Marine Stewardship Council fisheries assessments



# Norway North East Arctic cold water prawn fishery

# **Surveillance Report No. 1**

Conformity Assessment Body (CAB)	DNV GL
Assessment team	Julian Addison and Sigrun Bekkevold
Fishery client	Norway Fishermen's Association
Assessment Type	First Surveillance
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Conformity Assessment Body (CAB)	DNV GL - Business Assurance DNV GL Business Assurance Norway AS Veritasveien 1 1322 HØVIK, Norway Tel: +47 67 57 99 00 http://www.dnvgl.com
Authors	Julian Addison and Sigrun Bekkevold
Fishery client	Norges Fiskarlag, Pirsenteret, 7462 Trondheim, Norway
Contact person	Tor Bjørklund Larsen
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#### Objective:

The objective of this report is the first surveillance audit of the Norway North East Arctic cold water prawn fishery.

Prepared by:	Verified by: Sandhya Chaudhury Principle specialist and service manager
Julian Addison	
MSC Fishery Team Leader and Principle expert	
Sigrun Bekkevold	_
DNV GL Project manager and Chain of Custody responsible	
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MSC Fisheries, Norway, North East Arctic, cold water prawn, shrimp, surveillance

□ Secret

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# 1 Glossary

# Abbreviations & acronyms

AIS	Automatic Identification System
CL	Carapace length
CPUE	Catch per unit effort
DNV GL	Det Norske Veritas GL
DoF	Directorate of Fisheries, Norway
EEZ	Exclusive Economic Zone
ERS	Electronic Reporting System
ETP	Endangered, Threatened and Protected species
FAM	Fisheries Assessment Methodology
FAO	Food and Agriculture Organisation (of the United Nations)
FPZ	(Svalbard) Fishery Protection Zone
HCR	Harvest Control Rule
ICES	International Council for the Exploration of the Sea
GLM	Generalised Linear Model
IMR	Institute of Marine Research, Norway
MSC	Marine Stewardship Council
NAFO	Northwest Atlantic Fisheries Organisation
NEA	North East Arctic
NEAFC	North East Atlantic Fisheries Commission
NFA	Norwegian Fishermen's Association
NIPAG	NAFO/ICES Pandalus Assessment Group
PI	Performance Indicator
SSB	Spawning stock biomass
TAC	Total Allowable Catch
UoA	Unit of Assessment
UoC	Unit of Certification
VME	Vulnerable Marine Ecosystem
VMS	Vessel Monitoring System

# Stock assessment reference points

Minimum biomass below which recruitment is expected to be impaired or the stock dynamics are unknown
Biomass corresponding to the maximum sustainable yield (biological reference point); the peak value on a domed yield-per-recruit curve
Value of spawning stock biomass (SSB) that triggers a specific management action
Instantaneous rate of fishing mortality
Fishing mortality rate that is expected to be associated with stock 'collapse' if maintained over a longer time (precautionary reference point)
F giving maximum sustainable yield (biological reference point)
Carrying Capacity
Maximum Sustainable Yield
Precautionary Approach

# 2 Executive summary

# 2.1 The surveillance audit process.

The surveillance audit was carried out with an on-site client meeting conducted on 27 and 28 May 2019 in Oslo and Bergen, and meetings were also held with the Norwegian Ministry for Trade, Industry and Fisheries, the Directorate of Fisheries and scientists from the Institute of Marine Research (IMR). A skype meeting was also held with an IMR scientist on 24 May 2019.

# 2.2 Brief history of assessments.

#### 2.2.1 Summary of the original assessment

The Norway North East Arctic cold water prawn fishery received its first certification on 9 March 2012. Scope of certification is up to the point of landing and chain of custody commences from the point of sale/landing. The default assessment tree, set out in the MSC Fishery Assessment Methodology version 2.1 (FAM v.2.1), was used for the initial assessment. The certificate expired originally in March 2017, but was granted an extension of one year from the MSC giving the possibility to harmonize with the other cold water prawn fisheries in the Barents Sea.

The re-assessment in 2017-2018 used the re-assessment audit methodology, as defined in the MSC Certification Requirements (CR) (version 2.0) and in the subsequent MSC Guidance for the Fisheries Certification Requirements (version 2.0). The default assessment tree as set out in the MSC FCR v.2.0 without adjustments was used for this re-assessment.

The re-assessment was carried out by Principle experts Julian Addison (P1), Lucia Revenga (P2) and Bert Keus (P3). Team leader was Julian Addison, and DNV GL's Sigrun Bekkevold was project manager and Chain of Custody responsible. 105 stakeholders were identified and consulted during the assessment process.

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. The certification scores of the three Principles at re-assessment are provided in Table 1.

Table 1 Principle scores – re-assessment:

Principle	Score
Principle 1 – Target Species	85.0
Principle 2 – Ecosystem	88.0
Principle 3 – Management System	89.2

The fishery achieved a score of below 80 against 4 performance indicators. The assessment team therefore set 4 conditions for continuing certification that the client is required to address. Two recommendations were set. Conditions are presented in full in section 4.2 of this annual surveillance report.

#### 2.2.2 First annual surveillance – 2019

See section 6.1

# 2.3 Summary of surveillance findings.

The findings of the surveillance are summarised in the following:

The fishery continues to be within the scope of the MSC fisheries standard (MSC FCP v2.1 § 7.4) according to the following determinations :

- The target species is a fish (crustacean) and the fishery does not use poisons or explosives;
- The fishery is not conducted under a controversial unilateral exemption to an international agreement;

- The client or client group does not include an entity that has been successfully prosecuted for a forced labour violation in the last 2 years;
- The fishery has mechanisms for resolving disputes and disputes do not overwhelm the fishery;
- The fishery is not enhanced or based on an introduced species.

The audit team concluded that the Norway North East Arctic cold water prawn fishery should remain certified (Table 2).

The main findings by the surveillance team were:

- The fishery exploits the Norway North East Arctic cold water prawn fishery within sustainable limits, as has been the case in previous years. Landings increased significantly in 2018, but stock biomass continues to be above Bmsy and fishing mortality remains below Fmsy;
- Fishing strategy, fishing gears and fishing grounds are to all practical purposes unchanged compared to previous years. VMS data show that the fishery has been carried out in similar areas since the recertification report;
- The key management regulations are unchanged, although additional measures for protection of sensitive (VME) habitats will be introduced from 1 July 2019;
- Control and Enforcement activities and strategies were unchanged and no significant non-compliance has been reported;
- CoC conditions are unchanged;

# 2.4 Statement confirming the status of certification (e.g. certified, suspended, etc.)

#### **Table 2 Conclusion**

Fishery	Status of certification	Comment
Norway NEA Cold Water Prawn	Certified	The assessment team concludes that the MSC Certificate for this fishery shall remain active, subject to the agreed annual surveillance schedule and progress on the remaining condition.

# 3 Report details

# 3.1 Surveillance information

#### Table 3

Survei	llance information	
1	Fishery name	
	Norway North East Arctic cold water prawn fishery	
2	Surveillance level and type	
	Surveillance level 6	
	On-site surveillance	
3	Surveillance number	
	1st Surveillance	x
	2nd Surveillance	
	3rd Surveillance	
	4th Surveillance	
	Other (expedited etc)	
4	Proposed team leader	
	Julian Addison (team leader and principle expert)	
	Julian holds a Ph.D. in population ecology and modelli University of London, and also a BSc in Zoology from	ng from Imperial College of Science and Technology, Kings College, University of London.
	He has 30 years' experience of stock assessment and and scientific research on crustacean biology and pop December 2010 when he left the organisation to becom Centre for Environment, Fisheries and Aquaculture Sc Senior Shellfish Advisor to Government policy makers managers, legislators and stakeholders, Government environmental NGOs. He has also worked as a visiting	provision of management advice on shellfish fisheries ulation dynamics and inshore fisheries. Until me an independent consultant, he worked at the ience (Cefas) in Lowestoft, England where he was , which involved working closely with marine Statutory Nature Conservation Organisations and a scientist at DEO in Halifax. Nova Scotia and at

NMFS in Woods Hole, Massachusetts where he experienced shellfish management approaches in North America. For four years he was a member of the Scientific Committee and the UK delegation to the International Whaling Commission providing scientific advice to the UK Commissioner. He has worked extensively with ICES and most recently was Chair of the Working Group on the Biology and Life History of Crabs, a member of the Working Group on Crangon Fisheries and Life History and a member of the Steering Group on Ecosystems Function.

He has extensive experience of the MSC certification process primarily as a P1 team member but also as a P2 team member and team leader undertaking MSC full assessments for the Ireland and Northern Ireland bottom grown mussel fisheries, the Newfoundland and Labrador snow crab fishery, Estonia and Faroe

Islands North East Atlantic Cold Water prawn fisheries, Swedish Skagerrak and Norwegian Deep cold water prawn fishery, the Eastern Canada offshore lobster fishery and the Limfjord mussel and cockle fisheries. He has also undertaken MSC pre-assessments, numerous annual surveillance audits and has carried out peer reviews of MSC assessments in both Europe and North America of lobster, cold water prawn, razorfish, cockle and scallop fisheries. Other recent work includes a review of the stock assessment model for blue crabs in Chesapeake Bay, USA, and an assessment of three Alaskan crab fisheries under the FAO-based Responsible Fisheries Management scheme.

Julian has completed all requisite training and has signed all relevant forms for assessment team membership on this fishery.

- He was team leader and Principle 1 expert for the re-assessment and also principle expert and team leader for the surveillance audits in the first certification period.
- He will be the principle expert and team leader of this surveillance audit, and operating on-site
- He has been a member of MSC certification assessment teams for several other fisheries as mentioned above
- He meets the competence criteria in to MSC Certification requirements v. 2.0, annex PC, concerning substantial and appropriate skills related to Principle 1 and Principle 2 requirements.
- He is trained as a team member and team leader according to FCR v. 2.0
- He has no conflict of interest in relation to the fishery under assessment.
- 5

#### Proposed team members [remove if not applicable]

#### Sigrun Bekkevold (project manager and CoC responsible)

Sigrun Bekkevold is a principal consultant at DNV GL Business Assurance and holds a Master of Science in industrial chemistry and biochemistry from the Norwegian University of Science and Technology in Trondheim. She has 25 years of experience in leading projects for sustainable development of the marine sector.

In the DNV GL she works with the MSC standard for sustainable fisheries as project manager and chain of custody responsible for pre-assessments, initial assessments and surveillance assessments. This includes e.g. Norwegian, Swedish and Danish shrimp fisheries in Skagerrak and the North Sea, Faroese and Estonian shrimps fisheries in the Barents Sea, Norwegian krill fishery in Antarctica and fisheries in the Baltic sea. She has also been project manager in developing product certification standard for marine ingredients in for Norwegian Food industry and has also been working with strategies for sustainability services in the marine sector.

