Vottunarstofan Tún ehf.

Sustainable Fisheries Scheme

Marine Stewardship Council Fisheries Assessment

ISF Iceland Lemon Sole Fishery

Surveillance Report

Report on the 1st surveillance of the fishery

Conformity Assessment Body	Vottunarstofan Tún ehf.
Assessment Team	Rod Cappell (team leader), Giuseppe Scarcella, Gudrun Gaudian; Louise le Roux (assessment secretary)
Fishery Client	Icelandic Sustainable Fisheries ehf.
Assessment Type	1st Surveillance
Report Date	December 2019

Contents

Glossary

ASCOBANS	Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas
B	Biomass (PA/TRIGGER/LIM/LOSS)
CoC	Chain of Custody
CAP	Client Action Plan
DF	Directorate of Fisheries
DLS	Data Limited Stock
EEZ	Exclusive economic zone
ETP	Endangered, threatened and protected
F	Fishing mortality (MSY/PROXY)
FAO	Food and Agriculture Organisation
HCR	Harvest Control Rule
HR	Harvest rate
ICES	International Council for the Exploration of the Sea
IINH	Icelandic Institute of Natural History
ISF	Iceland Sustainable Fisheries Ltd
IS-SMH	Icelandic Autumn Groundfish survey biomass index
MFRI	Marine and Freshwater Research Institute
MII	Ministry of Industries and innovation
MOU	Memorandum of understanding
MSC	Marine Stewardship Council
MSY	Maximum Sustainable Yield
NAMMCO	North Atlantic Marine Mammal Commission
NAO	National Audit Office
OSPAR	OSPAR Convention for the Protection of the Marine Environment of the NE- Atlantic
PCR	Public Certification Report
PI	Performance indicator
PRI	Point of recruitment impairment (stock reference point)
RBF	Risk based framework
SG	Scoring guidepost
SSB	Spawning stock biomass
t	tonnes
TAC	Total Allowable Catch
UoA	Unit of Assessment
UoC	Unit of Certification
VMS	Vessel Monitoring System

Executive Summary

The surveillance audit

This is the first surveillance audit for the first certification of the ISF Lemon sole fishery.

To assist the client in managing audit requirements, this surveillance audit (SA) was undertaken in combination with surveillance activities for two other ISF fisheries: Greenland halibut and Anglerfish (2nd surveillances). As a result, this first SA was carried out in October 2019, ten months after the certificate anniversary (January 2019).

An on-site surveillance audit was conducted in Iceland by Rod Cappell (TL and P3), Gudrun Gaudian (P2) with Giuseppe Scarcella (P1) joining remotely. Meetings were held on 22nd October 2019 with the following client group and stakeholders:

- Iceland Sustainable Fisheries ehf. (ISF)
- Ministry of Industry and Innovation (MII)
- Directorate of Fisheries (DF)
- Marine and Freshwater Research Institute (MFRI)
- Icelandic Institute of Natural History (IINH)

Summary of surveillance findings

The surveillance team found that two conditions are on target and two were closed, as follows:

Cond. nr.	Condition	PI	UoC	PI original score	1st SA	2nd SA	3rd SA	4th SA
C1	Well-defined harvest control rule put in place	1.2.2	TB/TN/SD/ GN/GA/LL	75	**On target 75**			
C2	Management strategy to ensure that the UoAs do not hinder recovery of ETP species.	2.3.2	TB/TN/SD	75	**On target 75**			
C3	Conservation and management measures for all vulnerable marine habitats Harmonised with ISF demersal fisheries	2.4.1	TB	75	**80 Closed**			
C4	Conservation and management measures for deep-sea sponge aggregation and coral gardens. Harmonised with ISF demersal fisheries	2.4.2	TB/TN	70	**80 Closed**			

Statement confirming the status of certification

The ISF Lemon Sole Fishery continues to meet the MSC standard and its certification should continue.

1 Report details

1.1 Surveillance Information

Table 1 Surveillance announcement

1	Fishery name	
	ISF Iceland lemon sole	
2	Surveillance level and type	
	Level 4 – on-site surveillance audit.	
3	Surveillance number	
	1st Surveillance	X
	2nd Surveillance	
	3rd Surveillance	
	4th Surveillance	
	Other (expedited etc)	
4	Team leader	
	Rod Cappell: Team leader on-site, principle 3, traceability and knowledge of regional/national fisheries management **Education:** **Rod Cappell** holds post-graduate degrees in Marine Resource Development and Environmental Economics. **Experience in the fisheries sector related to tasks under his responsibility as team leader:** Rod is a Director of Poseidon Aquatic Resources Management Ltd. and has over 20 years´ experience in the fisheries and aquaculture sectors, working throughout Europe, Africa, the Middle East and Asia for public and private sector clients. **Understanding of the MSC fisheries standard and certification process:** Rod has completed MSC online training modules for the role of fishery team leader as well as the traceability module against the FCP v2.1, and the role of team member for scoring a fishery against fishery standards v2.0. **Assessment experience:** Rod has 10 years´ experience in MSC assessment as a team leader and P3 expert. He is experienced in the use of the Risk Based Framework and in version 2.0 of the MSC standard. Rod was part of assessment teams, often as team leader, for 12 now certified fisheries and has undertaken numerous other assessments and pre-assessments of fisheries in the UK, Europe and further afield. Recent assessments include the West Greenland offshore Greenland Halibut fishery and ISF Iceland multi-species demersal fishery. Rod is also involved with Fishery Improvement Plans in Europe and China. **Communication and stakeholder facilitation skills:**	

	Rod has completed an Exemplar Global training course *Lead Auditor – Management Systems Auditing*, with the qualification Exemplar Global AU – Auditing Management Systems ISO 19011:2018 and Exemplar Global TL – Leading MS Audit Teams ISO 19011:2018. **Statement by CAB on competency and conflict of interest:** Vottunarstofan Tún confirms that Rod Cappell meets the qualification and competency criteria for (1) fishery team leader specified in Table 1 of CGR v2.3 Table 1 and Table PC1 of FCP v2.1, (2) fishery team member specified in Table PC2 of FCP v2.1, and (3) aspects of collective team qualifications number 4 (fishery management and operations), 5 (current knowledge of the country and the local fishery context), 6 (traceability) and 7 (use of RBF) of Table PC3 of FCP v2.1. Vottunarstofan Tún confirms that Rod Cappell has no conflict of interest in relation to the ISF Iceland lemon sole fishery.
5	Team members
	Gudrun Gaudian: Team member on-site, principle 2 **Education:** Dr Gaudian holds an LLM degree in Environmental Law and Management, giving a deeper understanding of law and policy dealing with such relevant issues as the Common Fisheries Policy, water and waste management, and international environmental law including EU environmental policy. **Experience in the fisheries sector related to tasks under his responsibility as team member:** Gudrun Gaudian is an experienced marine ecologist and taxonomist, including coastal and marine surveys, EIA's for coastal infrastructure development and tourism, and research projects in tropical and temperate seas. Work experience also includes coastal and marine management issues, such as identifying sustainable coastal development projects, as well as addressing conservation issues, including selection and planning of marine parks and reserves, sustainable utilisation of natural resources and community- based management programmes. Projects have been undertaken in temperate, polar and tropical marine regions. **Understanding of the MSC fisheries standard and certification process:** Gudrun has completed MSC online training modules for the role of fishery team leader for scoring a fishery against fishery standards v2.0 as well as modules for FCP v2.1 including traceability. **Assessment experience:** Since 2010 Gudrun has been working in fisheries certification, applying the Marine Stewardship Council standard for sustainable fisheries, primarily as Principle 2 assessor, both as Team Leader and Team Member. Other relevant work carried out includes pre-assessments, peer reviews and MSC workshops. **Statement by CAB on competency and conflict of interest:** Vottunarstofan Tún confirms that Gudrun Gaudian meets the qualification and competency criteria for (1) fishery team member specified in Table PC2 of FCP v2.1, and (2) aspects of collective team qualifications number 2 (fish stock biology/ecology), 3 (fishing impacts on aquatic ecosystems), 5 (current knowledge of the country and local fishery context) and 6 (understanding of the CoC Standard and CoC CRs of Table PC3 of FCP v2.1. Vottunarstofan Tún confirms that Gudrun Gaudian has no conflict of interest in relation to the ISF Iceland lemon sole fishery.
	Dr. Giuseppe Scarcella: Team member off-site, principle 1 **Education:**

