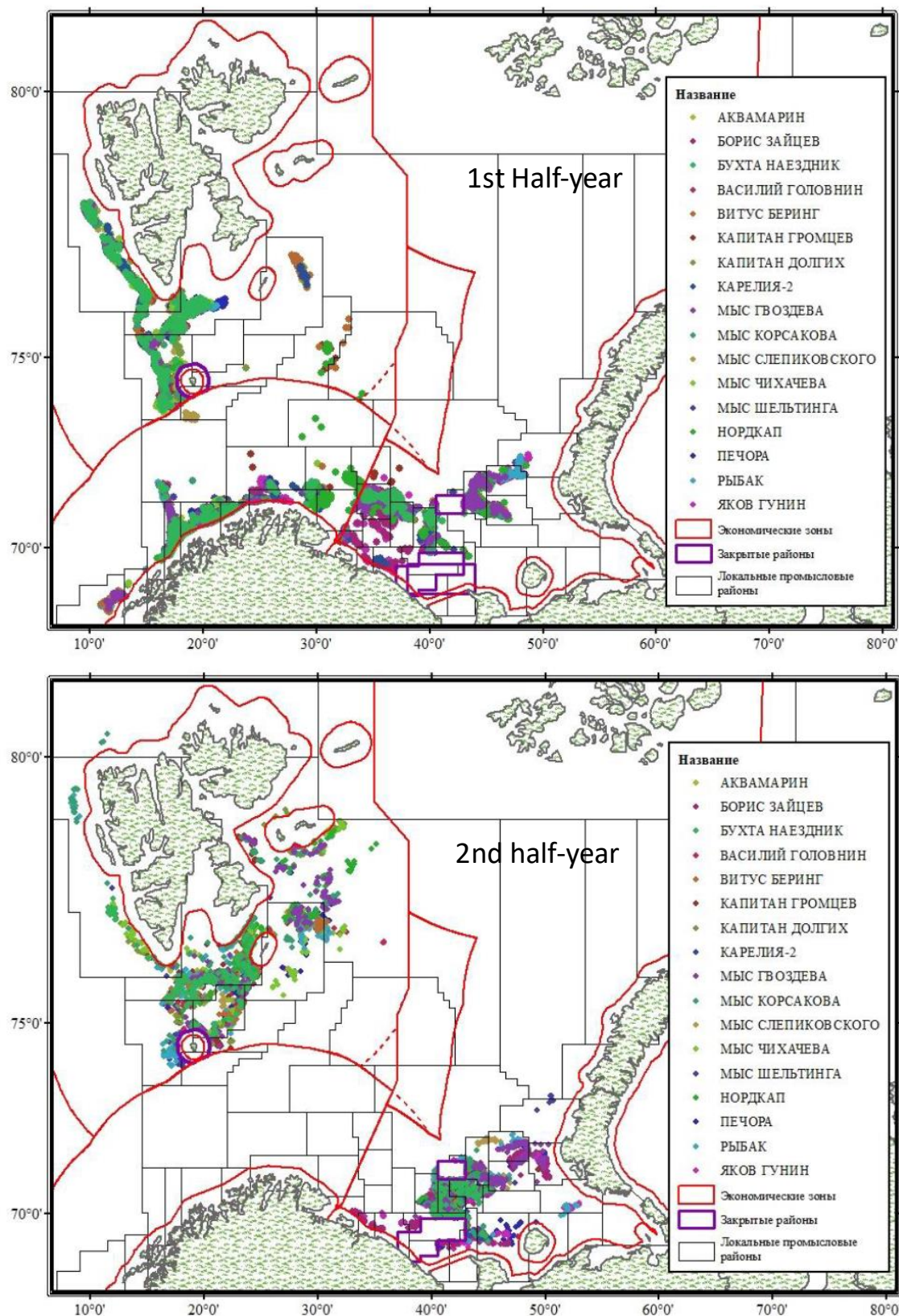


Figure 1 - Distribution of Russian fishing effort with MSC certified vessels by half-year.
Source: PINRO 2019

4 Assessment process

The audit was a desk study based on documentation provided by the Client and ICES stock assessments and advice.

ICES documentation included

- Arctic Fisheries Working Group (AFWG) Reports ICES (2018a, 2019a)
- Cod advice for 2020 for cod in the Barents Sea (ICES 1+2) ICES (2019b)
- Haddock advice for 2020 for haddock in the Barents Sea (ICES 1+2)
- Saithe advice for 2020 for saithe in the Barents Sea (ICES 1+2)
- Beaked redfish advice for 2019 in the Barents Sea (ICES 1+2) ICES (2018b)
- Golden redfish advice for 2019 in the Barents Sea (ICES 1+2) ICES (2018c)
- Greenland halibut advice for 2020 in the Barents Sea (ICES 1+2) ICES (2019f)

The Client provided the following documentation

- Annual PINRO report including catch data and maps of fishing operations
- Report on inspection of vessels
- Report on fishing operations based on logbook information
- Catch statistics
- Report on progress with recommendations
- An analysis of Industry Group Agreement to Cod fishery in the NE Atlantic January - November 2018 (OceanMind)
- A proposal for Voluntary closure of areas

5 Results and conclusion

The assessment team has reviewed the fishery and found that it remains within the scope of the MSC fisheries certificate. Stock status, catch composition, ecosystem impacts, and management framework generally remain as in previous years.