Before 2012 her main focus was on research, innovation and business development within total utilization of fish. This includes compiling strategies, action plans, feasibility analysis and market analysis, organizing project teams, performing mass flow analysis, networking with industry, research and authorities, evaluating regulatory issues and communication of results. She held a position as a general manager in RUBIN Foundation, aiming for value adding and better utilization of fish by-products. RUBIN has been owned by the seafood industry in Norway and supported by Ministry of Fishery and Coastal Affairs and the Norwegian Seafood Research Fund. The work has included the whole value chain, from the fishing vessel and all the way to the Marked.

- She was a part of the team for the re-assessment, and also several of the surveillance audits during the first certification period, as project manager and traceability responsible
- She will be the project manager and traceability responsible, and operate on-site in this second surveillance audit.
- She meets the competence criteria in to, annex PC, in having appropriate skills related to Chain of Custody requirements.
- She also have the knowledge of the country, language and local fishery
- She is trained as a team leader, incl. traceability, according MSC Certification requirements v. 2.0.
- She has no conflict of interest in relation to the fishery under assessment.

	All together the team meets at least three of the Fishery Team qualifications and competency requirements specified in Table PC3.
6	Audit/review time and location
	The on-site visit took place on 27 and 28 May 2019. A skype meeting was held on 24 May 2019.
7	Assessment and review activities
	<ul> <li>The key purpose of the surveillance audit was:</li> <li>to review and evaluate the progress of the fishery against Conditions of Certification raised during the full assessment;</li> <li>review any potential or actual changes in the management systems;</li> <li>review changes or additions / deletions to regulations;</li> <li>review any personnel changes in scientific staff, key management or industry to evaluate impact on the management of the fishery;</li> <li>review any potential changes to the scientific basis of information, including stock assessments.</li> <li>Review any changes affecting traceability.</li> </ul>

# 3.2 Background

# 3.2.1 Stock Status

The Norwegian shrimp fishery, comprising of offshore and coastal components, has been one of the most important fisheries in Norway. Norwegian vessels began offshore fishing for shrimp in 1970. Over the history of the fishery. annual catches by vessels from all nations have ranged from about 5,000 tonnes at the start of the fishery to a peak of 128,000 tonnes in 1984 (Figure 1). Catches subsequently declined to about 25,000 tonnes in 2010, largely due to low market prices and increased vessel operating costs. From 2000 to 2010, Norway accounted for 67 - 92% of the total shrimp catch in the Barents Sea, with EU, Iceland and Greenland accounting for the remainder, as Russian catches declined to zero from 2009 to 2012. Total catches continued to decline further until 2013, with landings by Norwegian vessels just under 9,000 tonnes, and despite higher market prices for shrimp, fishing for groundfish species was still more profitable. In 2014, total landings from the fishery were 21,000 tonnes of which half were landed by the Norwegian fleet. In 2013 and 2014 catches remained relatively low in comparison with historical catches for a number of reasons. Shrimp are more widely distributed than in previous years (with less ice opening up more grounds) creating problems in locating high densities of shrimp, there have been a number of areas closed to fishing in 2014 due to high bycatches of redfish, cod and haddock, and the high value and large catches of cod mean that the fleet has been targeting most effort on more profitable groundfish stocks, as shrimp fishing requires greater effort and more fuel. In 2015, total landings increased significantly to nearly 34,000 tonnes (Figure 1) with Norwegian landings of 17,000 tonnes accounting for 50% of the total, landings by EU countries, Faroes and Greenland were nearly 16,000 tonnes and Russian landings just over 1,000 tonnes (Table 1; ICES, 2018). Landings from all fleets increased significantly in 2015 due to increased fishing effort and favourable market conditions for both raw and processed shrimps (Tor-Edgar Ripman, Norges Råfisklag, pers. comm.). In 2016 and 2017, total landings were approximately 30,000 tonnes with increased landings by the Russian, EU and other fleets, but Norwegian landings declined to 11,000 and 7,000 tonnes in 2016 and 2017 respectively (Table 1) as there has been reduced participation by both offshore and inshore Norwegian vessels in 2016 with less vessels fishing. In addition catch rates were generally lower than in previous years as the shrimp population was more dispersed than in previous years and hence finding dense areas of shrimps has proved more difficult. An additional factor for the reduced Norwegian landings was lower prices in 2016 due to over-supply of cold-water prawns globally (Client, pers. comm.). Increased fishing effort across all fleets in 2018 has meant that predicted total landings were 45,000 tonnes in 2018, the highest level since 2002 (ICES, 2018). Landings in 2018 for Norwegian vessels recorded by the Directorate of Fisheries were 22,700 tonnes which is a significant increase on recent years and the highest level of landings since 2007 (Modulf Overvik, DoF, pers. comm.). A key reason for the increase in fishing effort and landings in 2018 is the high prices currently being achieved for shrimp. Early figures for 2019 suggest that landings from the offshore vessels are going to be higher than those for 2018.

Fishing occurs primarily from 250 – 400 m depth in the Barents Sea, although recently some vessels have been fishing at depths of up to 700m in more northerly areas up to 82 degrees North. According to fishermen, shrimp can be found almost everywhere, though not always in the same densities. The shrimp fleet consists of large trawlers (over 21m) operating offshore and small vessels (under 21m) operating in the coastal areas. An updated list of

vessels is included in the Appendix.. Updated information on all Norwegian shrimp trawlers registered in Norway can also be found at www.fiskeridir.no

Most of the catch is taken by large factory trawlers which process and pack shrimp on board. In recent years, there have been around 7-9 larger offshore vessels, but in 2018 the number of large offshore vessels targeting brown shrimps increased significantly to 20 vessels resulting in a large increase in landings of offshore vessels to 22,000 tonnes. The fishery occurs mainly in the central Barents Sea (the Hopen area) and on the Svalbard Shelf, although in recent years the distribution of shrimp has moved northwards and eastwards and consequently fishing activity has increased further eastwards in the NEAFC-managed international waters in the "The Loophole" (NAFO/ICES, 2018). In 2018, 36% of the Norwegian catch was from the Svalbard Fishery Protection Zone (FPZ), 47% from the Loophole and 17% from the Russian EEZ. The coastal fishery occurs along the entire Norwegian coast and comprises small trawlers that have the capacity to cook shrimp on board. Catches are sold primarily as fresh and cooked shrimp. Between 1977 and 2010 the annual catches by the coastal fleet varied between 4,000 and 30,000 tonnes, averaging about 5,000 tonnes since the 1990s. After 1984, there was a decline in catches from about 25,000 tonnes to less than 1,000 tonnes per year. This was largely due to a major restructuring and efficiency improvement in the shrimp industry in Northern Norway, leading to the replacement of many small shrimp trawlers, operating in the coastal areas, by larger factory trawlers, operating offshore. In 2018 small coastal vessels contributed only around 900 tonnes to the total Norwegian landings.



Figure 1. Total catches of *Pandalus borealis* in the Barents Sea from 1970 to 2018. The unshaded bar for 2018 landings is preliminary. (Source: ICES, 2018a).

Table 4.	Catches	(tonnes)	from 20	)09 to	2018 by	Norway,	Russia	and other	(EU,	Faroes 8	Greenland	) fleets	used	by
NIPAG in	the 2018	<pre>stcok as</pre>	sessme	ent. (	Source:	NAFO/IC	ES, 201	8)						

	2009	2010	2011	2012	2013	2014	2015	2016	2017	20181
Recommended TAC	50 000	50 000	60 000	60 000	60 000	60 000	70 000	70 000	70 000	70 000
Norway	19784	16779	19928	14158	8846	10234	16618	10896	7010	16000
Russia	0	0	0	0	1067	741	1151	2460	3849	10000
Others	7488	8419	10298	10598	9336	9989	16252	16223	18894	19000
Total	27272	25198	30226	24756	19249	20964	34022	29609	29753	45000

<sup>1</sup> Catches projected to the end of the year.

The stock in the Barents Sea and Svalbard area (ICES Sub-areas I and II) is assessed along with other Northwest Atlantic Fisheries Organization (NAFO) and International Council for the Exploration of the Sea (ICES) stocks by the joint NAFO/ICES Pandalus Assessment Group (NIPAG). The most recent assessment was carried out at the NIPAG meeting in Dartmouth, Canada in October 2016 (NAFO/ICES, 2018). The stock assessment model used by NIPAG is a stochastic version of a surplus production model. The model is formulated in a state-space framework and Bayesian methods are used to derive posterior likelihood distributions of the parameters (Hvingel and Kingsley, 2006). The model synthesises information from input priors including the initial population biomass in 1969, the carrying capacity (K) and Maximum Sustainable Yield (MSY), a series of shrimp catches and four independent series of shrimp biomasses (Hvingel, 2018).

Total reported catch from all vessels in the fishery is used as yield data. The four series of shrimp biomasses are a series of commercial catch rates and three trawl survey biomass indices. Log book data from Norwegian vessels are used in a multiplicative model to calculate standardised annual catch rate data (Hvingel and Thangstad, 2018a). The GLM model includes vessel, season, area and gear type as variables and is considered to be a good index of the biomass of shrimps over 17mm CL, i.e. of the older male and female stock combined. The standardized catch per unit effort (CPUE) declined to the lowest value of the series in 1987, but then showed an overall increasing trend until 2011. The 2012-14 values were however down significantly to below long term mean values, but standardised CPUE showed a significant increase from 2015 to 2017 to recover to just below the long term mean (NAFO/ICES, 2018). Norwegian and Russian shrimp trawl surveys were conducted from 1982-2004 and 1984-2005 respectively and provided indices of stock biomass, recruitment and size composition. In 2004 these two trawl surveys were superseded by the joint Norwegian-Russian ecosystem survey which surveys shrimp and monitors other ecosystem variables (Hvingel and Thangstad, 2018b). Biomass indices from all three trawl surveys used in the model have fluctuated without any obvious trend. Recruitment indices (estimated abundance of shrimp between 13 and 16mm CL) derived from Norwegian (Hvingel and Thangstad, 2018b) and Russian (Zakharov, 2014) surveys showed no major changes from 2004 to 2013, but there are no data available since 2013.

The assessment model estimates biomass in relation to  $B_{MSY}$  and fishing mortality in relation to  $F_{MSY}$ , and considers two other reference points that ICES uses within its MSY framework for providing advice: MSY  $B_{trigger}$  (50% of  $B_{MSY}$ ), a biomass encountered with low probability if  $F_{MSY}$  is implemented, and  $B_{LIM}$  (30% of  $B_{MSY}$ ), the biomass below which recruitment is expected to be impaired. The assessment also considers  $F_{LIM}$  (170% of  $F_{MSY}$ ), the fishing mortality that would drive the stock to  $B_{LIM}$ .