	Giuseppe Scarcella has Laurea 110/110 in Biology (2001) and PhD in Marine Biology and Ecology at the Università Politecnica delle Marche (2009) with Vincenzo Caputo. Contracted research scientist at the National Research Council since 2008.He has also attended courses of uni- and multivariate statistics and participated to field activity both scuba diving and aboard fishing and research vessels. **Experience in the fisheries sector related to tasks under his responsibility as team member:** Giuseppe has worked as a project scientist in several research programs about artificial reef and the impact of offshore platform. During the years of employment at CNR-ISMAR he has gained experience in benthic ecology, fish assemblages of artificial structures, fisheries ecology and impacts of fishing activities, stock assessment, otholith analysis, population dynamic. As a scientist at CNR-ISMAR, he is responsible for the sampling design and statistical analyses of numerous research activities. In particular, he has worked as a project scientist on several research programs about fishery activities in the Mediterranean and Black sea, artificial structures and their impact on the marine environment. In the framework of such activities he has gained experience in stock assessment, management plans, benthic ecology, fish assemblages of artificial structures, analysis of stomach contents, fisheries ecology and the impacts of fishing activities. Moreover, during his employment at ISMAR-CNR he worked as part of a team of scientists operating within different fields of marine biology, including population dynamics, taxonomy and fisheries as well as with physical oceanographers and fisheries technologists. The application of EAF principles to fisheries management have been at the core of these collaborations. **Understanding of the MSC fisheries standard and certification process:** Giuseppe has completed MSC online training modules for the role of fishery team member for scoring a fishery against MSC´s fishery standard v2.0 as well as modules for FCP v2.1. **Assessment experience:** For some years now, Giuseppe has been working in fisheries certification applying the Marine Stewardship Council standard for sustainable fisheries, currently concentrating on Principle 1 of the Standard. Furthermore, Giuseppe holds the credential as Fishery team leader (MSC v2.0). **Statement by CAB on competency and conflict of interest:** Vottunarstofan Tún confirms that Giuseppe Scarcella meets the qualification and competency criteria for (1) fishery team member specified in Table PC2 of FCP v2.1, and (2) aspects of collective team qualifications number 1 (fish stock assessment), 2 (fish stock biology/ecology), 5 (current knowledge of the country and local fishery context) and 7 (use of RBF) of Table PC3 of FCP v2.1. Vottunarstofan Tún confirms that Giuseppe Scarcella has no conflict of interest in relation to the ISF Iceland lemon sole fishery.
	Current knowledge of the country, language and local fishery context: All members of the surveillance team have in the last five years conducted full assessments and surveillance audits of Icelandic fisheries against the MSC fisheries standard and are therefore acquainted with the practices and management systems applied to the Icelandic fisheries. English is a commonly spoken and understood language among client staff and stakeholders. During the surveillance, including the site visit, the team is supported by Tún´s Assessment Secretaries who have Icelandic as a native language to provide translation service if and when necessary.
6	Audit/review time and location
	The surveillance audit was conducted in Reykjavík, Iceland, on 21-23 October 2019, with stakeholder meetings held on 22 October 2019.
7	Assessment and review activities
	The surveillance audit team actively engaged with the client and stakeholders.

	In particular, the team reviewed the following: - any potential or actual changes to the fishery and its management systems; - any changes to, deletion or introduction of, law and regulations affecting the fishery; - any changes in personnel in industry, science or management and their potential impact on the management of the fishery; - any changes to scientific information, including stock assessments; - any changes to its traceability systems; - any changes affecting harmonisation of overlapping fisheries – and – - the fishery´s progress against open conditions and recommendations.

1.2 Background

1.2.1 Management & regulation

At the site visit (Oct 2019) it was reiterated by MII and DF that lemon sole is not a target species, it is a bycatch of the demersal mixed fishery. There are no significant changes to the management systems relating to the fishery, but the following developments are noted:

The Icelandic fishing industry continues to pursue efficiency gains through consolidation and vertical integration. The total fishing effort by bottom trawls targeting fish and shrimp has decreased by around 40% in 2000–2014; in the same period the Nephrops trawling effort remained at the same level. The decrease in fishing effort varied locally, with decreases mainly being noted on the southern shelf (Subarea 1) and at typical shrimp trawling grounds on the northern shelf (ICES, 2018). Over time the fishing activity has become more concentrated (Figure 1).

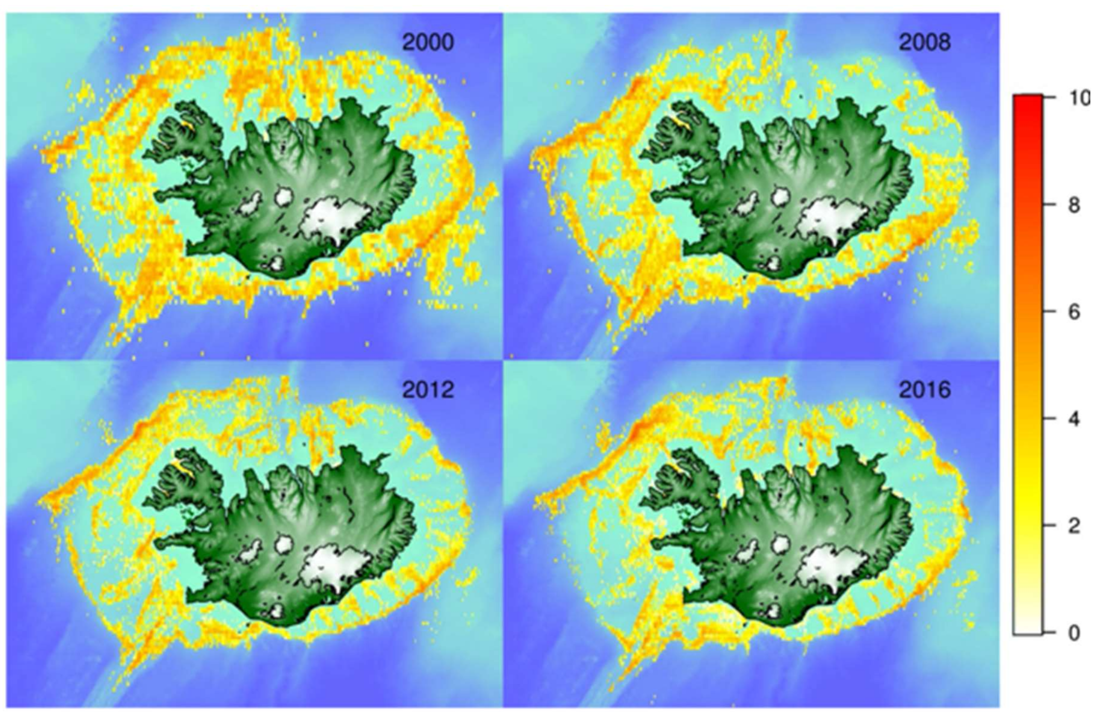

Figure 1 Spatial Distribution of bottom-trawl effort (1000 kWhr) based on logbooks from trawl fishery targeting demersal fish, shrimp and Norway lobster in 2000, 2008, 2012 and 2016. source: ICES, 2018

A National Audit Office (NAO) report published in December 2018 found some shortcomings in the fisheries control system. The Ministry of Industries & Innovation (MII) and the Directorate of Fisheries

(DoF) have stated publicly that work is ongoing to address the issues raised in the NOA report. A Committee has also been established with a 5 body steering group including lawyers and parliamentarians, which is supported by a larger stakeholder group of 23. This committee is to look at all the control issues identified including weighing, by-catch and legislation. It will report in March 2020.

DoF states that it was aware of the issues related to weighing raised in the report and has already taken steps to address these. Weighing is now more accurate (in terms of accounting for the use of ice) and discrepancies are published on the website along with sanctions. If a vessel or factory is suspected of exceeding weighing thresholds, inspectors are put in post for 6 weeks inspecting activities and the operator pays the associated costs. These measures act as strong incentives to be consistent in weighing and remain within the permitted thresholds. Overall the DoF sees opportunities for non-compliance reducing and control protocols improving, which together result in good compliance. (DoF pers. comm.).

A new regulation gives regulatory powers to MII in relation to seal hunting & management, which could include fishery management measures to address seal by-catch.

Regulation 268/2019 introduced temporary closure of areas to bottom trawling within nephrops grounds.

1.2.2 Status of Target stock

The Icelandic spring groundfish survey (hereafter spring survey, IS-SMB), which has been conducted annually in March since 1985, covers the most important distribution area of the lemon sole. In addition, the Icelandic autumn groundfish survey (hereafter autumn survey, IS-SMH) was commenced in 1996. However, a full autumn survey was not conducted in 2011 due to a labour dispute.

The spring survey is considered to measure changes in abundance/biomass better than the autumn survey. It may not, however, adequately cover the main recruitment grounds for lemon sole as the main nursery areas are thought to be in shallow water in habitats unsuitable for demersal trawling. In addition to these two major surveys, a designated flatfish survey with beam trawl was started in 2016 and will be expanded in 2018 to cover most of the recruitment grounds of lemon sole and other flatfish species. The plan is to incorporate this survey in the stock assessment for lemon sole in the future.

Figure 2, shows both a recruitment index based on abundance of lemon sole smaller than 20 cm, and trends in various biomass indices. Total biomass index and the biomass index for lemon sole larger than 30 cm (harvestable part of the stock) has been variable in recent years, with large fluctuations between years (Figure 2). The index for lemon sole larger than 39 cm has been increasing recently. The index of juvenile abundance (<20 cm) has decreased in the last five years after large peak in 2011 which was observed only in spring survey. The result from the shorter autumn survey are by and large similar to those observed from the spring survey, except for the juvenile abundance index that shows a different pattern than the spring survey.