5.1 Principle 1 – Target Species: Cod, Haddock and Saithe

5.1.1 Cod

a. Stock status

The most recent advice for the Cod stock in ICES 1+2 (Barents Sea) was issued June 2019, ICES (2019b).

The spawning-stock biomass (SSB) has been above $MSY B_{trigger}$ since 2002. The SSB reached a peak in 2013 and now shows a downward trend. Fishing mortality (F) was reduced from well above F_{lim} in 1997 to below F_{MSY} in 2008. It remained below F_{MSY} until 2018 when it increased to slightly above F_{MSY} . There has been no strong recruitment since the 2004- and 2005-year classes. ICES assess that fishing pressure on the stock is above F_{MSY} and between F_{pa} and F_{lim} , while the spawning stock size is above $MSY B_{trigger}$, B_{pa} , and B_{lim} . Figure 2 presents stock status and stock trends.

Northeast Arctic Cod

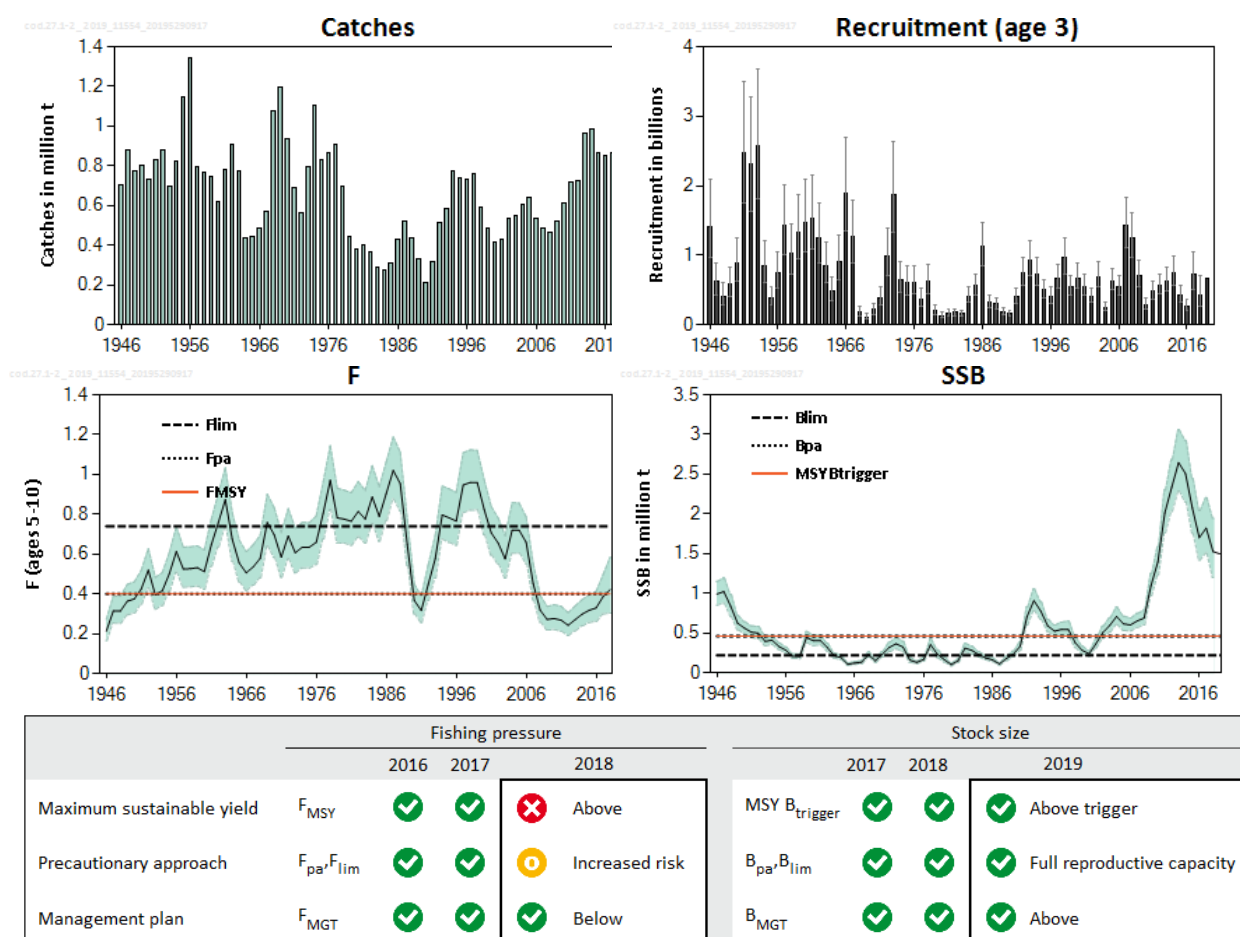


Figure 2 - Northeast Arctic Cod. Stock status and Stock trends. Source ICES (2019b) Figure 1 and Table 1