The most recent assessment in 2018 shows that there has been no change in stock status since the original assessment. The estimated biomass has been above  $B_{MSY}$  since the start of the fishery in the 1970s, and the fishing mortality rate has been well below  $F_{MSY}$  throughout the duration of the fishery (Figure 2). Assuming a total catch of 45,000 tonnes in 2018, the assessment estimated that fishing mortality in 2018 would be 0.12 x  $F_{MSY}$ , and that biomass in 2019 is projected to be 1.78 x  $B_{MSY}$  (Figure 2, Table 5). The assessment estimates the risk associated with exceeding the various reference points. In 2018, the risk of F being above  $F_{MSY}$  was 2.6%, the risk of falling below  $B_{trigger}$  and  $B_{LIM}$  was 0.2% and zero respectively, and the risk of exceeding  $F_{LIM}$  was 1.2% (NAFO/ICES, 2018). The 2018 assessment also provides model predictions of risk associated with a range of catch levels in 2019. Assuming a catch of 45,000 tonnes for 2018, catch options up to 120,000 tonnes for 2019 have a low probability of exceeding  $F_{MSY}$  (21%) and  $F_{LIM}$  (10%), or of the biomass going below  $B_{trigger}$  (3.6%) and  $B_{LIM}$  (1.0%) by the end of 2019, and all are likely to maintain the stock at its current high level (NAFO/ICES, 2018). More detail of the most recent values of the various stock indices can be found in the 2018 stock assessment report (NAFO/ICES, 2018).





**Figure 2.** Estimated time series of relative biomass (B/B<sub>MSY</sub>) and fishing mortality (F/F<sub>MSY</sub>). The solid black lines are the median with 90% probability intervals. The dotted lines are the B<sub>LIM</sub> and F<sub>LIM</sub> reference points and the red lines are the MSYB<sub>trigger</sub> and F<sub>MSY</sub> reference points. (Source: ICES, 2018a).

**Table 5**. Northern shrimp (Pandalus borealis) in subareas 1 and 2 (Northeast Arctic): state of the stock and fishery relative to reference points. (Source: ICES, 2018a)



In conclusion, the most recent stock assessment by NIPAG in 2018 shows that there is no change in the status of the stock in recent years. Based on the 2018 stock assessment, ICES advises that catches of up to 70,000 tonnes in 2019 would maintain stock biomass well above  $B_{MSY}$ , and move the exploitation rate a little closer to, but still well below,  $F_{MSY}$  (ICES, 2018a). Even with significant recent increases in fishing effort in the fishery, catches are again forecast to be much lower than 70,000 tonnes.

The assessment methodology has been in place since 2006. An external peer review of the 2016 NIPAG assessment was undertaken by the University of Maine Review Group (see NAFO/ICES, 2016 for further details). The Review Group concluded that the assessment should be accepted but that transition towards a better modelling framework should be considered at the next ICES benchmark, which is currently scheduled for 2020.

#### 3.2.2 Impact on the ecosystem

The Norwegian shrimp fishery in the Barents Sea uses a small-mesh trawl gear with a minimum stretched mesh size of 35 mm. The mesh size used in the cod end by all vessels is 44 mm although a smaller mesh size (42 mm) is permitted in the Svalbard FPZ. All trawls are equipped with mandatory sorting grids, limiting the by-catch of juvenile fish. Temporary closing of areas where excessive bycatch of juvenile cod, haddock, Greenland halibut, redfish or shrimp <15 mm CL is encountered also reduces bycatch. There are no quantitative estimates of discards of shrimp in the Norwegian fishery but discards are considered to be minimal as there are no limits on catches through quotas. Observer sampling on Estonian vessels which fish in both the Svalbard FPZ and the Loophole provided an estimate of shrimp discards of 0.6% by weight of the total catch (NAFO/ICES, 2018). Bycatch rates of other species are estimated from at-sea inspections and research surveys and are corrected for differences in gear selection pattern and then raised to total fleet catches (ICES, 2018b). With the Nordmøre sorting grid, only small individuals (5-25 cm) of cod, haddock, Greenland halibut and redfish are caught. There are negligible interactions of the shrimp fishery with ETP species. Revised and updated discard estimates of cod, haddock and redfish juveniles from 1983 to 2017 were available from the Norwegian commercial shrimp fishery (Figure 3). The observer programme in the Estonian fishery,

which takes place in two of the same fishing areas as the Norwegian fishery (Svalbard FPZ and the Loophole), estimated that the weight of fish discards was 2.9% of the total catch (NAFO/ICES, 2018).



Year

**Figure 3**. Estimated bycatch of cod, haddock and redfish (million individuals) in the Norwegian shrimp fishery. (Source: NAFO/ICES, 2018)

The majority of vessels operate on the soft sea bed, which causes no lasting damage to the substrate. Some vessels operate in areas with harder substrate, and use rock-hopper gear. In both cases, trawl doors make contact with the sea bed and directly impact habitat structure. Vulnerable Marine Ecosystem (VME) habitats are particularly vulnerable to trawling, but in an area as large as the Barents Sea, there may not be sufficient information on the distribution of habitats to fully evaluate the likely impact of shrimp trawling. The MAREANO program aims to map the Norwegian EEZ seafloor. First launched in 2005, the area covered by the program has increased year by year. Information about vulnerable habitat types can be found on its website, although initially the program focused on mapping the seabed along the coast of the Norwegian mainland. In recent years the program has been extended to transects northwards from the Norwegian coastline and to areas south of Svalbard (Figure 4). More information on the MAREANO program and details of the sampling stations can be found on the MAREANO website:

http://www.mareano.no/kart/mareano\_en.html#maps/4050



Figure 4. Stations surveyed by the MAREANO program. (Source: www.mareano.no)

The potential that the shrimp fishery could impact on habitat structure and function led to two conditions being raised during the reassessment. In considering the potential impact of the fishery, the assessment team took into account the distribution of fishing activity in relation to known distribution of the VME habitats, the bio-regional distribution of habitat types, the irregular reproduction and slow growth rates of the vulnerable species with consequent slow recovery rates, the nature of the fishing gear used, and the behaviour of fishermen in avoiding habitats which might damage the fishing gear. According to VMS tracks, the UoA fishing grounds overlap with the location of different indicator species of VME, such as seapen fields and sponges in the Northwestern area of the Svalbard Islands, and soft corals in the central Barents Sea. Whilst move-on rules are in place when VME species are encountered, and coral reefs in coastal areas which have been identified through the MAREANO program have already been protected as Marine Protected Areas, the MAREANO program has limited information on the status of benthic habitats in the central Barents Sea. In view of the overlap between the documented distribution of indicator species of VME and the UoA fishing grounds for the offshore fleet, it was not possible to state that the UoA is highly unlikely to reduce structure and function of VME habitats in the Barents Sea to a point where there would be serious or irreversible harm. A second condition was raised because there were no specific measures in place to protect seapen fields and burrowing megafauna communities.

The Directorate of Fisheries provided the audit team with VMS data for the Barents Sea shrimp trawling fleet for 2018. The fishing activity in 2018 across the Barents Sea and within the coastal fishing areas is shown in Figures 5 and 6. Comparison of 2018 data with 2017 data (not shown in this report, but data provided at the surveillance audit) and with VMS data presented in previous surveillance audits for this fishery during the initial certification period demonstrate that there have been only minor changes in the distribution of fishing activity over the last few years. For the offshore fleet, there has been an increase in fishing in areas east of Hopen in the Barents Sea in recent years and in the Russian EEZ, but there appeared to be no significant overall changes in the activity of the coastal fisheries.



**Figure 5.** VMS data for Norwegian shrimp trawling fleet in the Barents Sea in 2018. (Source: Directorate of Fisheries)



Figure 6. VMS data for Norwegian coastal shrimp trawling fleet in 2018. (Source: Directorate of Fisheries)

Since the publication of the Public Certification Report for the recertification (DNV GL, 2018), there has been one key change in the regulations that will help to minimise the impact of the shrimp and other trawl fisheries on VME species. At the surveillance audit, the Directorate of Fisheries described the new bottom gear regulations that will be implemented on 1 July 2019 under regulation J-39-2019. In addition to already existing closed areas (such as coldwater coral reefs) the regulation introduced 10 new closed areas, including areas with identified soft corals, sea lilies and sponge and sea pen aggregations (Figure 7). (Two of these areas, nos. 9 and 10, are closed areas for scientific purposes.) In addition, the new regulation defines areas where there is currently no fishing (the green shaded areas on Figure 7) for which any proposed new fishery (including the use of gears that have not been used for many years) must first submit an application and then gain approval to obtain a fishing permit. This regulation applies to all Norwegian waters including the Svalbard FPZ, and any such proposed new fishery will not be permitted if there are known areas of VME species.

The mapping program which produced Figure 7 is publicly available on the Directorate of Fisheries website at the following address:

#### https://kart.fiskeridir.no/fiskeinord

The program permits the plotting of closed areas and areas where fishing does not currently take place, and can be overlaid with information on distribution of VME species such as corals based on results of MAREANO sampling and research survey data. The maps show that both soft corals and sponges are widely distributed across the Barents

Sea and this information can be used to determine which areas should be closed to fishing. The mapping program also permits the overlay of fishing activity data (Figure 8) which shows, for example, that some VMEs have been identified in the MAREANO project as being in high density trawling areas. Such areas can be closed if necessary. One major advantage of this new mapping program on the DoF website is that all stakeholders can access the information on VME distributions, fishing activity and closed areas, and so can be fully informed about why some areas are closed to fishing and why other areas remain open. As more information becomes available from the MAREANO project and from research studies, decisions on closure of areas to fishing becomes better informed. This new regulation and the information that has been synthesised into the mapping program demonstrates that a strategy is being developed to evaluate and manage the impact of shrimp trawling on VME habitats and to ensure that fishing cannot move into new areas without an evaluation of whether such fishing would impact on VME habitats. The MAREANO project is being extended into areas of the Barents Sea that are not currently fished and this may result in further closed areas.

Regulation J-39-2019 can be found at:

https://www.fiskeridir.no/Yrkesfiske/Regelverk-og-reguleringer/J-meldinger/Gjeldende-J-meldinger/J-39-2019

The Directorate of Fisheries' press release on the regulation can be found here:

https://www.fiskeridir.no/Yrkesfiske/Nyheter/2019/0319/Betre-vern-for-saarbare-artar-i-Barentshavet

In addition to the newly-implemented legislation, the Client has engaged a consultant to plan and coordinate a project to collect and analyse bottom habitat data in relation to all Norwegian fisheries in the Barents Sea and other fishery areas. This project will collect information on protected areas identified by DoF, existing information on distribution of VME indicator species from MAREANO and other sources, predictive modelling on distribution of VMEs as undertaken by Buhl-Mortensen *et al.* (2019) on corals and sponges, fishing locations on a high resolution spatial scale and data from the reference fleet on benthic organisms, particularly VME indicator species, captured by fishing vessels, including the prawn fleet.