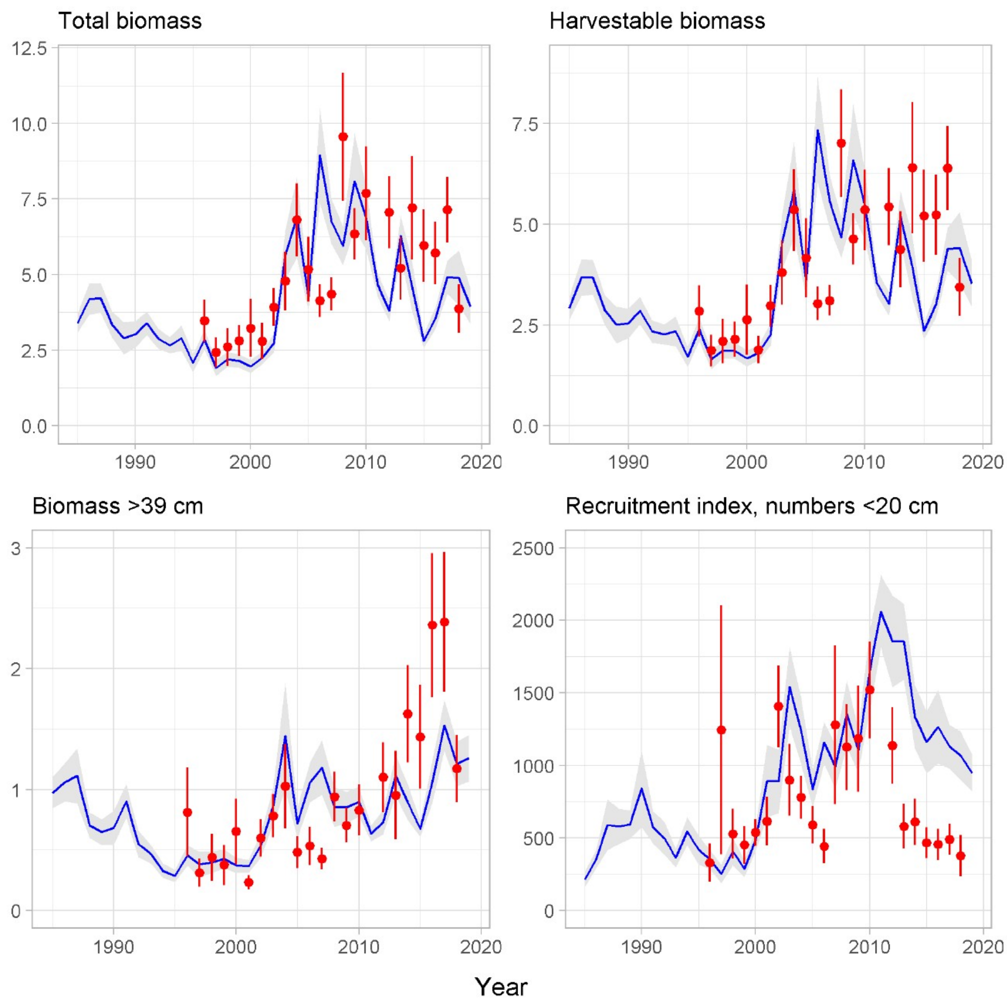

Figure 2 – Lemon sole in Icelandic EEZ. Total biomass indices (upper left) and harvestable biomass indices (≥30 cm, upper, right), biomass indices of larger individuals (≥39 cm, lower left) and juvenile abundance indices (≤20 cm, lower right) from the spring survey (blue) from 1985 and autumn survey (red) from 1996, along with the standard deviation. *Source: https://www.hafogvatn.is/static/extras/images/24-LemonSole_TR1141472.pdf*

The IS-SMB biomass index has been relatively high but variable since 2003 compared to the period 1992–2002. Fproxy has been highly variable for two decades. IS-SMB recruitment index has been high since 2002 (Figure 3).

This advice follows the ICES framework for stocks where reliable stock biomass indices are available, but analytical age-length based assessments are not feasible (Category 3 stocks; ICES 2012). IS-SMB survey biomass index of lemon sole 30 cm and larger, along with catch, is used to calculate Fproxy (catch/survey biomass). The target Fproxy was defined as 80% of the mean Fproxy from the reference period 2010–2015. Age disaggregated catch data from 2010–2015 suggest that fishing mortality was too high and needed to be reduced by at least 20%. The advice is based on multiplying the most recent index value with target Fproxy value. This value is constrained by an uncertainty cap of 20% compared to the previous catch advice.

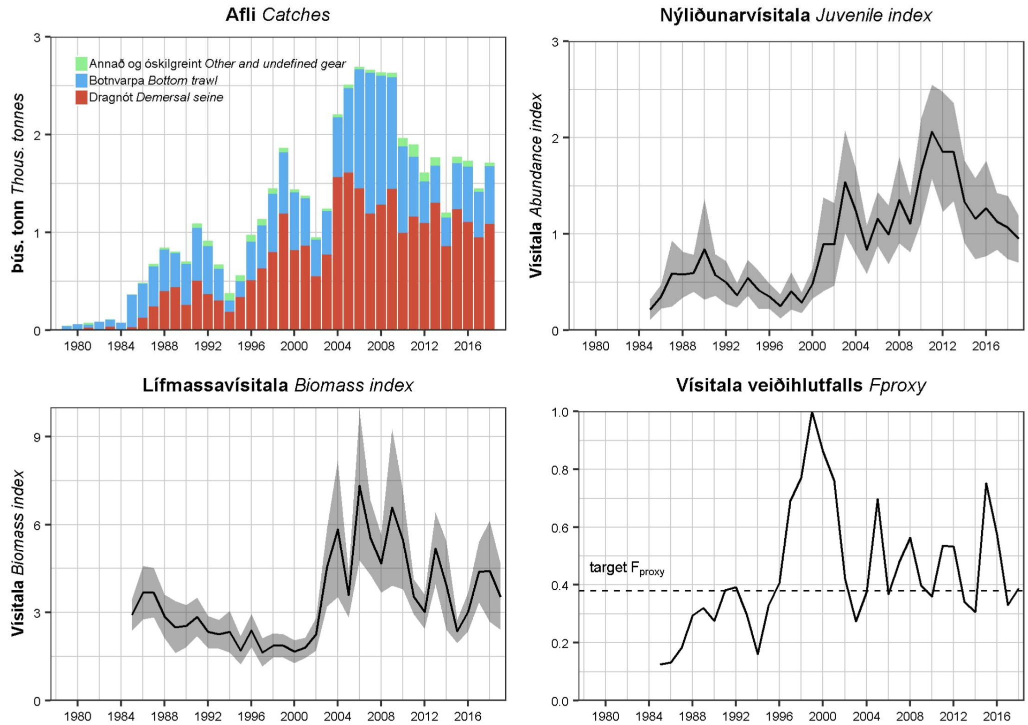

Figure 3 – Lemon sole in Icelandic EEZ. Catches by gear type, IS-SMB juvenile (≤30 cm) and biomass (≥30 cm) indices and Fproxy. Grey areas represent 95% CI. *Source: https://www.hafogvatn.is/static/extras/images/24-LemonSole%20(1)1141520.pdf*

The Ministry of Industries and Innovation is responsible for management of the Icelandic fisheries and implementation of legislation. Lemon sole was included in the ITQ system in the 1999/2000 quota year and as such subjected to TAC limitations.

Between 2005 and 2009, TAC was set higher than recommended by Marine Research Institute (MRI), but this practice stopped in the 2010/2011 quota year (Table 1). No formal management plan exists for this stock.

Table 2 Lemon sole in Icelandic EEZ. Recommended TAC, national TAC and landings

FISHING YEAR	REC. TAC	NATIONAL TAC	CATCH
1999/00	1400	1400	1406
2000/01	1400	1400	1411
2001/02	1400	1400	1028
2002/03	1600	1600	1059
2003/04	1600	1600	2065
2004/05	1600	1600	2549
2005/06	1600	1800	2518
2006/07	1600	2000	2918
2007/08	1600	2200	2654
2008/09	1800	2200	2682
2009/10	1800	2200	1955
2010/11	1800	1800	1733
2011/12	1800	1800	1803
2012/13	1400	1400	1464
2013/14	1600	1600	1427
2014/15	1600	1600	1758
2015/16	1300	1300	1724
2016/17	1087	1087	1471
2017/18	1304	1304	1778
2018/19	1565	1565	
2019/20	1341		

Source: *https://www.hafogvatn.is/static/extras/images/24-LemonSole_TR1141472.pdf*

Figure 4 shows net transfers of lemon sole in the Icelandic ITQ-system. From 2003-2008 there was a net transfer of other species to lemon sole quota (the positive values). However, from 2009-2014, there was little transfer from other species, until three years ago when considerable amounts were transferred to lemon sole from other species. Net transfer of lemon sole quota for a given fishing year is usually in the range of -6 to 6% (Figure 4).