There are warning signs in the stock status, while the stock remains at a high level and there are no grounds for rescoring Principle 1 indicators, the stock is decreasing and fishing mortality increasing and in 2018 just above F_{MSY} . If the stock trend is extended into the future the re-assessment up in 2020 might face problems in maintaining the high score the stock currently enjoys.

b. Stock assessment methodology

The stock assessment is kept under close scrutiny and ICES reports that there are some conflicting signals from the different surveys and catch-at-age data. This increases the uncertainty of the assessment.

An increasing proportion of older fish in the stock is outside the age range in the survey data used in the assessment; this may require a revision of the model tuning. The estimated selectivity-at-age is dome-shaped with selectivity sharply decreasing above age 12, which is not currently informed by survey data. These issues were investigated in 2019 (ICES, 2019a). However, no adequate solution was found so it will have to be investigated further at the next benchmark.

The Russian bottom trawl survey was not conducted in 2018 and the joint ecosystem survey had a complete lack of coverage in the south-eastern part of the survey area. This adds uncertainty to the assessment in the final year.

The sampling level from commercial catches was reduced around 2010 and remained at a lower level in the following years but has improved in 2016–2018.

The stock assessment approach is unchanged.

Reference points are unchanged.

c. Stock Management

Stock management is through the Joint Norwegian-Russian Fisheries Commission based on the Management plan agreed in 2016. This is as in previous years.

However, the agreed TACs have overshot the ICES advice – based on the agreed HCR – for the years where the newest management plan has been in effect.

Table 5 - TAC advice and agreed TAC for cod in ICES 1+2 in recent years under the new (2016) management plan

| Year | TAC advice (tons) | TAC agreed |
|------|-------------------|------------|
| 2017 | 712,000 | 890,000 |
| 2018 | 674,678 | 775,000 |
| 2019 | ≤689,672 | 735,000 |

While the harvest strategy is unchanged, the HCR apparently is under pressure. PI 1.2.2 scoring was revisited; see section 5.1 4 below.

5.1.2 Haddock

a. Stock status

The spawning-stock biomass (SSB) has been above $MSY B_{trigger}$ since 1989. Due to the strong recruitment-at-age 3 in 2007–2009 (2004–2006-year classes) the stock reached an all-time high level in 2013. SSB is now decreasing but remains well above $MSY B_{trigger}$. Fishing mortality (F) has increased since 2013 and was above F_{MSY} in 2017 and 2018.

ICES assess that fishing pressure on the stock is above F_{MSY} , but below F_{pa} and F_{lim} , and that the spawning stock size is above $MSY B_{trigger}$, B_{pa} , and B_{lim} . The advised catch for 2020 is considerably higher than that advised for 2019 because the strong year classes of 2016 and 2017 will recruit to the fishery in 2020.

Figure 3 summarises the stock status and stock trends.

b. Stock assessment methodology

The stock assessment is based on the same database as in previous years and the approach (SAM) is unchanged.

Reference points are unchanged.

c. Stock Management

Stock management is through the Joint Norwegian-Russian Fisheries Commission based on the Management plan agreed in 2016. This is as in previous years.

However, the agreed TAC for 2020 overshoot the ICES advice – based on the agreed HCR while remained below the MSY estimate.