**Figure 7**. Newly closed areas (red) under regulation J-39-2019 to protect a variety of VME habitats including soft corals, sponges, seapens and sea lilies. (Areas 9 and 10 are closed for scientific purposes.) Green areas represent grounds which have not been recently fished and for which there are new requirements under regulation J-39-2019. (Source: Directorate of Fisheries)



**Figure 8**. Fishing effort overlaid over newly closed areas (red) under regulation J-39-2019 to protect a variety of VME habitats including soft corals, sponges, seapens and sea lilies. Unfished areas are shaded green. (Source: Directorate of Fisheries)

# 3.2.3 Changes to the management system

Norwegian vessels fishing for shrimp in the Barents Sea require a licence, but there is no overall TAC established for this fishery, although Norwegian and other non-Russian vessels fishing in the Russian EEZ are subject to a catch quota (6000 tonnes for Norwegian vessels in 2019). Activity of third country fleets operating in the Svalbard zone is also restricted by the number of effective fishing days and the number of vessels by country (NAFO/ICES, 2018). There are minimum mesh sizes for shrimp nets and sorting grates are mandatory, and there is extensive use of area closures when small shrimp (< 15mm CL) or small fish (red fish, Greenland halibut, cod and haddock) are present in catches above defined limits. Fishing activity is monitored rigorously through recording of fishing position by VMS and log book data, inspections at sea are carried out through a surveillance programme and by the Norwegian Coast Guard's surveillance of the fishing fleet, and monitoring of all landings are conducted by the sales organisations.

The recertification identified two deficiencies in the harvest strategy which resulted in two conditions being raised. Firstly there is no overall control on fishing effort within the international area managed by NEAFC known as the Loophole. In addition, whilst current catches are significantly below the precautionary maximum catches advised by ICES, there are at present no explicit harvest control rules in place to respond to changes in stock status.

Since the recertification report (DNV GL, 2018) there have been no major changes to the key elements of the management system and regulations relating to the harvest strategy. There are plans to roll out the use of the Electronic Reporting System (ERS) to all vessels in the fleet irrespective of vessel size, but this will take place over many years.

As described above there has been new legislation relating to the impact of the fishery on VME habitats (J-39-2019). In addition to the mapping of VME habitats, Regulation J-39-2019 also formalises the move-on rules which close areas to shrimp fishing temporarily if bycatch rates of cod, haddock, redfish and Greenland halibut exceed prescribed limits. The maximum permitted number of juvenile fish per 10kg of shrimp catch are 8 cod, 20 haddock, 3 redfish or 3 Greenland halibut. An example of recent closures under this legislation to the north and east of Svalbard due to high catches of juvenile redfish, cod and Greenland halibut are shown in Figure 9. A detailed description and maps of temporary closed areas are published on the Directorate of Fisheries website:

#### https://www.fiskeridir.no/Yrkesfiske/Regelverk-og-reguleringer/Stenging-og-aapning/Test-Nord-for-62-N

The bycatch from the shrimp fishery is limited to 5% of any single tow, and inspections by Coastguard, DoF and sales organisations provide evidence that this limit is not being exceeded.



Figure 9. Closed areas north and east of Svalbard due to high bycatch of juvenile redfish, cod and Greenland halibut which exceeded limits. (Source: Directorate of Fisheries)

Inspections have been carried out by Norwegian Coast Guard in the Norwegian EEZ and in the Svalbard FPZ, and by Norwegian and other national authorities in the Loophole in 2018 but no major infringements have been reported. As in all years there have been a few minor infringements for which warnings or fines have been issued, but there is no evidence of any systematic non-compliance in the shrimp fishery. There have been some reports in the Norwegian press concerning a National Audit Agency review of potential misreporting of landings declarations but there is no evidence that misreporting occurs in the shrimp fishery because there are no overall catch quotas, and therefore no incentive to mis-report landings.

# 3.2.4 Personnel

Since the recertification of the fishery there have been no changes in personnel within the Client Organisation or involved in the science and management of the fishery or within the fishing industry that would have an impact on the fishery and its sustainability.

# 3.2.5 CoC considerations

Since the re-assessment of the fishery the only change is that more of the catch is landed at places for storing the products in local cold stores in Båtsfjord and Vesterålen before sale. However the structure of the landings is the same as before, and there is no change in the CoC from the re-assessment that affects the systems of tracking and tracing in the fishery and the risk for mixing of certified with non-certified shrimps is negligible.

For other issues no changes in the CoC from the re-assessment were observed during the surveillance activities, and the systems of tracking and tracing in the fishery are still considered sufficient to make sure all prawn and prawn products identified and sold as certified by the fishery originate from the certified fishery.

Except for landings in Båtsfjord and Vesterålen the landing sites are identical to the initial assessment.

Land-based peeling/processing plants, as well as cold/freezer stores, that perform anything more than movement of products must have separate CoC certification in accordance with MSC Certification Requirements.

# 3.3 Version details

Table 6 – Fisheries program documents versions	
Document	Version number
MSC Fisheries Certification Process	Version 2.1
MSC Fisheries Standard	Version 2.01
MSC Surveillance Reporting Template	Version 2.01
MSC General Certification Requirements	Version 2.3
MSC Default Assessment tree	FCR version 2.0

# 4 Results

# 4.1 Surveillance results overview

# 4.1.1 Summary of conditions

#### Table 7 Summary of conditions

Condition number	Condition	Performance Indicator (PI)	Status	PI original score	PI revised score
1	Regulations limiting fishing effort in international waters (ICES Ia and Ib), that are responsive to the state of the stock, should be implemented to demonstrate that the elements of the harvest strategy work together towards achieving management objectives for the Barents Sea shrimp stock as a whole.	1.2.1	On target	70	70
2	Well defined harvest control rules shall be implemented for the shrimp stock as a whole to ensure that the exploitation rates are reduced as limit reference points are approached, the HCRs are likely to be robust to the main uncertainties, and that available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	1.2.2	On target	60	60
3	Demonstrate that the UoA is <b>highly unlikely</b> to reduce structure and function of the VME habitats located in the different fishing grounds, to a point where there would be serious or irreversible harm.	2.4.1	On target	70	70
4	Provide evidence that the management measures (designed to ensure that the UoA does not pose a risk of serious or irreversible harm to the habitats) are successfully implemented and working effectively, based on <b>information directly about the UoA and/or</b> <b>habitats</b> involved.	2.4.2	On target	75	75

# 4.1.2 Total Allowable Catch (TAC) and catch data

# Table 8 Total Allowable Catch (TAC) and catch data

TAC	Year	2019	Amount	N/A
UoA share of TAC	Year	2019	Amount	N/A
UoA share of total TAC	Year	2019	Amount	N/A
Total green weight catch by UoC	Year (most recent)	2018	Amount	22695 tonnes
Total green weight catch by UoC	Year (second most recent)	2017	Amount	7010 tonnes

# 4.1.3 Recommendations

Table 9 Summary	of recommendations
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Recommendation number	Recommendation	Performance indicator
1	Systems are put in place to ensure that all interactions with ETP species are recorded on log books irrespective of whether they are landed or discarded and that the captures of all ETP species are mapped.	2.3.3
2	The recording of all interactions between the UoA and VME habitats, regardless of these being inside the established regulated limits.	2.4.3

# 4.2 Conditions

Performance Indicator	PI 1.2.1 There is a robust and precautionary harvest strategy in place
Indicator	Sla. The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 SG80.
Score	70
Rationale	For the shrimp stock as a whole, the components of this harvest strategy form an implicit management plan and work together to control fishing mortality and maintain a high level of stock biomass, which along with rigorous monitoring of the fishery, ensure that stock management objectives are achieved. SG60 is met. The annual assessment of the status of the stock in relation to reference points ensures that the harvest strategy can be responsive to the state of the stock and works to maintain B>Bmsy by setting upper limits of catch based on an MSY framework. However, a significant component of the shrimp fishery, including an increasing proportion of the Norwegian fishery, takes place in International waters where only technical measures apply, and there is currently therefore no scope for limiting fishing effort within this sub-area of the fishery. Although the proportion of the stock which is in international waters is relatively small and there is a limit on the number of the vessels from the various nations, and the overall lack of effort limitation in this small area is not expected to have any impact on the likelihood of achieving the overall stock management objectives, this is nevertheless a significant weakness in the harvest strategy and therefore SG80 is not met. This is a new condition which was not raised during the original certification because at that time only a very small proportion of the Norwegian fishery took place in international waters.
Condition	By the fourth annual surveillance, regulations limiting fishing effort in international waters (ICES Ia and Ib), that are responsive to the state of the
	stock, should be implemented to demonstrate that the elements of the harvest strategy work together towards achieving management objectives for the Barents Sea shrimp stock as a whole.
Milestones	<ul> <li>Annual surveillance 1: Show written evidence of consultation with relevant authorities and stakeholder groups in relation to options limiting fishing effort in international waters, in particular to request that shrimp is included in the list of species in Annex 1 of the NEAFC Scheme of Control and Enforcement. This milestone is an incremental step toward fulfilling the condition. Its successful completion will not result in a change of score to this PI. Expected interim score: 70</li> <li>Annual surveillance 2: Ensure that shrimp is included in the list of species in Annex 1 of the NEAFC Scheme of Control and Enforcement.</li> </ul>

	<ul> <li>consultation with the relevant authorities. Provide an evaluation of options considered for potential mechanisms for limiting fishing effort. This milestone is an incremental step toward fulfilling the condition. Its successful completion will not result in a change of score to this PI. Expected interim score: 70</li> <li>Annual surveillance 3: Propose regulations for limiting fishing effort to relevant authorities. This milestone is an incremental step toward fulfilling the condition. Its successful completion will not result in a change of score to this PI. Expected interim score: 70</li> <li>Annual surveillance 4: Implementation of regulations for limiting shrimp fishing effort within the NEAFC region known as the Loophole through consultation with relevant authorities. Expected score: 80</li> </ul>
Client action plan	<ul> <li>Action 1.1         Conduct meetings with Ministry of Trade, Industry and Fisheries to explore options limiting fishing efforts in international waters. NFA will also present the ministry with a formal request to include shrimp in the list of species in Annex 1 of the NEAFC Scheme of Control and Enforcement.     </li> <li>Action 1.2         Ensure that shrimp is included in the list of species in Annex 1 of the NEAFC Scheme of Control and Enforcement.     </li> <li>Action 1.2         Ensure that shrimp is included in the list of species in Annex 1 of the NEAFC Scheme of Control and Enforcement. Present an evaluation of options of mechanisms to limit fishing effort.     </li> </ul>
	Action 1.3 Depending on outcomes of 1.2, NFA will propose regulations for limiting fishing effort to relevant authorities. Action 1.4 NFA will demonstrate that the proposed regulations have been implemented.
Consultation on condition	The relevant party here is primarily the Ministry of Trade, Industry and Fisheries. As all scoring under principle 3 for these fisheries confirms, Norwegian management authorities maintain close cooperation with NFA, as well as the larger Norwegian seafood industry. Although successful outcomes cannot be <u>guaranteed</u> , NFA input has heavy emphasis, and there is vast empirical evidence of this. This standing practice in Norwegian management gives the largest degree of credibility to the action plan possible, and the willingness of authorities to engage with us on the conditions can be regarded as a given.
	With this general comment in mind, we also refer to the enclosed letter from
Progress on Condition [Year 1]	NFA to the Ministry asking for a meeting on this subject.At this year's surveillance audit, the Client reported that there had been internal discussions within the Client Organisation and informal discussions with the Ministry of Trade, Industry and Fisheries and with the Directorate of Fisheries on exploring options for limiting fishing effort in international waters. In conjunction with Condition 2 on harvest control rules (HCR), this approach has included the

	impossible, the Client may have to consider exclusion of international waters from the UoC. Based on discussions between the Client and the relevant authorities, the audit
	team considered that the 1 <sup>st</sup> year milestone had been met.
Status of condition	On target