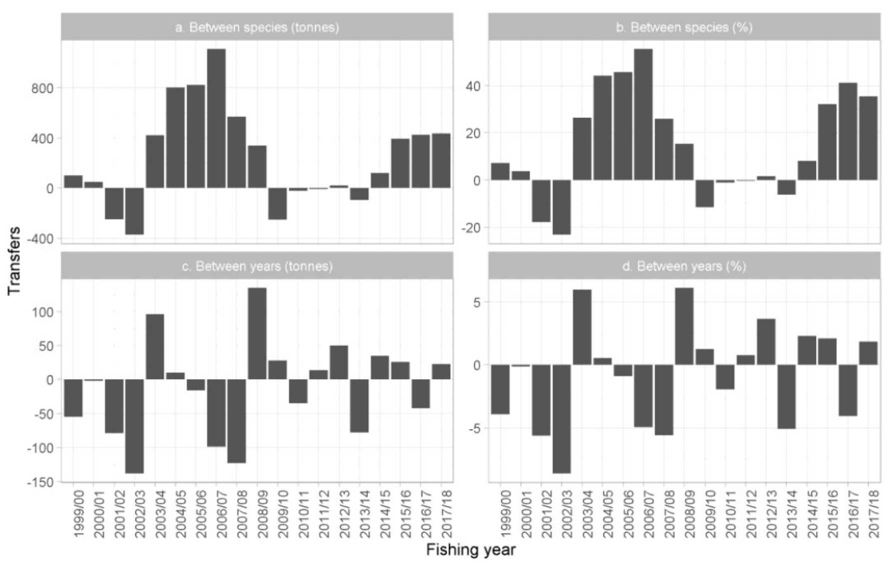

Figure 4. Net transfers of quota to and from lemon sole in the Icelandic ITQ system by fishing year. Between species (upper): Positive values indicate a transfer o f other species to lemon sole, but negative values indicate a transfer of lemon sole quota to other species. Between years (lower): Net transfer of quota in a given fishing year. *Source: https://www.hafogvatn.is/static/extras/images/24-LemonSole_TR1141472.pdf*

Based on the evidence available from MFRI (2019) and during the meeting with the client and MFRI scientists, it is possible to conclude that the scoring outlined in the PCR is still valid (Tun, 2017), even if an overshot of quota has occured since 2014/2015.

1.2.3 Scientific information updates

Bycatch of out-of-scope species and ETP species:

The most recent available data provided by MFRI (2017), giving the estimates of gear interaction with marine mammal and seabird species, raised to levels for the entire fleet and averaged across years 2014-17, is still to be updated with more recent data.

At the site visit (October 2019), MFRI provided the following additional information, which is based on the available data from 2014-2016. According to MFRI, the annual bycatch was roughly estimated for seabirds in cod gillnets, longlines and otter trawl for various certifications/inquiries (see table below). For this fishery, otter trawl is relevant to the UoAs (bottom trawl, Nephrops trawl and Danish seine). Variance around the estimate (based on the CV) is in brackets.

Table 3 Estimated bycatch of sea birds in Icelandic waters by cod gillnets, longline and otter trawl. Source: MFRI

Species	*Cod gillnets*	*Longline*	*Otter trawl*
Common guillemot	*454 (340-568)*	*0*	*0*
Northern gannet	*128 (69-187)*	*0*	*45 (2-90)*
Northern fulmar	*1702 (1362-2042)*	*920 (340-1500)*	*0*
Atlantic puffin	*13 (1-26)*	*0*	*0*
Razorbill	*26 (2-52)*	*0*	*0*
Common loon	*82 (3-164)*	*0*	*0*
Common eider	*142 (2-282)*	*0*	*0*
Cormorants	*0*	*47 (16-78)*	*0*
Great-black backed gull	*0*	*67 (2-134)*	*0*

Since 2016 MFRI have been publishing bycatch rates of seabirds and marine mammals in annual reports of the ICES working group on bycatch of protected, endangered or threatened species (The 2019 report[1] can be found here: https://tinyurl.com/y29e4s66)

Over the past three years MFRI have been chartering industry vessels for trials of mitigation measures, focusing on the gillnet fisheries where by-catch is identified as a particular issue. Other collaboration projects with the fishery include the reporting of seabird and marine mammal bycatch in logbooks. MFRI reports (interview at site visit Oct 2019) that a record number of seabirds and marine mammals were recorded in 2018 in general, almost triple the number reported in 2016. It is suggested that this is probably due to better reporting rather than increase in bycatch, as bycatch rates in the MFRI surveys and by onboard inspectors have 'not changed much'. MFRI stressed that underreporting will however always be a problem with a logbook system, and it therefore needs to be validated with other methods.

[1] ICES. 2019. Working Group on Bycatch of Protected Species (WGBYC). ICES Scientific Reports. 1:51. 163 pp. http://doi.org/10.17895/ices.pub.5563

Experiments which use high frequency sound as a method to discourage marine mammals are ongoing. Trials with fishtec banana pingers showed a slight increase in bycatch and so did trials with PALs (Porpoise alert devices). Trials begun last year with a louder regular pinger based on a model that is no longer in production, but these trials are still ongoing as MFRI had not caughts any marine mammals in the trials this year (MFRI site visit Oct 2019)

New legislation has come in to protect seals as related to hunting (IINH interview at site visit Oct 2019), whereby new rules have been introduced relating to the registration of seal hunting and prohibiting the hunting of seals without a licence. However, the bycatch of seals in fisheries was not addressed in this update of the Act[2]. According to this Amendment, the Minister can set regulations regarding seal hunting, require information gathering or ban seal hunting. Hunting of seals is done for food but is some cases 'just for fun' (according to the interviewee). With the licence payment hunters pay into a fund, which is used for research.

Seabirds are also hunted, with hunters licensed and paying into a fund, but there is no quota on hunting seabirds. Research is ongoing on the status of seabirds, such as puffins (which are cliff breeding birds, and a new assessment of the puffin 'stock' will be published in December this year, 2019). Puffins have a large non-breeding population, and puffin hunters are targeting the non-breeding population (as these fly round and round and are caught by pole net), although eggs are collected too. The popularity of hunting is decreasing, although this depends on location, as some areas remain traditional in this matter. 2019 appears to have been the best puffin year in recent times in the South and West of Iceland, and it is thought that this possibly relates to the sandeel population. Puffin burrows occupancy are monitored throughout Iceland. However, observations seem to indicate that chick development takes 12 days longer because of food availability.

In general, there is a recommendation to limit the number of eggs per licence, for all bird species. Efforts are being increased by the IINH to monitor seabird species, such as Black guillemots.

An up to date Red List has now been published (IINH interview at site visit Oct 2019), which is published on the IINH website. Assessments of species on that list are coordinated with the IUCN standard.

The IINH is not involved in fishing gear research and bird bycatch. However, bird ringing data is returned to the Institute when caught in fish nets. Oceanographic conditions, and changes, are considered the most important and largest threat to seabirds (IINH site visit interview Oct 2019), and it appears that the status of almost all seabirds is decreasing. Apart from the returned rings (from bycaught ringed birds, as these rings have to be returned to the office) there has not been any other bird bycatch data returned from the fisheries (as in self-reporting).

A census on gannets was conducted in 2019, and it appears that the population is overall stable in Iceland and increasing in the East of the country; the conservation status is 'good', they used to be hunted but this has now almost stopped.

The Ministry of Environment is considering the update of the Wildlife Act (1994) with regards to bycatch of seabirds and marine mammals, but the process is slow (IINH site visit interview Oct 2019).

Other data sources on seabirds derive from windfarm projects (IINH site visit interview Oct 2019), but need to be incorporated into the overall seabird population picture.

[2] Lög um breytingu á lögum um lax- og silungsveiði, nr. 61/2006, með síðari breytingum (selveiðar); Approved by Parliament on May 7, 2019

Habitat

A recent study (Buhl-Mortensen et al 2019[3]), funded through the Nordic Council of Ministers as part of Nordic co-operation (which is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, and the Faroe Islands, Greenland and Åland) provides information on the the distribution of vulnerable marine ecosystems (VMEs) in Arctic and sub-Arctic waters. Eleven VMEs were identified, based on management goals for coral and sponge communities, of these Sponge agreggations and sublittoral sea pens were the widest distributed VMEs. Bottom related fishing was the human activity that was the largest threat to the VMEs, and trawling occured in 40–50% of the study area. In general, less than 50% of the predicted VME distribution overlapped with fishing, and 10 – 30% had experienced high fishing intensity. In parts of the study area the information on the seafloor environment is very poor and the prediction of the occurrence of VMEs is not possible with any certainty. This report evaluates the risk of vulnerable marine ecosystems (VMEs) in Arctic and sub-Arctic waters to bottom trawling. It is based on an exhaustive compilation of data on the distribution of VME indicator species, including published and unpublished data, and new data gathered during the project from areas where information is sparse. The distribution of VMEs was furthermore predicted using Environmental Niche Models (aka Habitat Suitability Models).