Northeast Arctic Haddock ICES 1+2

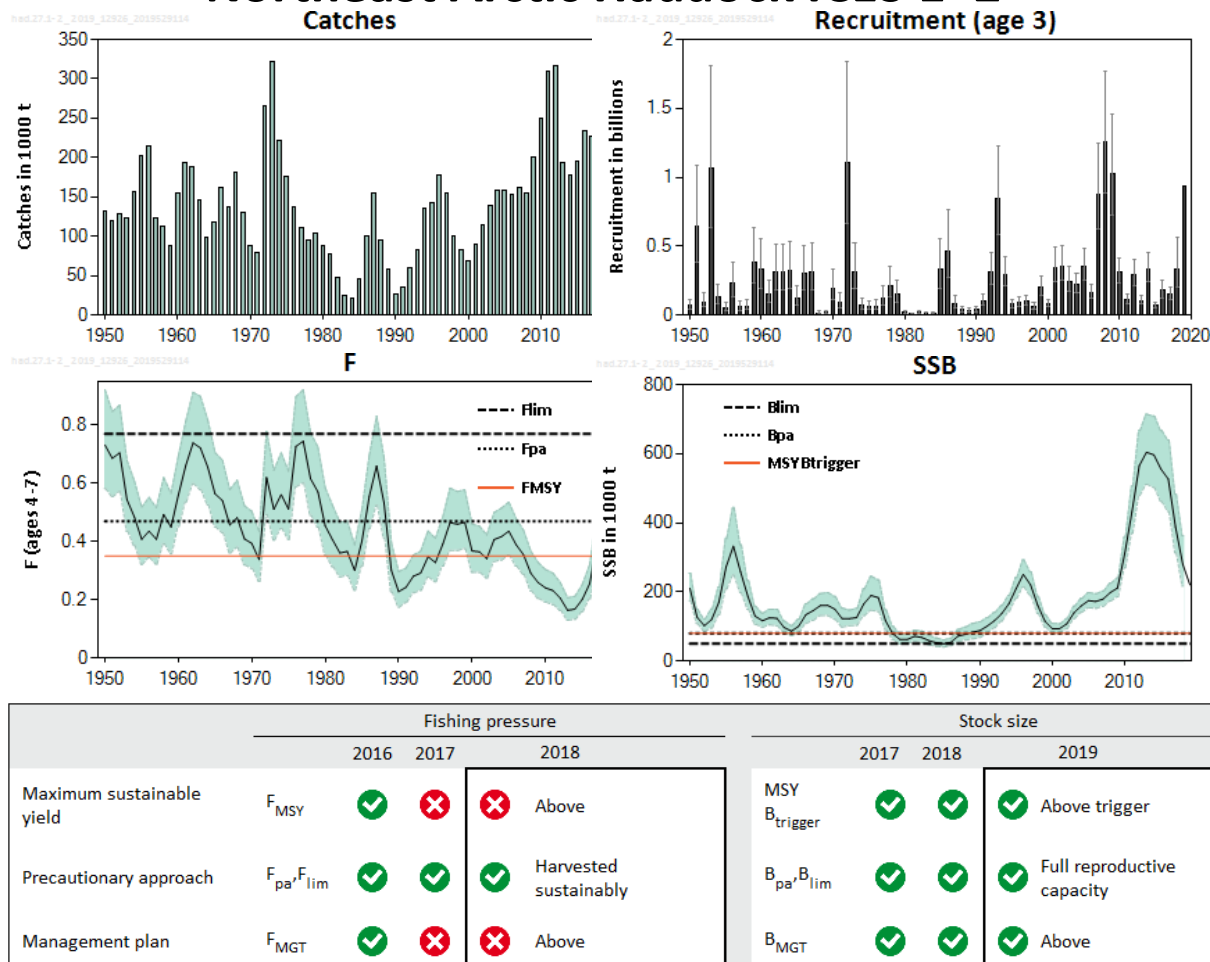


Figure 3 - Northeast Arctic Haddock ICES 1+2. Stock status and stock trends. Source: ICES (2019d) Figure 1 and Table 1

5.1.3 Saithe

a. Stock status

The spawning-stock biomass (SSB) has been above B_{pa} since 1996 and is presently estimated to be well above B_{pa} . The fishing mortality (F) has been below F_{pa} since 2013. Recruitment (R) has been close to the long-term geometric mean level in the last decade.

ICES assesses that fishing pressure on the stock is below F_{pa} , F_{lim} , and F_{MP} , and that the spawning stock size is above B_{pa} , B_{lim} , and SSB_{MGT} . The advised catch for 2020 is higher than that advised for 2019 because the stock in 2019 is estimated to be larger than in 2018, partly due to higher survey indices in 2018.

Figure 4 summarises stock status and stock trends.