Performance	PI 1.2.2 There are well defined and effective harvest control rules (HCRs)
Indicator	in place.
	Sla. Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY. Slb. The HCRs are likely to be robust to the main uncertainties. Slc. Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.
Score	60
Rationale	Sia. Although there are no formally defined harvest control rules, the fishery is managed through a series of regulations including effort limitation, technical conservation measures (minimum landing size, mesh size and sorting grid regulations, closed areas, move-on rules) and partial TACs in some areas. These management measures have been changed during the history of the fishery, and may in future be changed in order to reduce the exploitation rate if limit reference points are approached. However the stock has been above Bmsy since the start of the fishery, so it is not clear that management measures have previously been changed in response to changes in stock status. The assessment team concluded that HCRs are not in place, but evidence from the Norwegian <i>Pandalus borealis</i> fishery in the Skagerrak and Norwegian Deep, which is managed under the EU-Norway agreement and by the Norwegian authorities, shows that HCRs are available for the Barents Sea <i>Pandalus</i> fishery. In addition, there are already many MSC-certified fisheries in the Barents Sea region which have well-defined harvest control rules in place. The Norway North East Arctic cod and Norway North East Arctic haddock are managed under the EU-Norway agreement and the Norwegian authorities based on ICES advice. The Norway North East Arctic saithe is managed under the EU-Norway agreement and the Norwegian authorities. The Russian Federation Barents Sea cod and haddock fisheries which are managed through the Russian and Norwegian authorities, the Joint Norwegian herring fisheries in the North East Attactic which range across the EEZ's of Russia, Iceland, Norway, Faroe Islands and in international waters have also been certified and have well-defined harvest control rules. The agreements are implemented in Norway under National management systems and advised by ICES. All these fisheries have harvest control rules that have been implemented and shown to be capable of achieving the exploitation levels required under the HCRs, and therefore the assessme

	Although annual stock assessments show that the stock has been above Bmsy throughout the history of the fishery, there are no explicit harvest control rules in place which define what management action will be invoked if the stock biomass declines to levels close to MSY Btrigger or Blim, or if fishing mortality increases to levels above Fmsy and/or close to Flim. The key HCR in relation to stock levels declining below reference points is not well-defined therefore. SG80 is not met and a condition is raised. <b>SIb.</b> Available HCRs and any future modifications to current management measures will be underpinned by the outputs from stock assessments. The current stock assessment model explicitly accounts for inherent uncertainties in input parameters in a quantitative manner, so it can be concluded that available harvest control rules are likely to be robust to the main uncertainties. However as there are currently no formal HCRs in place to trigger the reduction of exploitation rates if stock levels decline below reference points, the SG80 is not met. <b>SIc.</b> In line with SA2.5.5a, evidence from other Norwegian fisheries managed under international agreements where HCRs are in use shows that the available tools are effective in controlling exploitation rates when stock status falls below reference points, ensuring that recruitment is not impaired and that stock biomass is at a level consistent with MSY. SG60 is met therefore. As the tools are not yet in use, and in line with recent advice on the MSC Interpretations webpage (see link below), as the HCRs are only regarded as 'available' in scoring issue (a), it is not possible to score more than 60 for issue (c) since the SG80 refers to the tools 'in use' in the fishery in assessment, not the tools 'in
	use or available'. SG80 is not met therefore. This condition is similar to a condition raised in the original certification, which was not met within the timeframe of the certification. However the assessment team noted that the MSC has issued new guidance in relation to the timeframe required in which to meet conditions raised against PI 1.2.2 in relation to harvest control rules. The MSC has acknowledged that for certified fisheries in which the stock biomass has consistently been above Bmsy during the history of the fishery, that F is consistently below Fmsy, and for which HCRs are available, additional time may be given to the Client in meeting any condition which requires the implementation of a well-defined HCR under PI 1.2.2. This additional flexibility can only be granted to fisheries that will undergo the recertification process under MSC CRv2.0, and that any additional time required to meet the condition must not take more than five years after agreement by MSC, in this case therefore beyond the third annual surveillance audit of the recertification. The audit team concluded that as biomass has been above Bmsy for the entire history of the Barents Sea shrimp fishery, that F is consistently below Fmsy, and that the re-certification of the fishery was conducted using MSC CRv2.0, the MSC agreed therefore that it is appropriate under new MSC Guidelines to extend the deadline for meeting this condition to the third surveillance audit of the recertified fishery.
Condition	By the third annual surveillance, well defined harvest control rules shall be implemented for the shrimp stock as a whole to ensure that the exploitation rates are reduced as limit reference points are approached, the HCRs are likely to be robust to the main uncertainties, and that available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.
Milestones	<ul> <li>Annual surveillance 1: Show written evidence of consultation with relevant authorities and stakeholder groups in relation to options for HCRs, and request that shrimp is included in the list of species in Annex 1 of the NEAFC Scheme of Control and Enforcement.</li> <li>This milestone is an incremental step toward fulfilling the condition. Its successful completion will not result in a change of score to this PI. Expected interim score: 60</li> <li>Annual surveillance 2: Ensure that shrimp is included in the list of species in Annex 1 of the NEAFC Scheme of Control and Enforcement through consultation with the relevant authorities, and provide an evaluation of options considered for potential HCRs.</li> </ul>

	This milestone is an incremental step toward fulfilling the condition. Its successful completion will not result in a change of score to this PI. Expected interim score: 60
	<b>Annual surveillance 3:</b> Implement HCR through consultation with relevant authorities.
Client action plan	This action plan is a direct continuation of NFA's efforts towards implementing an HCR in this fishery during the first certification period. So far, these efforts have not yielded results, but work on this issue continues even as the reassessment is still ongoing. It is NFAs assessment that the main key to fulfilling this condition is to get political acceptance within the Norwegian ministry of Trade, Industry and Fisheries. Crucial meetings are already scheduled between industry and management during the fall of 2017 that may provide important progress on this condition.
	Action 2.1 NFA and industry partners will consult with relevant authorities – principally the Ministry of Trade, Industry and Fisheries – and propose including shrimp on the list of species in Annex 1 of the NEAFC Scheme of Control and Enforcement, and implementing potential HCRs.
	Action 2.2 NFA will ensure that shrimp is included in the list of species in Annex 1 of the NEAFC Scheme of Control and Enforcement and provide an evaluation of options considered for potential HCRs.
	Action 2.3 An HCR shall be implemented at this stage.
Consultation on condition	The relevant party here is primarily the Ministry of Trade, Industry and Fisheries. As all scoring under principle 3 for these fisheries confirms, Norwegian management authorities maintain close cooperation with NFA, as well as the larger Norwegian seafood industry. Although successful outcomes cannot be <u>guaranteed</u> , NFA input has heavy emphasis, and there is vast empirical evidence of this. This standing practice in Norwegian management gives the largest degree of credibility to the action plan possible, and the willingness of authorities to engage with us on the conditions can be regarded as a given.
	With this general comment in mind, we also refer to the enclosed letter from NFA to the Ministry asking for a meeting on this subject.
Progress on Condition [Year 1]	At this year's surveillance audit, the Client reported that NFA, through its daughter organization Fiskebåt, sent a letter to the Directorate of Fisheries (DoF) on 9 April 2018 (see Appendix, section 7), urging the Directorate to convene a working group to develop a proposed HCR. Whilst there has not been a formal response from DoF to this letter, DoF confirmed at the site visit that they had been undertaking internal discussion on how progress could be made on the two issues raised by Conditions 1 and 2. Initial discussions suggest that attempting to list <i>Pandalus borealis</i> in in Annex 1 of the NEAFC Scheme of Control and Enforcement may not be the most efficient route to meeting Conditions 1 and 2 within the required timeframe.
	The Client stressed that they will need to increase their lobbying efforts, leading up to the 2 <sup>nd</sup> surveillance audit, using the full range of approaches and lobbying skills to demonstrate the urgency and importance of achieving an HCR in the fishery.
	In parallel with this, NFA has established communication with Ocean Trawlers in Russia, who is a fishery client in process for MSC certification of prawns on the Russian side. The client agreed to have a meeting (date yet to be decided) to look at potential solutions from a joint industry proposal to the respective

	governments. The Client hoped that by putting some pressure on the two national authorities on both sides may help to achieve some positive progress.
	Based on discussions between the Client and the relevant authorities, the audit team considered that the 1 <sup>st</sup> year milestone had been met.
Status of condition	On target

Performance Indicator	PI 2.4.1. The UoA does not cause serious or irreversible harm to habitat structure and function, considered on the basis of the area covered by t governance body(s) responsible for fisheries management in the area(s) where the UoA operates. SIb: The UoA is highly unlikely to reduce structure and function of the V habitats to a point where there would be serious or irreversible harm.				
Score	70				
Rationale	Different species described by NEAFC and OSPAR as indicators of VME ecosystems have been identified in the UoA fishing grounds. Both Jørgensen <i>et al</i> (2015) and Jakobsen and Ozhigin (2011) have located the spatial distribution of sponges, seapens, and soft corals. These species have been designated by NEAFC as indicators of VMEs in the Barents Sea. Besides, different types of sponges are considered as threatened and declining in the Barents Sea.				
	The assessment team has considered the following scoring elements (VME habitats), following ICES and NEAFC advice and Jorgesen et al (2015) identification of benthic species present in the area:				
	Cold water coral reefs: Lophelia pertusa reef and Solenosmilia variabilis reef.				
	<ul> <li>Coral garden: Hard bottom coral garden and soft bottom coral garden.</li> <li>Deep sea sponge aggregations: Hard bottom sponge gardens and glass sponge communities</li> </ul>				
	<ul> <li>Seapen fields and burrowing megafauna communities.</li> <li>In considering the potential impact of the fishery, the assessment team took into account the distribution of fishing activity in relation to known distribution of the VME habitats, the bio-regional distribution of habitat types, the irregular reproduction and slow growth rates of the vulnerable species with the consequent slow recovery rates, the nature of the fishing gear used, and the behaviour of fishermen in avoiding habitats which might damage the fishing gear. According to VMS tracks, the UoA fishing grounds overlap with the location of different indicator species of VME, such as seapens fields and sponges in the Northwestern area of the Svalbard Islands, and soft corals in the central Barents Sea.</li> </ul>				
	Regulation <u>J-40-2016</u> establishes that if a trawl vessel catches more than 30 kg corals or 400 kg sponges in a single haul the vessel shall stop fishing and move position at least 2 nautical miles in order to avoid such catches and report such incident to the Directorate of Fisheries. Both the client and the Directorate of Fisheries reported not having reached those limits in their catch. In addition there are no records of any catches of corals or sponges in log books irrespective of whether the catches are above or below the thresholds designated under the move-on rules.				
	The Mareano program has mapped some coral reefs in the Norwegian main coast. These coral reefs, most located in coastal areas, have already been protected as Marine Protected Areas, so that the coastal fleet does not fish in there. Besides, trawling is forbidden within 12 nautical miles from the coastline. The Mareano program has however limited information on the status of benthic habitats in the central Barents Sea, as the mapping program has not reached that area yet.				