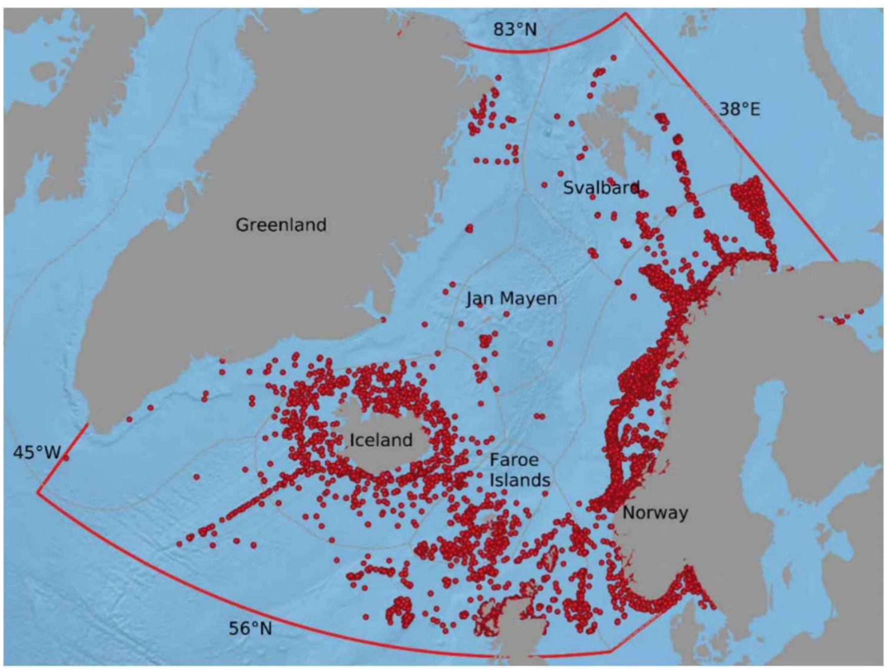

Fig. 5 Map of the study area. Red dots indicate the position of the records of VME indicator species compiled in this study. Source: Buhl-Mortensen et al 2019)

One of the authors of this study, Steinunn Olafsdottir, was available at the site visit (Oct 2019). She confirmed that the study produced a broad map of potential and actual VME indicator species, but this does not constitute a broad scale habitat map for Iceland EEZ. The existing sediment map of the EEZ contributes towards the prediction models, technically it does not in itself constitute a habitat map. She confirmed that the study involving fishers' knowledge of the fishing grounds as part of habitat mapping is about to start (end of 2019), with interviews of those fishers willing to participate. The questionnaire is currently being worked out together with captains' experiences.

[3] Buhl-Mortensen L et al 2019. Vulnerable marine ecosystems (VMEs) Coral and sponge VMEs in Arctic and sub-Arctic waters - Distribution and threats. Published by TemaNord 2019:519 ISSN 0908-6692;

It was also stated that although all benthos brought up as part of fishing activity has to be logged, this is not necessarily done consistently, as it is not mandatory. Corals and sponges pose identification issues too. The app as a platform for logging and identifying benthos in the catch is not yet ready to be rolled out. Once the app is ready, it will be compulsory to be used, the data will be transmitted to the harbour authorities as part of the landing process (MII interview site visit Oct 2019). This will also be rolled out across the smaller vessels and coastal fleet.

1.2.4 Traceability update

No changes to the processes that ensure traceability were reported.

2 Surveillance details

2.1 Version Details

Table 4 Fisheries programme documents versions

Document	Version number
MSC Fisheries Certification Process	**Version 2.1**
MSC Fisheries Standard	**Version 2.0**
MSC General Certification Requirements	**Version 2.4.1**
MSC Surveillance Reporting Template	**Version 2.01**

2.2 Surveillance results overview

2.2.1 Summary of Conditions

Table 5 Summary of conditions for ISF Lemon sole fishery

Cond. nr.	Condition	PI	UoC	PI original score	1st SA	2nd SA	3rd SA	4th SA
C1	Well-defined harvest control rule put in place	1.2.2	TB/TN/SD/ GN/GA/LL	75	**75**			
C2	Management strategy to ensure that the UoAs do not hinder recovery of ETP species.	2.3.2	TB/TN/SD	75	**75**			
C3	Conservation and management measures for all vulnerable marine habitats Harmonised with ISF demersal fisheries	2.4.1	TB	75	**80** **Closed**			
C4	Conservation and management measures for deep-sea sponge aggregation and coral gardens. Harmonised with ISF demersal fisheries	2.4.2	TB/TN	70	**80** **Closed**			

2.2.2 Total Allowable Catch (TAC) and catch data

Table 5: TAC and Catch Data for Lemon sole.

TAC	**Year**	2019/2020	Amount	1,565 t
UoA share of TAC	**Year**	2019/2020	Amount	1,565 t
UoC share of total TAC	**Year**	2019/2020	Amount	1,565 t
Total green weight catch by UoC	**Year (most recent)**	2018/2019	Amount	
			Demersal otter trawl	551 t
			Nephrops trawl	23 t
			Danish seine	945 t
	Year (second most recent)	2017/2018	Amount	
			Demersal otter trawl	539 t
			Nephrops trawl	38 t
			Danish seine	1,199 t

3 Progress on Conditions and Recommendations

3.1 Conditions update

Table 6 Condition 1 (all UoAs)

Performance Indicator	PI 1.2.2 There are well defined and effective harvest control rules in place
Score	75
Justification	The harvest control rule is based on calculating the TAC corresponding to a proxy of FMSY in the latest stock assessment model. At least this part of the harvest control rule is well defined and is clearly consistent with the overall MSY-based harvest strategy. However, to what extent exploitation might be reduced as PRI is approached is not clear. The clear target exploitation levels required and delivered by the harvest control rules, together with the intention to reduce exploitation below the trigger point, meet the SG60. However, the lack of a well-defined response should the stock fall below the a trigger reference point prevents the SG80 being met.
Condition	A well-defined harvest control rule should be put in place that is consistent with the harvest strategy and defines how the exploitation rate will be reduced as the stock approaches the limit reference point. Evidence should be provided that the HCR is precautionary within 4 years.
Milestones	It is recognised that changes to the harvest control rule may require another benchmark assessment. Therefore, timing may need to fit into the MFRI stock assessment cycle. Year 1: Evidence is available indicating reassessment of the harvest control rule. Score 75. Year 2: Evidence is available indicating reassessment of the harvest control rule. Score 75. Year 3: Evidence is available indicating reassessment of the harvest control rule. Score 75. Year 4: A new harvest control rule is adopted that reduces exploitation as the limit reference point is approached. Score 80.
Consultation on condition	Consultation with MFRI and MII.
Progress on Condition (Year 1)	The client briefed the MII and MFRI on requirements of the MSC conditions and a meeting was carried out between ISF, MII and MFRI (see: minutes in Icelandic). MFRI work on the lemon sole HCR is well underway. During the site visit it was clear that even if an HCR (to reduce exploitation in case the biomass is low) is not outlined in any legislation, MFRI and MII confirmed that the TAC is always set in accordance with the scientific advice. Therefore, this is evidence that a re-assessment of the HCR is already in place and in the case a zero catch is recommended by MFRI the TAC agreed by MII will be zero. An example given is the case of capelin in Icelandic waters (see: https://www.hafogvatn.is/static/extras/images/LodnaHaust20181100274.pdf)
Status	On target
Additional information	*https://www.hafogvatn.is/static/extras/images/LodnaHaust20181100274.pdf*

Table 7 Condition 2 (all UoAs)

Performance Indicator	**PI 2.3.2: The UoA has in place precautionary management strategies designed to: ensure the UoA does not hinder recovery of ETP species.** SI b) There is a strategy in place that is expected to ensure the UoA does not hinder the recovery of ETP species.
Score	All gears: 75
Rationale	Interaction between bottom trawl, Nephrops trawl and Danish seine with ETP species is expected to be low to negligible. Measures in place including closures, seasonal closures, restrictions on gear operation within inshore waters, some monitoring of bycatch, and requirement to release live birds and mammals. However, these measures are not considered to form a cohesive strategy that has been specifically designed to manage interaction with ETP species, nor does it contain any mechanism for the modification fishing practices in the light of the identification of unacceptable impacts. This issue was not identified in other ISF fisheries and has therefore not been harmonised with the ISF Iceland anglerfish, ISF Iceland cod, ISF Iceland haddock, ISF Iceland golden redfish, blue ling and tusk, ISF Iceland saithe, ling, Atlantic wolfish and plaice, and ISF Greenland halibut fisheries, where there is no condition for this PI.
Condition	By the fourth surveillance audit a management strategy shall be developed, and fully adopted, that is expected to ensure that the UoAs do not hinder recovery of ETP species.
Milestones	Year 1: Develop and propose a strategy that contains mechanism for the modification of fishing practices in the light of the identification of unacceptable impacts and therefore ensures that the bottom trawl, Nephrops trawl and Danish seine fisheries do not hinder recovery and rebuilding of vulnerable ETP mari ne mammal and seabird species. Score: 75 Year 2: Consult with industry and all stakeholders on the proposed strategy and amend accordingly. Score: 75 Year 3: Formally commit to the new strategy. Score: 75 Year 4: Demonstrate that the management strategy has been fully adopted and associated measures have been implemented as appropriate. Score: 80
Client action plan	Year 1. Actions: ISF will approach the Ministry of Fisheries to ask for current work and current plans by the authorities to formalize and implement a strategy which is expected to ensure the UoA (lemon sole fisheries using bottom trawl, nephrops trawl or Danish seine) does not hinder the recovery of ETP species. Continuing from there, ISF will approach Marine Research Institute and ask to assess current knowledge and research of interaction between fisheries and ETP within the UoA. In light of the conclusions, ISF will approach the fisheries authorities to ask if current measures can be the basis for a cohesive strategy, specifically designed to manage interaction with ETP species, including a mechanism for modification of fishing practices, should results of research identify unacceptable impacts. Evidence:

	ISF will present meeting agendas and meeting minutes from meetings with each of the stakeholders, to shed light on status of strategy and direction it might be taking. Year 2. Actions: ISF will be in contact with the ISF certificate sharing fisheries to ask for input and support of a strategy for ETP interaction. ISF will continue working with the Ministry and MFRI, as a central governmental policy would be the most appropriate and widespread course of action, to form and roll out a strategy for ETP interaction of the UoA. Evidence: ISF presents a evidence of a strategy in the making, should the authorities find scientific reasons for forming such a strategy, and meeting agendas, communication with fisheries using the relevant gear. Year 3. Actions: The strategy for the ETP interaction should be in place and ready to be implemented. The form of the strategy and its implementation is under the auspice of the government and ISF will cooperate with the authorities on rolling out the strategy into action. Evidence: ISF presents a strategy established by the authorities, should it have been set in motion and presents communication with fisheries using the relevant gear to emphasize a quick roll out and effective implementation of an ETP strategy for the UoA. Year 4. Actions: Depending on the need and responses to meet the need, the Ministry and MFRI would have implemented a mechanism. ISF will obtain and present research results, a quantitative and qualitative report with finding and status at the year four surveillance. Evidence: ISF will present information stemming from and relating to a mechanism which is aimed at reducing interaction of gear with ETP´s in the UoA, should the results or conclusions earlier in the process indicate its pertinence.
Consultation on condition	ISF will consult and cooperate with Icelandic MFRI and MII during the process.
Progress on Condition 1st SA 2019	The client is working with MFRI and MII to ensure that on-board recording and monitoring of any ETP bycatch is of good quality, by improving identification and recording practices. The client provided minutes of meetings between these and fishing industry stakeholders where bycatch management was discussed, which is the evidence required for the year 1 milestone. The MFRI focus has been on high risk gears with respect to seal-ETP management, such as in the lumpfish fishery (Client information, site visit Oct 2019). Nevertheless, since 2016 MFRI have been publishing bycatch rates of seabirds and marine mammals in annual reports of the ICES working group on bycatch of protected, endangered or threatened species (The 2019 report[4] can be found here: https://tinyurl.com/y29e4s66). This record covers all gears including trawl.
Status	On target

[4] ICES. 2019. Working Group on Bycatch of Protected Species (WGBYC). ICES Scientific Reports. 1:51. 163 pp. http://doi.org/10.17895/ices.pub.5563

Table 8 Condition 3 (bottom trawl UoA)

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 the governance body(s) responsible for fisheries management in the area(s) where the UoA operates.** SI b) The UoA is highly unlikely to reduce structure and function of the VME habitats to a point where there would be serious or irreversible harm
Score	Bottom trawlers: 75
Rationale	The slope areas off the south coast of Iceland are very steep, with depths descending from around 400 m to more than 1500 m within few nautical miles, and parts of the slope areas are considered difficult for trawling. Therefore, vulnerable habitats have some depth refuge from fisheries impacts in Icelandic waters. Nevertheless, in the past the bottom trawl fishery has reduced coral habitat structure and the present fishing patterns of the bottom trawl UoA overlap with vulnerable habitats of corals. There is explicit protection of several *Lophelia* areas where no fishing gear with bottom contact are allowed, including bottom trawling since permanent area closures for bottom trawling are in operation along the shelf break off West Iceland including seabed on the shallow part of the Reykjanes Ridge where *Lophelia* reefs occur. No such closures are in place to protect coral gardens characterised by aggregations of colonies or individuals of one or more coral species of leather corals (Alcyonacea), (Gorgonacea), sea pens (Pennatulacea), black corals (Antipatharia), and hard corals (Scleractinia) other than *Lophelia*. There is no explicit protection of areas which are rich in sponge communities where no fishing gear with bottom contact are allowed, although a number of seasonal or annual closures to bottom trawling exist which might have beneficial effects on the sponge habitats occurring there. Limited recording of benthic bycatch by commercial fishing vessels is in place. This has been harmonised with the ISF Iceland anglerfish, ISF Iceland cod, ISF Iceland haddock, ISF Iceland golden redfish, blue ling and tusk, ISF Iceland saithe, ling, Atlantic wolfish and plaice, and ISF Greenland halibut fisheries, where there is a condition for this PI.
Condition	By the fourth surveillance audit necessary conservation and management measures for all vulnerable marine habitats shall be in place and implemented, such that the trawl fishery does not cause serious or irreversible harm to habitat structure, on a regional or bioregional basis, and function. This condition is harmonised with that for ISF Iceland anglerfish, ISF Iceland haddock, ISF Iceland golden redfish, blue ling and tusk, and the ISF Iceland saithe, ling, Atlantic wolfish and plaice fisheries.
Milestones	Year 1: There shall be evidence of the Client's plan to evaluate potential damage to *Lophelia* reefs, sponges, coral gardens appropriate to this UoA. There shall be evidence of engagement with the relevant authorities. Score 75 Year 2: 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 all vulnerable habitats, such that the fishery does not cause serious or irreversible harm to habitat structure, on a regional or bioregional basis, and function. Score 75 Year 3: 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 *Lophelia* reefs, sponges, coral gardens from trawling shall be agreed upon, either at client group level or at a higher level. Score 75 Year 4: Implement the agreed upon partial strategy. Score 80. A formal commitment to the agreed upon conservation and management measures shall remain in place for the duration of the certification period.
Client action plan	Year 1 Actions ISF has been running a pilot project in close cooperation with fishing companies HB Grandi and Brim hf, and the Icelandic MFRI, to increase and normalise onboard logging of coral and sponges brought on board by fishing gear. ISF will approach MFRI to further research coral and sponge aggregations in trawling areas to evaluate potential damage to deep-sea sponge aggregations and soft corals.

	Evidence ISF will provide evidence of engagement with MFRI with the goal of evaluating potential damage to vulnerable habitats by trawling activities. In the unlikely event, MFRI is unable to perform the research, ISF will seek for 3rd party consultant for evaluation purposes. Year 2 Actions ISF will meet with MRI to discuss findings from annual research on sponge and coral incidents. The meeting is intended to review statistics and discuss alternative actions, if needed. ISF will meet with members of the client group to discuss the condition and ask for feedback on current and future actions made by each member to address the condition. The actions will be formalized into a plan, intended for engagement by members of the client group to meet the condition. The purpose is to ensure that bottom trawling is highly unlikely to cause serious or irreversible harm to sponges and coral gardens. Evidence If Year 1 conclusions require there to be plan, then at the Year 2 audit, ISF will present an action plan, with evidence that it has been agreed by all participating parties (e.g. a signed agreement, meeting minutes, letters of support etc.). Year 3 Actions ISF will meet with members from the client group to discuss effects of actions taken in year 2 and adjust for improved efficiency, as needed. The goal is to protect deep sea sponge aggregations and coral gardens from impacts of trawling and seek an agreement among the members of the client group for this type of conservation. The actions of Year 3 are contingent on the outcome of findings showing whether and how conservation actions are required. If a plan has been proven necessary and agreed upon in year three, ISF will monitor the implementation of the plan in year 4 in cooperation with the members of the client group. Evidence If required, the plan is implemented; it is updated as new information is available. At the Year 3 audit, ISF will present the updated plan if necessary, with evidence of implementation (e.g. benthic logbook data, MFRI report or other similar). Year 4 Actions ISF will meet with members from the client organisation to discuss conservation needs and approach the fisheries authorities regarding a formal conservation and management measures, if they are not in place already. ISF will approach the Ministry of fisheries to underline the need from the viewpoint of sustainability certifications. ISF will further approach MFRI for overlapping analysis of VMS records and OSPAR threatened or declining habitats. Evidence ISF will present the partial strategy, which will be, if formed and implemented, under control of Icelandic fishing authorities. ISF will present a map of potential overlapping of VMS records and OSPAR threatened or declining habitats.
Consultation on condition	ISF will consult and cooperate with Icelandic MFRI and MII during the process.
Progress on Condition 1st SA Dec 2019	**September 2019.** ISF in cooperation with two client group members set out a project plan to complete the project “Captain’s knowledge of the ocean floor” before the end of year 2019. It is a joint project between ISF and MFRI designed to increase knowledge and awareness of different bottom types and habitats. **September 2019.** ISF has inquired via email, to the MII and to the MFRI, as to how contact between fishing gear and ocean habitats are being mitigated and with what progress. ISF has requested a meeting for a follow up. **February 2019.** In a cooperation, ISF and MII invite stakeholders to a meeting to cover issues relating to sustainability of Icelandic fisheries, projects being worked on by the authorities, regulatory and legal

	changes, improvements in fishing gear, fundamentals of scientific advice and importance of sustainability for consumers and procurement officers.[5] [6] **January 2019.** ISF and MII plan two sessions with stakeholders to Icelandic fisheries to discuss and exchange information and updates on tasks or projects being implemented for the purpose of increased sustainability of Icelandic fisheries. The sessions were held in January and February. This condition has been harmonised with the ISF Iceland Multi-Species Demersal Fishery (Tun 2019), ISF cod and haddock (Tun 2019) and the scoring revised to 80. See re-scoring in Section 5.4.
Status	**Closed**