Northeast arctic Saithe ICES 1+2

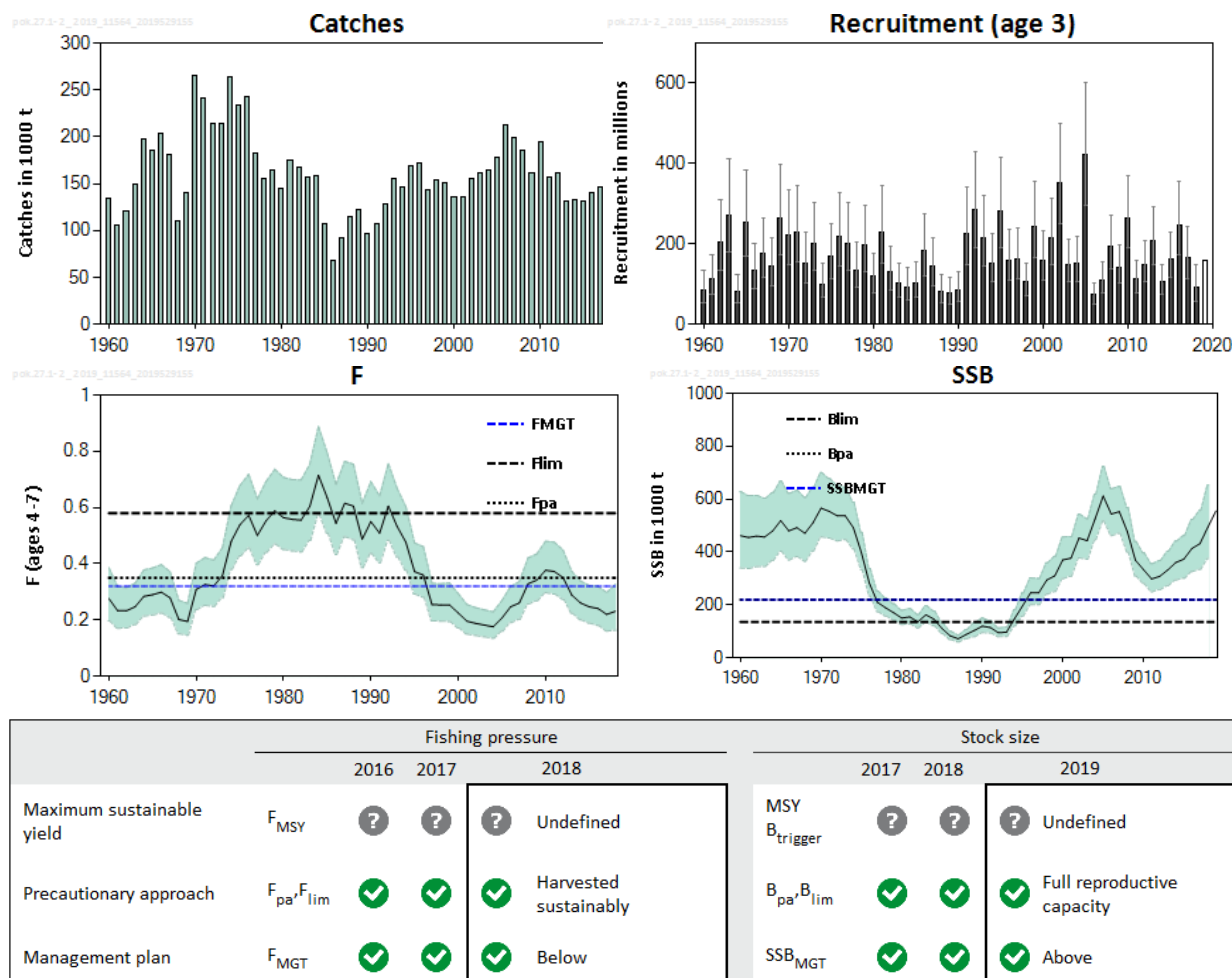


Figure 4 - Northeast Arctic Saithe ICES 1+2. Stock status and stock trends. Source: ICES (2019e) Figure 1 and Table 1

b. Stock assessment methodology

The stock assessment is based on the same database as in previous years and the approach (SAM) is unchanged. Reference points are unchanged.

c. Stock Management

Saithe remains an exclusive Norwegian stock, of which Russia receives a share through quota exchange. There is a management plan based on reference points which was latest revised in 2013. The management plan takes into account the variability in the assessment.

The TACs are set strictly following the ICES advice. Stock management is unchanged.

5.1.4 Rescoring of Principle 1 indicators

The TACs set for the cod (2017-2020) and haddock (2020) overshoot the scientific advice based on the HCR embedded in the Management plans. The surpluses are minor. At the same time fishing mortality increased in the cod and haddock stocks and fishing mortalities are now around F_{MSY} (slightly above) and it is not clear whether 1.2.2c SG100 is met for these two fisheries.

Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the HCRs.

This was scored to meet SG100 based on the following justification:

Norwegian and Russian authorities have the administrative mechanisms and enforcement infrastructure to ensure compliance with the HCR. The JNRFC sets the TAC and quotas for each nation's fleet participating in the cod fishery and the fishery can be closed when quotas are taken. The activity and catch landing of all fishing vessels is subject to regular monitoring. Catches are monitored and counted against the TAC during the year. Prior to 2009, although TAC regulations were in place, there was a significant amount of unreported landings, mostly due to quota control evasion through trans-shipping of fish from the Barents Sea. In 2009, a Barents Sea wide catch monitoring and reporting system was put in place which has effectively addressed the IUU issue (see PI 1.2.3). While discarding is thought to occur, although it is illegal, in the cod fishery, it is considered minor. The most recent assessment is evidence that catch and thus fishing mortality is being effectively controlled with F at or below $FMP = FMSY$. SG 100 is met.

The HCR requirement is to assure that the fishing mortality will vary around FMSY allowing significant higher mortality in cases where the stock is at high level. The HCR was revised in 2016 after the justification above was formulated and while the overall objective was unchanged the 2016 HCR allows a wide range of fishing mortalities dependent on stock status. ICES found that the 2016 HCR is precautionary.

The HCR is based on an average fishing mortality over three years and on this basis the SG100 requirement is met.

The assessment team decided that the PI 1.2.2c should not be rescored at this time, but the issue will be considered in relation to the reassessment to be launched in 2020.

5.1.5 Conditions

There are no conditions set for Principle 1.

5.1.6 Recommendations

There are no recommendations pertinent to Principle 1.