The team considers that due to the overlap between documented distribution of indicator species of VME and the UoA fishing grounds for the offshore fleet it is not possible to state that the UoA is highly unlikely to reduce structure and function of VME habitats in the Barents Sea to a point where there would be serious or irreversible harm. SG80 is not met for any scoring element.

The fact that there is certain regulation protecting indicator species of VME such as sponges, and soft and hard corals, gives sufficient confidence to these scoring elements to meet SG60.

Other indicator species of VME habitats, present in the area, such as seapens fields and burrowing megafauna communities, are at present not protected by any Norwegian or international regulation, nor by any management measure taken by the UoA. However, VMS tracks show limited possibility of overlap with fishing activity as seapens are mostly located near the islands of Franz Josef Land, norther that the UoA fishing grounds. Seapen and burrowing megafauna scoring elements also meet SG60 due to the limited possibility of interaction.

Scoring element	SG60	SG80	SG100
Cold water coral reefs	Y	Ν	N
Coral gardens	Y	Ν	N
Deep sea sponge aggregations	Y	Ν	N
Seapen fields and burrowing megafauna communities	Y	N	N

Condition 3 relates to one condition in the first certification report. The condition was set on PI 2.4.1.a ("The fishery does not cause serious or irreversible harm to habitat structure, considered on a regional or bioregional basis, and function"). The condition was set because knowledge on the impacts of shrimp trawling on sensitive habitats at the time was incomplete. According to the rationale, the Mareano program was aimed to map the distribution and structure of sensitive habitats in the Barents Sea in the following years. The action required for closing the condition was monitoring the results from the Mareano program and take inmediate action in the UoC to protect sensitive habitats if the results of the Mareano program indicated significant impacts of trawling on sensitive habitats. The condition was closed during the 4<sup>th</sup> surveillance.

Rationale for raising the condition again: Information from

http://www.mareano.no/en/about\_mareano/activities relates the year and location of the different mapped areas. But as shown in the Figures below, mapped areas by 2017 do not fully overlap with the UoA fishing grounds in the central Barents Sea. At present, mapping (by Mareano) of the Barents Sea is limited to its southern and eastern areas. On the other hand, the fishing grounds of the coastal fleet are very well mapped by this program.

The fishing grounds where most of the UoA shrimp catch takes place, the Loop hole area in the central Barents Sea, is at present not mapped by Mareano, as well as the Northwestern coast of the Svalbard area, which has not been mapped yet by Mareano neither.



	This milestone is an incremental step toward fulfilling the condition. Its successful completion will not result in a change of score to this PI. Expected interim score: 70
	<b>Annual surveillance 2</b> : By the end of year 2 there shall be evidence of ongoing work towards the design of necessary plans (i.e. developing options for conservation) and management measures to all VME habitats affected by the UoA, such that the fishery does not cause serious or irreversible harm to VME habitats located in the different fishing grounds.
	This milestone is an incremental step toward fulfilling the condition. Its successful completion will not result in a change of score to this PI. Expected interim score: 70
	<b>Annual surveillance 3</b> : Evaluate the options developed in year 2. Consider suggested modifications if needed, and finalise and agree on conservation and management measures. By the end of the year a partial strategy for the protection of the different VME habitats from trawling shall be agreed upon, either at client group or at a higher level.
	This milestone is an incremental step toward fulfilling the condition. Its successful completion will not result in a change of score to this PI. Expected interim score: 70
	<b>Annual surveillance 4</b> : Implement the agreed upon partial strategy. A formal commitment to the agreed upon conservation and management measures shall remain in place for the duration of the certification period.
	The client shall provide overlapped maps of VMS records for the UoA and OSPAR threatened or declining habitats, to show avoidance of VME.
	Demonstrate that the UoA is <b>highly unlikely</b> to reduce structure and function of the VME habitats located in the different fishing grounds, to a point where there would be serious or irreversible harm.
	Expected score: 80
Client action plan	Action 3.1 Consult with IMR and Directorate of Fisheries – or third parties if necessary- to perform VMS data analysis of bottom gear affected area and probable overlap with VME habitats. The analysis shall include models of rate of destruction and regeneration times. Completed by SA2
	Action 3.2 Review the results of the study and consult management authorities regarding any needs for protective measures that may arise from the study. Completed by SA2.
	Action 3.3 Depending on the outcomes of Action 3.1 and 3.2; if further management measures are identified as necessary, NFA will promote implementing them in official Norwegian management. An implementation process can then be reported at SA3, and evaluated at SA4.
Consultation on	There is an ongoing process in the Directorate of Fisheries on this subject, which
condition	has been initiated by and is in close cooperation with NFA. The process relates to
	conclusion on this condition for the prawn fishery is therefore not improbable. As
	documentation of this ongoing process, we disclose a letter of 26.05.2017 from the Directorate of Fisheries to the Ministry. We also refer to the general rationale under condition 1 and 2 concerning implicit cooperation between NFA and
	Norwegian authorities.
Progress on Condition [Year 1]	that significant progress had been made in relation to this condition through both the collection and synthesis of data and through the implementation of new
	legislation. The MAREANO project continues to collect information on the

	distribution of VME habitats through the extension of transects northwards from the Norwegian coastline and to areas around Svalbard. The MAREANO data show that some VMEs have been identified in high density trawling areas, and such areas can be closed if necessary. The data from the MAREANO program and research studies have now been synthesised into a mapping program which is publicly available on the Directorate of Fisheries website. The mapping program allows the plotting of VME habitat distribution overlaid with current closed areas and fishing activity allowing decisions to be made about the number and geographical distribution of areas closed to trawling.
	implemented on 1 July 2019 under regulation J-39-2019. In addition to already existing closed areas (such as coldwater coral reefs) the regulation introduced 10 new closed areas, including areas with identified soft corals, sea lilies and sponge and sea pen aggregations. (Two of these areas, nos. 9 and 10, are closed areas for scientific purposes.) In addition, the new regulation defines areas where there is currently no fishing for which any proposed new fishery (including the use of gears that have not been used for many years) must first submit an application and then gain approval to obtain a fishing permit. This regulation applies to all Norwegian waters including the Svalbard FPZ, and any such proposed new fishery will not be permitted if there are known areas of VME species. The MAREANO project is being extended into areas of the Barents Sea that are not currently fished and this may result in further closed areas.
	In addition to the newly-implemented legislation, the Client has engaged a consultant to plan and coordinate a project to collect and analyse bottom habitat data in relation to all Norwegian fisheries in the Barents Sea and other fishery areas. This project will collect information on protected areas identified by DoF, existing information on distribution of VME indicator species from MAREANO and other sources, predictive modelling on distribution of VMEs as undertaken by Buhl-Mortensen <i>et al.</i> (2019) on corals and sponges, fishing locations on a high resolution spatial scale and data from the reference fleet on benthic organisms, particularly VME indicator species, captured by fishing vessels, including the prawn fleet.
	The audit team concluded that the Directorate of Fisheries had developed a coordinated approach including a network of closed areas to evaluating and mitigating the potential impact of the shrimp fishery on VME habitats. Along with further information collected through the MAREANO program and research studies, this approach should in future provide evidence that the shrimp fishery is highly unlikely to reduce structure and function of the VME habitats to a point where there would be serious or irreversible harm.
Status of condition	Based on the evidence presented at the surveillance audit, the audit team considered that the 1 <sup>st</sup> year milestone had been met and that work was ahead of target in meeting the condition within the specified timeframe.

Performance Indicator	This condition is only relevant for the seapen fields and burrowing megafauna communities scoring elements.
	PI 2.4.2. There is a strategy in place that is designed to ensure the UoA does not pose a risk of serious or irreversible harm to the habitats.
	SIa: There is a <b>partial strategy</b> in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above.

	SIb: There is some <b>objective basis for confidence</b> that the measures/partial strategy will work, based on <b>information directly about the UoA and/or habitats</b> involved.				
	SIc: There is <b>some quantitative evidence</b> that the measures/partial strategy is				
0	being implemented successfully.				
Score Bationalo	75 PL2.4.2.a: Seapen fields and hurrowing magefound communities searing element				
Kationale	only reaches SG60. There is limited overlap of the fishery with these VME habitats, and there are no directed measures to protect these indicator species of VME (although it is not clear if these are necessary) which at present only benefit from general measures such as effort limitation and gear design which on their own fail to be considered as a partial strategy for this scoring element.				
	PI 2.4.2.b: Seapen fields and burrowing megafauna communities scoring element only reaches SG60. This is because the limited applicable measures (effort limitations and gear design) are considered likely to work just because according to Jorgensen et al (2015) there is very limited overlap of seapen fields distribution (most of which are located near the Franz Josef Land Island) and the UoA fishing grounds, located in southern positions.				
	PI 2.4.2.c: Seapen fields and burrowing megafauna communities does not meet SG80 as there are no specific measures to implement.				
	This condition relates to condition 3 of this recertification report (on PI 2.4.1.b), which requires the UoA to demonstrate that it is highly unlikely that the UoA activity reduces the structure and function of the VME habitats located in the UoA fishing grounds to a point where there would be serious or irreversible harm. While condition 3 applies to all VME habitats in the fishing grounds, Condition 4 only applies to seapen fields and burrowing megafauna communities scoring element.				
Condition	Provide evidence that the management measures (designed to ensure that the UoA does not pose a risk of serious or irreversible harm to the habitats) are successfully implemented and working effectively, based on <b>information directly about the UoA and/or habitats</b> involved.				
Milestones	<b>Annual surveillance 1</b> : There shall be evidence of the Client's plan to evaluate potential damage to seapen fields and burrowing megafauna communities appropriate to this UoA. There shall be evidence of engagement with a research institution with the goal of evaluating potential damage to these VME habitats by fishing activities of this UoA.				
	This milestone is an incremental step toward fulfilling the condition. Its successful completion will not result in a change of score to this PI. Expected interim score: 75				
	<b>Annual surveillance 2</b> : By the end of Year 2 there shall be evidence of ongoing work towards the implementation of the plan; i.e. developing options for conservation and management measures to seapen fields and burrowing megafauna communities affected by the UoA, such that the fishery does not cause serious or irreversible harm to this habitat structure, on a regional or bioregional basis, and function.				
	These options may be developed with the support of a research institution, or may be developed within the client group, as appropriate.				
	This milestone is an incremental step toward fulfilling the condition. Its successful completion will not result in a change of score to this PI. Expected interim score: 75				
	<b>Annual surveillance 3</b> : Evaluate the options developed in year 2. Consider suggested modifications if needed, and finalise and agree on conservation and management measures. By the end of the year a partial strategy for the protection of seapen fields and burrowing megafauna communities from trawling shall be agreed upon, either at client group level or at a higher level.				