Table 9 Conditon 4 (bottom and Nephrops trawl UoAs)

Performance Indicator	**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** SI a) There is a partial strategy in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above SI b) There is some objective basis for confidence that the measures/partial strategy will work based on information directly about the UoA and/or habitats involved.
Score	Bottom trawlers: 70; *Nephrops* trawlers: 70
Rationale	The Icelandic management strategy for marine habitats in general, and VMEs in particular, is mainly implemented through a system of closed areas which effectively prevent both bottom trawls and *Nephrops* trawls from being used in known areas of cold-water coral concentrations along the edge of the continental shelf. A known hydrothermal vent area is also closed to trawling. This represents a partial strategy for cold water corals and hydrothermal vents, but is not yet in place for coral gardens or sponge concentrations, and does not meet SG80 for these two VME types. Vessels abide by commonly accepted move-on rules when encountering VMEs in these areas, but these are informal.
Condition	By the fourth surveillance audit necessary conservation and management measures for deep-sea sponge aggregation and coral gardens shall be in place and implemented, such that there is a partial strategy in place and implemented for these habitat types specifically, ensuring that the bottom and *Nephrops* trawl fisheries do not cause serious or irreversible harm to habitat structure and function in Icelandic waters. This strategy will include, where necessary, appropriate formalised move-on measures to avoid interactions with all forms of VMEs. With regard to the bottom trawl UoA, this condition is harmonised with that for ISF Iceland anglerfish, ISF Iceland haddock, ISF Iceland golden redfish, blue ling and tusk, and the ISF Iceland saithe, ling, Atlantic wolfish and plaice fisheries. With regards to Nephrops UoA, this condition is harmonised with that for ISF Iceland anglerfish, ISF Iceland cod and ISF Greenland halibut fisheries.
Milestones	Year 1: There shall be evidence of the Client's plan to evaluate potential damage to deep-sea sponge aggregations and coral gardens appropriate to the UoAs. There shall be evidence of engagement with the relevant authorities. In addition, measures to repeatedly avoid interactions with VMEs will be developed and formalised within the UoAs. Score 70

[5] See Appendix VI 1. Dagskráin

[6] See Appendix VII Malstofa ISF samantekt

	Year 2: 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 all vulnerable habitats, such that the fishery does not cause serious or irreversible harm to habitat structure, on a regional or bioregional basis, and function. Score 70 Year 3: 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 deep-sea sponge aggregations and coral gardens from trawling shall be agreed upon, either at client group level or at a higher level. Score 70 Year 4: Implement the agreed upon partial strategy and provide evidence of the implementation. Score 80. A formal commitment to the agreed upon conservation and management measures shall remain in place for the duration of the certification period.
Client action plan	Year 1 Actions Based on work done pilot project with HB Grandi, ISF will meet with MRI and request an engagement by MRI to conserve vulnerable habitats and ask for options and plans to prevent serious or irreversible harm to habitat structures, if necessary. ISF will engage their members to agree upon and implement methods of benthic bycatch monitoring by vessels fishing under the certificate, and if proven necessary, with the aim of reducing impacts to an acceptable level. Evidence At the Year 1 audit, ISF will present evidence from the monitoring efforts, however, it will continue to MFRI who stores and reports on data collected from the fisheries. ISF will look into a forming of a stakeholder panel from the fisheries to disseminate information on progress and to channel tasks regarding the condition to representative stakeholders within or outside of ISF. The panel will convene twice a year during the lifetime of the certificate, or as needed, and be comprised of ISF representatives and from other stakeholders as fitting for each condition. Year 2 Actions ISF will meet with MFRI to discuss findings from annual research on all VMEs incidents. The meeting is intended to review statistics and discuss alternative actions, if needed. ISF will meet with members of the client group to discuss the condition and ask for feedback on actions made by each member to address the condition. The actions will be formalized into a plan, intended for engagement by members of the client group to meet the condition. The purpose is to ensure that bottom trawling is highly unlikely to cause serious or irreversible harm to all VMEs. Evidence The plan, if required, is updated according to the results of ongoing monitoring, and agreed by ISF and all relevant parties. If needed at the Year 2 audit, ISF will present an action plan, with evidence that it has been agreed by all participating parties (e.g. a signed agreement, meeting minutes, letters of support etc.) Year 3 Actions ISF will meet with members from the client group to discuss effects of actions taken in year 2 and adjust for improved efficiency, as needed. The goal is to protect deep sea sponge aggregations, coral gardens and other VMEs from impacts of trawling and seek an agreement among the members of the client group for this type of conservation. The actions of Year 3 are contingent on the outcome of findings showing whether and how conservation actions are required. If a plan has been proven necessary and agreed upon in year three, ISF will monitor the implementation of the plan in year 4 in cooperation with the members of the client group. Evidence

	If required, the plan is implemented; it is updated as new information is available. At the Year 3 audit, ISF will present the updated plan if necessary, with evidence of implementation (e.g. benthic logbook data, MRI report or other similar). Year 4 Actions ISF panel from the fisheries will convene and meet with MFRI to discuss implementation and progress of the partial strategy, if it will prove necessary for conservation purposes. Evidence ISF will provide and present a timeline of meetings, actions and reports which are to follow up on the contents of the partial strategy.
Consultation on condition	ISF will consult and cooperate with Icelandic MFRI and MII during the process.
Progress on Condition 1st SA Dec 2019	**September 2019.** ISF in cooperation with two client group members set out a project plan to complete the project "Captain's knowledge of the ocean floor" before the end of year 2019. It is a joint project between ISF and MFRI designed to increase knowledge and awareness of different bottom types and habitats. **September 2019.** ISF has inquired via email, to the MII and to the MFRI, as to how contact between fishing gear and ocean habitats are being mitigated and with what progress. ISF has requested a meeting for a follow up. **February 2019.** In a cooperation, ISF and MII invite stakeholders to a morning session to cover issues relating to sustainability of Icelandic fisheries, projects being worked on by the authorities, regulatory and legal changes, improvements in fishing gear, fundamentals of scientific advice and importance of sustainability for consumers and procurement officers.[7] [8] **January 2019.** ISF and MII plan two sessions with stakeholders to Icelandic fisheries to discuss and exchange information and updates on tasks or projects being implemented for the purpose of increased sustainability of Icelandic fisheries. The sessions were held in January and February. This condition has been harmonised with the ISF Iceland Multi-Species Demersal Fishery (Tun 2019), ISF cod and haddock (Tun 2019). The scoring has been revised to 80. See re-scoring in Section 5.4.
Status	**Closed**

3.2 Recommendations update

Recommendation 1 **UoA: Bottom trawl, Nephrops trawl, Danish seine.**	
Performance Indicator	**PI 2.2.3 Secondary species information** Information on the nature and amount of secondary species taken is adequate to determine the risk posed by the UoA and the effectiveness of the strategy to manage secondary species
Purpose	Interactions with seabird and marine mammals should be recorded in the electronic logbooks of client vessels. However, no analysis or documentation of such entries within E-logs is available.
Recommendation	The returns from electronic logbooks should be assessed by MFRI on a regular basis and compared to survey and ad hoc observer data. Where disparities are determined,