5.2 Principle 2

5.2.1 Retained species and bycatch

The catch composition in 2018 is shown in Table 6. Non-target species present in the catch and the proportions that most species comprised were broadly similar to 2017. While still well under 1% of the total catch, the proportions of Greenland halibut, deepwater redfish, golden redfish and northern wolffish increased in 2018. A sorting grid (Sort-V system) was used in trawl nets to increase gear selectivity.

Table 6 - Catch composition reported by PINRO in the Barents Sea cod, haddock and saithe fishery, 2018.

| Common name | Scientific name | Norway EEZ | Spitsbergen MA | Russia EEZ | Total (Tonnes) | % |
|----------------------------|--------------------------------------|------------|----------------|------------|----------------|-------|
| Cod | <i>Gadus morhua</i> | 33,196 | 36,736 | 31,766 | 101,698 | 77.01 |
| Haddock | <i>Melanogrammus aeglefinus</i> | 8,163 | 7,920 | 9,154 | 25,237 | 19.11 |
| Saithe | <i>Pollachius virens</i> | 1,412 | 33 | 128 | 1,573 | 1.19 |
| Greenland halibut | <i>Rheinhardtius hippoglossoides</i> | 66 | 137 | 163 | 366 | 0.28 |
| Deepwater (beaked) redfish | <i>Sebastes mentella</i> | 697 | 64 | 8 | 769 | 0.58 |
| Golden redfish | <i>Sebastes norvegicus</i> | 203 | 278 | 21 | 502 | 0.38 |
| Spotted wolffish | <i>Anarhichas minor</i> | 13 | 220 | 270 | 503 | 0.38 |
| Northern wolffish | <i>Anarhichas denticulatus</i> | 5 | 601 | 119 | 725 | 0.55 |
| Atlantic wolffish | <i>Anarhichas lupus</i> | 0 | 204 | 5 | 209 | 0.16 |
| European plaice | <i>Pleuronectes platessa</i> | | 0 | 225 | 225 | 0.17 |
| Long-rough dab | <i>Hippoglossoides platessoides</i> | 1 | 135 | 117 | 253 | 0.19 |

The 2019 ICES advice on catch and the stock status of Greenland halibut is unchanged from 2018 and the stock is considered to be in a relatively stable state. The stock is considered to be above B_{pa} and is forecast to remain above B_{pa} over the next five years, while declining by 20% (if catch remains constant) due to a lack of recruitment.

ICES has not developed new advice for the deepwater redfish since 2018. Similarly, no new information is available on stock status of wolffish, plaice or long-rough dab.

The proportion of UoC catch comprising golden redfish has increased from 0.08% from 2011 to 2014. For this species, ICES has advised a zero catch since 2017, and the species is on the Norwegian redlist.¹ Spawning stock biomass has been in decline since the late 1990s. As reported in the previous audit, ICES estimates that trawl gear accounts for 64% of the 5,340 t commercial landings of this species in subareas 1 and 2. If total catch in subareas 1 and 2 in 2018 was comparable to 2017, the catch in Table 6 represents between 9 and 10% of total catch. While the UoC catch alone appears likely to be sustainable, is within regulated limits, and is a very small proportion of the target species catch and catch for this fishery overall, the cumulative catch of this species in ICES subareas 1 and 2 is well above a sustainable level. Consideration of specific measures to reduce the catch of golden redfish is recommended.

Eleven non-target species caught were reported in Norebo vessel logbooks as:

- Anglerfish
- Atlantic halibut (*Hippoglossus hippoglossus*)
- Blue ling (*Molva dypterygia*)
- *Chimaera* spp.
- Norway pout (*Trisopterus esmarkii*)
- Tusk (*Brosme brosme*)
- Snow crab (*Chionoecetes opilio*)
- Lumpsucker (*Cyclopterus lumpus*)
- Skate
- Greenland shark (*Somniosus microcephalus*)

¹ <https://www.biodiversity.no/Taxon/Sebastes%20norvegicus/42877> [Accessed 8 August 2019]
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- Northern shrimp (*Pandalus borealis*)

These species were reported at catch rates of mostly less than 10 individuals per tow.

Trawl surveys are included in the Joint Russian-Norwegian Scientific Research Program on Living Marine Resources for 2019². In addition to collecting information on this fishery's target species, wolffish, Greenland halibut and redfish are identified as species of interest.

5.2.2 ETP

On Norebo vessels, cormorant and seagull bycatch was recorded due to these species interacting with the trawl net on the sea surface. These events were reported to comprise a few cases. No captures of marine mammals were documented in logbooks. Captures of the blue ling were recorded (see above). This species is classified as Endangered on the Norwegian redlist. Observers did not report any ETP bycatch events.

The Joint Russian-Norwegian Scientific Research Program on Living Marine Resources for 2019² includes research on marine mammals, e.g., seal population studies.

5.2.3 Habitat

PINRO observers reported that VME indicator organisms were not detected in most cases, and if they were detected, quantities were considered insignificant. PINRO concluded that the fishery had no significant impact on benthic communities.