	This milestone is an incremental step toward fulfilling the condition. Its successful completion will not result in a change of score to this PI. Expected interim score: 75
	<b>Annual surveillance 4</b> : Implement the agreed upon partial strategy. A formal commitment to the agreed upon conservation and management measures for seapen fields and burrowing megafauna communities shall remain in place for the duration of the certification period.
	The client shall provide evidence that the requirements of SIa, SIb and SIc are met at SG80 level.
	Provide evidence that the management measures (designed to ensure that the UoA does not pose a risk of serious or irreversible harm to the habitats) are successfully implemented and working effectively, based on <b>information directly about the UoA and/or habitats</b> involved.
	Expected score: 85.
Client action plan	This condition is closely linked to condition 3 and especially the outcomes of action 3.2
	Action 4.4
	Action 4.1
	fishing grounds to explore the need to identify and regulate areas where further
	protection of indicator species of VMF may be needed. The possibility of including
	indicator species of sea pens and burrowing megafauna to existing move-on
	regulations and direct recording of bycatch of such species will be explored.
	Action 4.2
	The discussed management options will be evaluated and NFA will engage with
	authorities to see them implemented across the UoA as official Norwegian regulation.
	Action 4.2
	Appropriate management measures shall be implemented by SA3.
	Action 4.4
	The results of the adopted measures are to be reviewed.
Consultation on condition	There is an ongoing process in the Directorate of Fisheries on this subject, which has been initiated by and is in close cooperation with NFA. The process relates to
	the conditions tied to the Norway cod and haddock fisheries, and an earlier
	conclusion on this condition for the prawn fishery is therefore not improbable. As
	documentation of this ongoing process, we disclose a letter of 26.05.2017 from the
	condition 1 and 2 concerning implicit conneration between NEA and Nerwegian
	authorities
Progress on	At this year's surveillance audit, the Client and Directorate of Fisheries reported
Condition [Year 1]	that significant progress had been made in relation to this condition through both
	the implementation of new legislation and the collection and synthesis of data. The
	Directorate of Fisheries described the new bottom gear regulations that will be
	implemented on 1 July 2019 under regulation J-39-2019. In addition to already
	existing closed areas (such as coldwater coral reets) the regulation introduced 10
	new closed areas, including areas with identified soft corals, sea lilles and sponge
	for scientific purposes ) In addition the new regulation defines areas where there
	is currently no fishing for which any proposed new fishery (including the use of
	gears that have not been used for many years) must first submit an application and
	then gain approval to obtain a fishing permit. This regulation applies to all
	Norwegian waters including the Svalbard FPZ, and any such proposed new fishery
	will not be permitted if there are known areas of VME species. The MAREANO

	project is being extended into areas of the Barents Sea that are not currently fished and this may result in further closed areas.
	The MAREANO project continues to collect information on the distribution of VME habitats through the extension of transects northwards from the Norwegian coastline and to areas around Svalbard. The MAREANO data show that some VMEs have been identified in high density trawling areas, and such areas can be closed if necessary. The data from the MAREANO program and research studies have now been synthesised into a mapping program which is publicly available on the Directorate of Fisheries website. The mapping program allows the plotting of VME habitat distribution overlaid with current closed areas and fishing activity allowing decisions to be made about the number and geographical distribution of areas closed to trawling. The MAREANO program is particularly important as it has shown that seapens are found even in areas which have been heavily trawled, and this information allows decisions to be made about whether or not to close areas to trawling. Indeed closed areas to protect seapens have been implemented as part of regulation J-39-2109.
	In addition to the newly-implemented legislation, the Client has engaged a consultant to plan and coordinate a project to collect and analyse bottom habitat data in relation to all Norwegian fisheries in the Barents Sea and other fishery areas. This project will collect information on protected areas identified by DoF, existing information on distribution of VME indicator species from MAREANO and other sources, predictive modelling on distribution of VMEs as undertaken by Buhl-Mortensen <i>et al.</i> (2019) on corals and sponges, fishing locations on a high resolution spatial scale and data from the reference fleet on benthic organisms, particularly VME indicator species, captured by fishing vessels, including the prawn fleet.
	The audit team concluded that the new regulation (J-39-2019) and the information that has been synthesised into the mapping program demonstrates that a strategy is being developed to evaluate and manage the impact of shrimp trawling on VME habitats, including seapens and burrowing megafauna and to ensure that fishing cannot move into new areas without an evaluation of whether such fishing would impact on VME habitats.
Status of condition	Based on the evidence presented at the surveillance audit, the audit team considered that the 1 <sup>st</sup> year milestone had been met and that work was ahead of target in meeting the condition within the specified timeframe.
Jorardo or condition	

#### Progress in relation to recommendations.

**Recommendation 1.** Systems are put in place to ensure that all interactions with ETP species are recorded on log books irrespective of whether they are landed or discarded and that the captures of all ETP species are mapped (PI 2.3.3).

The Client reported that vessels in the reference fleet are fully reporting all interactions with ETP species. For the larger vessels in the fleet, all non-commercial bycatch including ETP species should be recorded on the log sheets, but there is some uncertainty as to the level of recording that occurs in practice. The Directorate of Fisheries is planning to extend the recording of catches electronically to all vessels in the fleet irrespective of size, and when the ERS is in place on all vessels, DoF will stress the importance of all vessels recording interactions with ETP species and will check compliance.

**Recommendation 2.** The recording of all interactions between the UoA and VME habitats, regardless of these being inside the established regulated limits (PI 2.4.3).

The approach to recording all interactions with VME habitats has been implemented within the reference fleet, but there is uncertainty about whether such recording is undertaken by the larger vessels using log books. As with recording of interactions with ETP species, this approach will be enforced when the ERS has been extended to all vessels irrespective of size.

# 4.3 Client Action Plan

There have been no changes to the milestones for the current conditions and no new conditions raised at this surveillance audit, and therefore there is no requirement to make any revisions to the Client Action Plan.

# 4.4 Re-scoring Performance Indicators

There is no requirement to rescore any Performance Indicators at this surveillance audit.

# **5** References

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DNV GL. 2018. Public Certification Report for the Reassessment of the Norway North East Arctic cold water prawn fishery, 310pp.

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# 6 Appendices

# 6.1 Evaluation processes and techniques

# 6.1.1 Site visits

The first surveillance audit was performed as an on-site audit and conducted according to MSC Fisheries Certification Process, version 2.1, 31 August 2018. The default assessment tree, set out in the MSC Certification Requirements v2.0, was used for this surveillance.

The surveillance was announced on the MSC website on 11 April 2019 followed by a supporting notice to stakeholders issued by the MSC on the same date. Direct email notification was also sent to the stakeholders that had previously been identified for this fishery, inviting interested parties to contact the audit team.

The surveillance visit for this fishery was conducted on 27 and 28 May 2019 in Oslo and Bergen. Also there was a skype meeting with IMR on 24 May 2019. Member of the original assessment team, Julian Addison, and DNV GL project manager Sigrun Bekkevold gathered input from the Ministry of Trade, Industry and Fisheries, Directorate of Fisheries, Institute of Marine Research as well as from the fishery client.

A list of participants and issues discussed in the surveillance meetings are shown in Table 10.

Date	Name and affiliation	Key issues			
27.05.2019	Client group	Review of basic info about the company:			
	Tor Bjørklund Larsen, Norges Fiskarlag	Changes in ownership or organizational structure			
	Erlend Grimsrud, Norges	Roles and responsibilities in the MSC			
	FISKARIAG	Fishery certification process			
	Kjell-Aflid Tølte, Skagefaklisk	Opdated vessel/certificate member list     Poview of fishing operations:			
	<ul> <li>Jali Dieusaliu, Skagelakiisk</li> <li>Tor-Edgar Pipman, Norges</li> </ul>	Changes in fishing season, allocation of			
	Råfisklag	fishing days, fishing areas and gear used (specifications)			
		<ul> <li>Changes in recording of catch and effort data</li> </ul>			
		Review of impact on ecosystem:			
		<ul> <li>List of all by-catch of fish species (species and quantities 3 preceding years)</li> </ul>			
		<ul> <li>List of by-catch of marine mammals,</li> </ul>			
		birds, ETP species (species and			
		quantities)			
		<ul> <li>Changes in recording of bycatch of fish and shellfish species, marine mammals, ETP species and birds</li> </ul>			
		Changes in discarding practices			
		<ul> <li>Changes in the overlap of the fishery with sensitive habitats and closed areas</li> </ul>			
		Compliance with rules and regulations			
		Change in control, surveillance and			
		monitoring routines			
		<ul> <li>Disputes with national/ international</li> </ul>			
		authorities during 2017/2018/2019.			
		<ul> <li>Records of sanctions and penalties (if any) for 2017/2018/2019.</li> </ul>			
		Chain of Custody start. Changes in:			
		<ul> <li>Traceability system on board and at landing</li> </ul>			
		<ul> <li>Labelling of products/changes in labeling of products</li> </ul>			
		<ul> <li>List of landing sites in 2018/2019</li> <li>Eirst point of landing</li> </ul>			
		First point of sale			
		Main products/change in product range			

#### Table 10. List of participants and issues discussed

		Main markets
		Review of progress against conditions and recommendations
27.05.2019	The Norwegian Ministry for	Function, role and responsibility
	<ul> <li>Geir Ervik, Ministry</li> <li>Sara Lier Fagerbakke, Ministry</li> <li>Mari Didriksen, Ministry</li> <li>Tor Bjørklund LArsen, Norges Fiskarlag</li> </ul>	<ul> <li>Changes in harvest strategy including regulations limiting fishing effort and harvest control rules</li> </ul>
		<ul> <li>Short-term and long-term management objectives for the fisheries including update on Long Term Management Strategy and harmonising Real Time Closures (RTC</li> </ul>
		Setting of TACs in the fishery in relation to scientific advice
		<ul> <li>Changes in recording of landings and discards (of non-commercial species) in log books</li> </ul>
		Catch data and VMS data for three most recent fishing seasons
		Level of slipping/discards in shrimp fisheries     in 2018/19
		Strategy for minimising or eliminating ETP by- catch
		Strategy and plans for protection of sensitive habitats, Natura 2000 sites
		Changes in control, surveillance and monitoring
		<ul> <li>Fishermen's compliance with laws and regulations</li> </ul>
		<ul> <li>Significant discrepancies found at landing control for shrimp fisheries in 2016-2018</li> </ul>
		Changes in consultation and decision-making process
		Changes in mechanisms for resolution of legal disputes
		Research programmes and strategic planning
		Evaluation of management system
28.05.2019	Directorate of Fisheries and	Management
	IMR	Function, role and responsibility
	<ul> <li>Gunnstein Bakke, DoF</li> <li>Carsten Hvingel, IMR (by skype)</li> <li>Tor Bjørklund Larsen, Norges Fiskarlag</li> </ul>	Changes in harvest strategy for the fisheries, including regulations limiting fishing effort and harvest control rules
		Changes in short-term and long-term management objectives for the fisheries
		Changes in regulations for the fisheries in the relevant geographical area
		<ul> <li>Changes in observed fishing patterns (gear used, fishing area, number of boats, fishing season, VMS data)</li> </ul>
		Changes in control, surveillance and monitoring routines/regulations applied to the fisheries in the relevant geographical area

		<ul> <li>Changes in strategy for minimising or eliminating ETP by-catch</li> <li>Changes in strategy and plans for protection of sensitive habitats</li> <li>Fishermen's compliance with laws and regulations.</li> <li>Significant discrepancies found at landing control for the fisheries in the last year</li> <li>Catch data for the most recent fishing season</li> <li>Updated VMS data for the fisheries</li> </ul>
		<ul> <li>Research</li> <li>Changes in sampling programmes/level of sampling and surveys including observer programmes</li> <li>Integration of national data collection programmes and stock assessments with ICES assessments</li> <li>Changes in stock status, stock structure and recruitment</li> <li>Changes in monitoring programmes for bycatch, discard, and ETP species</li> <li>Changes in level of slipping/discards</li> <li>Changes in impact of the fishery on marine habitats and the ecosystem.</li> <li>Changes in research strategy or programmes for the fishery</li> </ul>
24.05.2019	<b>IMR</b> Lis Jørgensen, IMR By skype	<ul> <li>Changes in impact of the fishery on marine habitats and the ecosystem.</li> <li>Changes in research strategy or programmes for the fishery</li> </ul>

The fishery remains in conformance with the scope criteria relating to unilateral exemption and destructive fishing practices (MSC Fisheries Certification Process v2.1 section 7.4.) The fishery cannot be considered as an enhanced fishery as it does not meet the enhanced fisheries criteria required under the MSC FCP 7.4.

All four existing conditions remain open and no new conditions have been raised following this first surveillance audit, and there have been no changes to any Performance Indicators. The overall Principle scores (Table 11) remain as they were when the fishery was recertified in 2018.

Table 11	Principle	scores	following	first	surveillance	audit
	1 milliopie	300163	ronowing	mat	Surveinance	auun.

Principle	Score
Principle 1 – Target Species	85.0
Principle 2 – Ecosystem	88.0
Principle 3 – Management System	89.2

# 6.2 Stakeholder input

No stakeholders submitted input to the assessment team.

# 6.3 Revised surveillance program

The surveillance audit was done 2,5 months after the anniversary date. The background for the postponement was the possibility to coordinate the audit with another Norwegian shrimp fishery (Norway Skagerrak and Norwegian Deep cold water prawn) and thereby minimising the inputs required from client, fisheries authorities and stakeholders.

# 6.4 Harmonised fishery assessments

There are two directly overlapping fisheries for the Norway North East Arctic cold water prawn in the Barents Sea – the Estonia North East Arctic cold water prawn fishery (including Danish, Lithuanian and UK vessels) and the Faroe Islands North East Arctic cold water prawn fishery (including Lithuanian and Greenland vessels). All three fisheries contracted DNV GL to conduct these assessments which strongly facilitated the harmonisation process. Complementary assessment trees were used under MSC Certification Requirements v2.0, information was shared and conclusions with respect to evaluation, scoring and conditions were consistent across the three fisheries, ensuring that the three assessments were fully harmonised.

There are a number of Barents Sea fisheries for other species which have been certified, but most of these certifications are under MSC Certification Requirements 1.3 and therefore there is no need to harmonise with the Pandalus borealis fisheries. The only Barents Sea fisheries currently certified under MSC CR v2.0 are the Russian red king crab fishery which uses traps, and the AGARBA Barents Sea cod fishery and the Oceanprom Barents Sea cod and haddock fishery both of which use very different trawls to those used in the cold water prawn fisheries. Although very different types of trawl, it may be important to harmonise the assessment of the cold water prawn fisheries with these other trawl fisheries particularly in relation to their potential impact on habitat. An initial harmonisation meeting of P2 assessment team members was held in November 2015 by the MSC to discuss harmonisation of habitat scoring for Barents Sea trawl fisheries. The meeting centred around the reasons why there was such a variation in scores across fisheries, but no overall conclusions were drawn as to how the fisheries should be harmonised. In addition, a workshop was held in Oslo in April 2016 to discuss harmonisation under CRv2.0. The output of this workshop and future meetings will provide guidance on harmonisation of Barents Sea cold water prawn fisheries with other certified Barents Sea fisheries. As noted above in section 3.2.2, the Client has engaged a consultant to plan and coordinate a project to collect and analyse bottom habitat data in relation to all Norwegian fisheries in the Barents Sea and other fishery areas, and the output from this project will aid in harmonising trawl fisheries in the future.

# 6.5 Vessel list

Municipality	Site name	Site reg.number
BÅTSFJORD	BÅTSFJORD SENTRALFRYSELAGER	F9175
NORDKAPP	KAMØYVÆR FISK AS	F340
HAMMERFEST	HAMMERFEST FRYSETERMINAL AS	F9435
LYNGEN	LYNGEN REKER AS	T184
LENVIK (TROMS)	STELLA POLARIS AS	T299
BERG (TROMS)	NERGÅRD SILD AS	T9315
TROMSØ	TROMS FRYSETERMINAL AS	T9211
	TROMSØTERMINALEN AS	T9199
SORTLAND	EIMSKIP NORWAY AS AVD SORTLAND	N149
	MYRE FRYSETERMINAL AS	N2246
ØKSNES	MYRE FRYSETERMINAL AS	N9120
HADSEL	MELBU FRYSELAGER AS	N9162
SØR-VARANGER	KENT TOFTELUND	F745
	NORWAY SHRIMP AS	F69
BÅTSFJORD	SEAGOURMET NORWAY AS	F101
BERLEVÅG	COAST BERLEVÅG AS	F201
LEBESBY	NORWAY KING CRAB TROLLBUKT AS	F805
VADSØ	DISP MOTTAK I FINNMARK	FUNT
	LYNGEN REKER AS	T184
PORSANGER	FINNMARK KRÅKEBOLLER AS	F824

	NORTH CAPE KING CRAB AS	F807	
	STORBUKT FISKEINDUSTRI AS AVD	F333	
NONDRAFF	HOVEDANLEGG HONNIN	1 3 2 3	
ALTA	DISP MOTTAK I FINNMARK	FUNT	
	KAISALG DISP MOTTAK I FINNMARK	FKAI	
LYNGEN	LYNGEN REKER AS	T184	
HARSTAD	PETTER`S SJØMAT AS		
tromsø	DRAGØY GROSSIST AS	T222	
	KAISALG DISP (UTGÅTT)	KAI	
	KAISALG DISP MOTTAK I TROMS	TKAI	
	KARLS FISK & SKALLDYR AS	T1079	
	SJØLAND AS	T1248	
	TROMS FRYSETERMINAL AS	T9211	
MELØY	ROAR WALLMANN	N2155	
BODØ	BOFISK AS	N905	
	KAISALG DISP MOTTAK I NORDLAND	NKAI	
LURØY	NORD-REKER AS	N1006	
LEIRFJORD	GEIR EDVARDSEN	N1415	
BRØNNØY	TOR INGE LARSEN	N1412	
NAMSOS	HANS FINNANGER	NT800	
ROAN	KRIFO FISK AS	ST102	
ØRLAND	KNUT GULDTEIG	ST810	
TRONDHEIM	KAISALG DISP MOTTAK I SØR-TRØNDELAG		
HALSA	LANGHOLM ODDMUND M/K LANGHOLM	M900	
KRISTIANSUND N	KAISALG DISP MOTTAK I MØRE OG ROMSDAL	MKAI	
	OMSUND AS	M849	
		M925	

# 7 Letter from Fiskebåt to DoF in relation to harvest control rules (HCRs)



JIM/

Fiskeridirektoratet

#### Arbeidsgruppe/møte om høstingsregler for MSC-sertifiserte fiskerier

Fiskebåt viser til møte i Nærings- og fiskeridepartementet den 20. mars d.å. om ulike utfordringer knyttet til sertifiseringen av norske fiskerier etter MSC-standarden. Fiskeridirektoratet var representert med Aksel Eikemo, Gunnstein Bakke og Modulv Overvik i møtet.

En av utfordringene med enkelte av de norske MSC-sertifiserte fiskeriene er mangelen på ICESgodkjente høstningsregler. Mest akutt er dette for reker i Barentshavet, der Norge står i fare for å miste sertifiseringen med mindre en høstningsregel kommer på plass i 2020. Markedsaktørene vurderer det som en tilnærmet katastrofe for rekenæringen dersom reker fra Barentshavet mister MSC-sertifiseringen.

Det var enighet på møtet om å etablere en arbeidsgruppe for å diskutere en høstningsregel for reker i Barentshavet. Fiskebåt viser til at det tidligere er gjort en del på dette området, og Havforskningsinstituttets Carsten Hvingel har blant annet utarbeidet en modell som diskusjonen kan ta utgangspunkt i.

Fiskebåt vil anmode Fiskeridirektoratet om å ta initiativ til en arbeidsgruppe/et møte for å diskutere en høstningsregel for reker i Barentshavet. Fiskebåt mener det vil være naturlig å invitere representanter fra Sjømat Norge og Norges Fiskarlag (Fiskebåt) til å delta i arbeidsgruppen, sammen med Havforskningsinstituttet og Fiskeridirektoratet. Det vises til at dette tidligere er gjort med suksess for andre fiskerier.

Fiskebåt mener at det vil være naturlig for arbeidsgruppen også å evaluere spørsmålet om høstningsregler for andre MSC-sertifiserte fiskerier der det er stilt krav om høstningsregel, herunder lange og brosme, og vurdere om og hvordan dette skal følges opp videre.

Vennlig hilsen FISKEBÅT

Jan Ivar Maråk

Sturla Roald

Kopi: Nærings- og fiskeridepartementet Havforskningsinstituttet Norges Fiskarlag Sjømat Norge

Brevet er godkjent elektronisk og sendes uten underskrift.

Fiskebåt / Røysegata 15, NO-6003 Ålesund, NORWAY / +47 70 IO I4 60 / fiskebat@fiskebat.no

www.fiskebat.no

# 8 Template information and copyright

This document was drafted using the 'MSC Surveillance Reporting Template v2.01'.

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#### **Template version control**

Version	Date of publication	Description of amendment
1.0	08 October 2014	Date of issue
2.0	17 December 2018	Release alongside Fisheries Certification Process v2.1
2.01	28 March 2019	Minor document change for usability

A controlled document list of MSC program documents is available on the MSC website (msc.org)

Senior Policy Manager Marine Stewardship Council Marine House 1 Snow Hill London EC1A 2DH United Kingdom

Phone: + 44 (0) 20 7246 8900 Fax: + 44 (0) 20 7246 8901 Email: standards@msc.org