On Norebo vessels, landings of 12 types of benthos were documented in logbooks. Starfish and sponges were the most commonly recorded. Other benthic species landed were:

- Sea cucumber (including *Cucumaria*)
- Brittle stars
- Coral polyps
- Segmented worms
- Actinia
- Sea urchin
- Jellyfish
- Gastropods
- Brachiopods

Initial analyses highlighted that species identification and naming could be improved. From January 2019, images of species and pop-out name selections were incorporated into the e-logbook. Position information can also be recorded which will be used for mapping non-target catch.

The Joint Russian-Norwegian Scientific Research Program on Living Marine Resources for 2019² includes continued investigations of vulnerable benthic habitats and species in the Barents Sea.

Fishing areas specified in daily reports were verified using VMS. The trawl footprint in 2018 was largely similar to 2017, but with more activity plotted close to the protected coastal zone off Russia (off the coast broadly north of Murmansk) in 2018. There were no violations of closed areas.

The audit team received a map identifying six discrete areas under consideration for closure to bottom trawl fishing to protect vulnerable habitats (Figure 5). These areas were identified following a mapping process conducted by members of the Coordination Council for Development of Sustainable Fishery in the North Atlantic (an association of Russian MSC clients in the Barents Sea), in cooperation with WWF-Russia and Russian scientists. Bottom trawling is already excluded from one of these areas (which is inside territorial waters). The Council plans to progress an agreement with fishing companies to avoid these areas.

² <https://www.regjeringen.no/contentassets/cb939423ea10498aac59dc3f7ac0dcd8/vedlegg-10-joint-russian-norwegian-scientific-research-programme-on-living-marine-resources-in-2019.pdf> [Accessed 8 August 2019]
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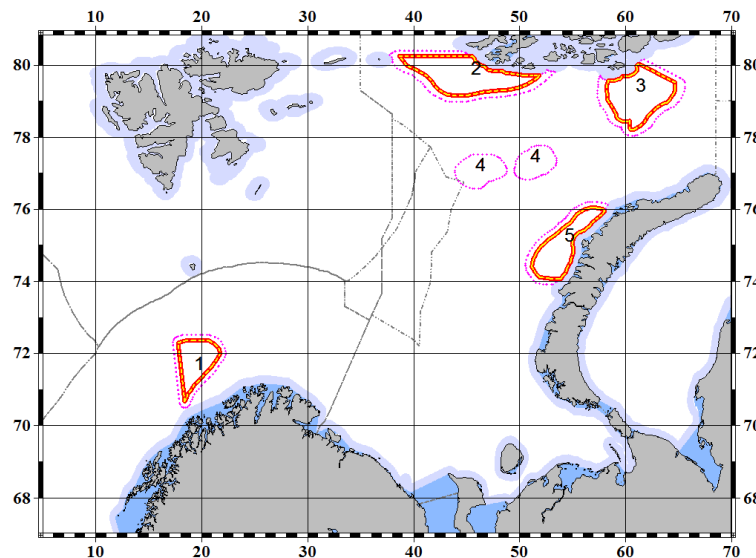


Figure 5 - Areas under consideration for voluntary closure to bottom trawl fishing.

5.2.4 Ecosystem

PINRO collects information about the diet of P1 species, which was provided to the audit team. A significant body of ecosystem-related research is included in the Joint Russian-Norwegian Scientific Research Program on Living Marine Resources for 2019².

5.2.5 Conditions

There are no conditions set for Principle 2.

5.2.6 Recommendations

There were four recommendations made at reassessment pertaining to Principle 2, and one recommendation made during the second surveillance audit:

Recommendation 1:

The client improves analysis and presentation of existing data on fleet interaction with VMEs and other sensitive habitats.

Bycatch of benthic organisms is being recorded by Norebo vessels in electronic logbooks. 12 types of benthic organisms have been documented in catch. PINRO observers reported insignificant catch of benthos, and that in most cases it was not observed at all. Presenting data collected on abundance (e.g. using the abundance scale described during the previous surveillance audit) is recommended, to facilitate an understanding of the quantities of benthic organisms landed.

Recommendation 2

The client continues and strengthens its engagement with PINRO, other research institutions, fishing companies and NGOs to map seabed habitat and develop sensitive habitat (VME) avoidance and/or protection protocols.

Mapping to identify areas that may be voluntarily closed to bottom trawling has been undertaken. This involved the Coordination Council for Development of Sustainable Fishery in the North Atlantic, WWF-Russia and Russian scientists. Six areas have been identified, one of which is already closed to bottom trawling. The Council plans to progress an agreement with fishing companies to formalise voluntary closures of these areas.

Recommendation 3:

The client continues to support careful monitoring and more robust survey and stock assessment of all wolfish species.

Wolfish catch is recorded by species. No other information specific to this recommendation was received for this audit.

Recommendation 4:

The client continues to support annual reporting by PINRO on status of Greenland halibut stocks and seeks to avoid this species should the recent downturn in estimated biomass continue.

Overall, this stock is considered to be in a relatively stable state and above B_{pa} . Stock projections predict a 20% decline over the next five years, due to the lack of recruitment. The proportion of this species in the reported UoC catch was lower in 2018 (and in 2017) than at reassessment (~1.7%).

Recommendation 5, from the Second Surveillance Audit (2018):

In the previous surveillance audit, the recommendation was made to map the catch of the golden redfish. The importance of this recommendation is reiterated. The capability of the Norebo e-logbook for collecting position information appears well-suited for this purpose.

5.2.7 Rescoring of Principle 2 indicators

There is no new information emerging at this audit that would lead to a rescore of Principle 2 indicators. However, consideration of the updated Principle 2 fisheries certification requirements is recommended ahead of reassessment in 2020.

5.3 Principle 3

5.3.1 Changes in legislation

Russian fisheries regulations were amended in 2017, and all changes came into force in 2018. The amendments allowed up to 20 % of the cod and haddock TAC to be allocated as investment quotas, which involves an obligation to build a fishing vessel (75 % of the investment quota) or a processing plant (25 % of the quota) in Russia. The majority of the investment quotas were allocated in 2017-2018. Investment agreements were concluded between the companies and the state, and Norebo has signed investment contracts to build six vessels for cod and haddock fisheries and one to build a processing plant in the Murmansk region.

The changes in Russian fisheries legislation involve a strengthening of the requirements to how fishing rights are used. Fishing rights are now revoked in cases where a company does not catch at least 70 % of its annual quota in two successive years. Chartered vessels can now only be used to catch up to 30 % of the annual quota, unless the chartered vessel belongs to the same group of companies as the quota holder. (There is a special procedure to submit information on the related companies that belong to the same group.)

The fishing rights for cod and haddock were re-allocated for a new 15-year period from 1st January 2019. This involves that companies have a fixed share of the Russian TAC for the next 15 years.

5.3.2 Changes in management structure

The status of the regional fisheries research institutes subordinate to the Federal Fisheries Agency, such as PINRO, has been changed from separate state institutions to branches of the federal fisheries research institute VNIRO.

5.3.3 Changes affecting traceability

Russia plans to implement electronic catch logbooks on fishing vessels that will be linked to the existing food safety system Mercury, which is a governmental electronic food safety system, which is obligatory for fish-processing plants among others, and provides full traceability of fish products from catch to consumer/point of export. This system allows for batch-based traceability in Russia at all critical points such as landing, processing, transportation and sales.

5.3.4 Inspections and compliance

The 19 client vessels were subjected to a total of 109 inspections at sea in 2018, 84 by the Norwegian Coast Guard and 21 by the Russian Coast Guard. In addition, there were four inspections in the NEAFC regulatory area. The higher number of inspections by the Norwegian Coast Guard than by the Russian is explained by the fact that the fishery predominantly takes place in waters under Norwegian jurisdiction. Inspections are thorough and include a full physical check of all catch on board. In addition, all catches are inspected at point of landing.

At one of the inspections by the Norwegian Coast Guard, a minor non-conformity was revealed in that the length of the adjustment chain of the sorting grid SORT-V was 12 cm shorter on the left side and 11 cm shorter on the right side than allowed for in Norwegian fisheries regulations. The non-conformity was corrected during inspection, and the vessel was allowed to continue fishing. At another inspection, also by the Norwegian Coast Guard, it was remarked that the bycatch of redfish was higher than the allowed 20 % in the last haul. The vessel changed position in accordance with the move-on rule, and no non-conformity was recorded. In the remaining 107 inspections, there were no remarks.

5.3.5 Conditions

There are no conditions set for Principle 3.

5.3.6 Recommendations

There are no recommendations pertinent to Principle 3.

5.3.7 Rescoring of Principle 2 indicators

There is no new information emerging at this audit that would lead to a rescore of Principle 3 indicators.

6 References

6.1 Principle 1

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6.2 Principle 2

- ICES. 2018a. Report of the Arctic Fisheries Working Group (AFWG), 18–24 April 2018, Ispra, Italy. ICES CM 2018/ACOM:06. 859 pp. Available at:
<http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2018/AFWG/00-AFWG%202018%20Report.pdf>
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- ICES. 2019f. Greenland halibut (*Reinhardtius hippoglossoides*) in subareas 1 and 2 (Northeast Arctic). In Report of the ICES Advisory Committee, 2019. ICES Advice 2019, ghl.27.1-2,
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- Jordan, T. 2018. Analysis of industry group agreement to cod fishery in NE Atlantic. Monitoring and Compliance Review 01Jul18 – 30Nov2018. Report number 18-0361, OceanMind Ltd.

6.3 Principle 3

- Client information checklist.
- JRNFC. 2018. Protocol of the 48th Session of the Joint Russian–Norwegian Fisheries Commission, 15–18 October 2018. Available in Norwegian and Russian at jointfish.org.
- List of inspections by the Norwegian and Russian Coast Guards for 2018.
- Websites of the Federal Fisheries Agency (fish.gov.ru) and its regional department in the northern fishery basin (bbtu.ru).

Appendix 1. Stakeholder input

None.