[7] See Appendix VI 1. Dagskráin

[8] See Appendix VII Malstofa ISF samantekt

	efforts should be made to improve accurate logbook returns for the catch of seabird and marine mammals. This recommendation applies to all gears.
Client Actions	**September 2019.** The latest report on marine mammal and seabird bycatch in Icelandic lumpfish fisheries is published by MFRI. It states that the latest stock estimates of harbour seal, grey seal and great cormorant are increasing.[9] ISF has inquired via email, to the MII and to the MFRI, as to how the work on improved information on secondary species is coming a long and requested a meeting. **August 2019.** ISF meets with representatives from the Directorate of Fisheries (DoF) to discuss improved logging and methods to follow up. DoF has started publishing its inspection reports for each trip with small vessels, which are the ones with the problem of returning proper logbooks. The public access shows results from each day's logbook and identifies which trips have an inspector on board and thus, reveals any discrepancies of logged catch with and without an inspector on board. DoF further presents its mobile app which is designed to ease the task of logging on captains of smaller vessels. In addition, failure of returning logbooks now has stricter consequences by DoF, following MII's instructions. A meeting is held to discuss effects of marine mammal and seabird bycatch on Icelandic fisheries in terms of sustainability and marketing. Meeting was held a Vignir G. Jónsson's (VGJ) offices, an ISF member and was attended by representatives from VGJ, MII, MFRI, MSC and ISF.[10] **July 2019.** VGJ emails and posts an inquiry to MII asking for update and progress of mitigation measures for bycatch of marine mammals and sea bird.[11] **May 2019.** The Althingi passed a bill stipulating that the Minister can now issue regulations regarding seal catch or seal hunting, including mandatory logging, ban or limitations on seal catches within the Icelandic EEZ, as deemed necessary by the MFRI.[12] **February 2019.** In a cooperation, ISF and MII invite stakeholders to a morning session to cover issues relating to sustainability of Icelandic fisheries, projects being worked on by the authorities, regulatory and legal changes, improvements in fishing gear, fundamentals of scientific advice and importance of sustainability for consumers and procurement officers.[13] [14] **January 2019.** In a cooperation ISF and MII invite stakeholders to a meeting to discuss effects of bycatch issues in gillnets. The meeting was attended by representatives from MII, MFRI and several ISF client group members; HB Grandi (now Brim), Útgerðarfélag Reykjavíkur, Iceland Seafood, Marz Seafood, VGJ, Danica Seafood, Sverrir Björnsson ehf. ISF followed up with MII and MFRI with a meeting conclusion.[15] ISF and MII plan two sessions with stakeholders to Icelandic fisheries to discuss and exchange information and updates on tasks or projects being implemented for the purpose of increased sustainability of Icelandic fisheries. The sessions were held in January and February.

[9] See further Appendix II medafli-fugla-og-spendyra-i-grasleppuveidum1158397

[10] See further Appendix I 2019-08-12-Fundagerð ANR-Hafró-VGJ-ISF-MSC

[11] See Appendix III 2019-07-23-fyrirspurn MSC vottun Grásleppu

[12] See Appendix IV Law regarding seal

[13] See Appendix VI 1. Dagskráin

[14] See Appendix VII Malstofa ISF samantekt

[15] See Appendix V ISF samantekt fundar 18.01.2019

Recommendation 2 **UoA: Bottom trawl, Nephrops trawl, Danish seine.**	
Performance Indicator	**PI 2.3.3 ETP species information** Information on the nature and amount of ETP species taken is adequate to determine the risk posed by the UoA and the effectiveness of the strategy to manage ETP species
Purpose	Interactions with seabird and marine mammals should be recorded in the electronic logbooks of client vessels. However, no analysis or documentation of such entries within E-logs is available.
Recommendation	The returns from electronic logbooks should be assessed by MFRI on a regular basis and compared to survey and ad hoc observer data. Where disparities are determined, efforts should be made to improve accurate logbook returns for the catch of seabird and marine mammals. This recommendation applies to all gears. This recommendation is harmonised with that for secondary out-of-scope species.
Client Action	At the site visit (Oct 2019) the client provided an update on the implementation of improving logbook returns – this is a project conducted together with MFRI. The action described in Recommendation 1 also apply here

Recommendation 3 **UoA: Danish seine.**	
Performance Indicator	**PI 2.4.1 Habitat Outcome Status** Data on the locational extent of Danish seine is adequate to determine the risk posed by the UoA on maerl bed habitat.
Purpose	The depth distribution of maerl beds is understood to occur from 0 to 20m in Icelandic waters and Danish seine operates from 40-60m. Overlap is therefore highly unlikely. However, effort mapping appears to show potential for overlap with recorded maerl habitats. This is expected to be due to the scale and resolution of the VMS mapping available.
Recommendation	Detailed mapping should be provided of Danish seine effort across north Iceland, at an appropriate scale and resolution to corroborate that activity does not coincide with recorded maerl bed habitat. This recommendation applies to the Danish seine UoA.
Client Action	At the site visit (Oct 2019) MFRI and the client provided information on the ongoing mapping projects in Iceland, which also include predictive habitat research (Olafsdottir pers comm Oct 2019). In addition, the activities described in R1 above apply here too.

Recommendation 4 **UoA: All**	
Performance Indicator	**Traceability**
Purpose	Management of risks to segregation and traceability within the fishery
Recommendation	The team requests that the client issues a reminder to all of the client members, as well as auctions, to observe the following: - to ensure full segregation of catch of each species by gear in the event more than one gear is applied during the same fishing trip;

	- to ensure full segregation of catch of each species by management region, i.e. fish caught inside the Icelandic EEZ is kept separate, in the event a vessel catches the same species on the same trip inside and outside the Icelandic EEZ – and – - to observe and implement appropriate measures of packing and labelling certified products prior to moving them to sub-contracting cooler or freezer storages upon landing, to ensure client members´ responsibility for product integrity prior to sale or further handling.
Client Action	At the site visit (Oct 2019) MFRI and the client provided information on the ongoing mapping projects in Iceland, which also include predictive habitat research (Olafsdottir pers comm Oct 2019). In addition, the activities described in R1 above apply here too.

3.3 Client Action Plan

No updates/changes to the Client Action Plan were reported from the fishery client, apart from the progress outlined for each condition and recommendation.

3.4 Surveillance Conclusions

The surveillance team concludes that two conditions are on target and two are closed at this surveillance audit.

The ISF Lemon Sole Fishery continues to meet the MSC standard and its certification should continue.

4 Re-scored Performance Indicators

4.1 Rescored 2.4.1 (Condition 3 closed)

TB was the only gear which scored below 80 at SIb at the original assessment of this fishery. Therefore, only this gear is being re-evaluated and re-scored. The other gears remain unchanged and no edits have been made to their texts (https://fisheries.msc.org/en/fisheries/isf-iceland-lemon-sole/@@assessments).

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 the governance body(s) responsible for fisheries management in the area(s) where the UoA operates.		
Scoring Issue	SG 60	SG 80	SG 100
a	Commonly encountered habitat status		
Guidepost	The UoA is unlikely to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm.	The UoA is highly unlikely to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm.	There is evidence that the UoA is highly unlikely to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm.
Met?	TB: Y	TB: Y	TB: N
	TN: Y	TN: Y	TN: N
	SD: Y	SD: Y	SD: Y

Justification

Gear	Commonly encountered habitats: Coarse sediments	Fine mud	Mixed sediment	Rock / hard substrata	Sand	Sandy mud - muddy sand
TB	80		80		80	
TN		80	80		80	80
SD	100	100	100		100	100

Bottom trawl

Trawl fishing effort In Icelandic waters is primarily concentrated in areas characterised by coarse sediments, mixed sediments and sands. High bottom trawling effort has been ongoing for decades in these habitats, and they are still productive fishing grounds. The current effort by the bottom trawl fishery is considerably less intensive than it used to be. Significant reductions in fishing effort in recent years (compared to early 1990s fishing effort, see ICES 2017) means that any impacts bottom trawl gear may be having in such habitats will have decreased concurrently.

Scientific research has shown that compared to hard bottom sites, species diversity is low in Icelandic deep-water sedimentary habitats (Santos et al., 2008). Moreover, there is evidence in the scientific literature that the effects of otter trawling on less stable sedimentary habitats (including coarse sediments and sandy bottoms) are relatively minor, and that such habitats recover quickly from the effects of fishing activities (Collie et al. 2000; Dernie et al. 2003; Kaiser et al. 2006). Indeed, research on the short- and long-term effects of otter trawling on a macrobenthic infaunal community in subtidal Icelandic waters that had never been trawled before found that no significant treatment effects could be detected on total abundance or on multivariate structure; tests for individual species revealed only a single short-term effect for a bivalve. Trawling did however cause significant short-term reduction in species richness and persistent effects on the Shannon-Wiener diversity index (Ragnarsson and Lindegarth 2009). Based on these studies the team considers that the habitat structure, biological diversity, abundance and function of coarse sediment, mixed sediment and sand habitats would be able to recover to at least 80% of its unimpacted structure, biological diversity and function within 5-20 years, if fishing were to cease entirely.

Overall, the team considers that it is highly unlikely that bottom trawling will reduce the structure and function of commonly encountered habitats (coarse sediment, mixed sediment and sand) to the point where there would be serious or irreversible harm. SG 60 and SG 80 are met.

Ragnarsson and Lindegarth (2009) carried out their research in shallow waters where storm induced disturbance will be higher than in the trawl fishing grounds being assessed. The team therefore considers that this study does not constitute sufficient evidence that the UoA is highly unlikely to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm. SG 100 is not met.

***Nephrops* trawl**

The habitat of *Nephrops norvegicus* is characterized by fine sand and mud, where sea-pen (*Virgularia mirabilis*, *Pennatula phosphorea*, and *Funiculina quadrangularis*) and burrowing megafauna communities can be found (OSPAR 2010d). Based on an assessment against the Texel-Faial criteria (selection criteria for habitats are: global importance, regional importance, rarity, sensitivity, ecological significance, status of decline) carried out by OSPAR such communities are ecologically significant, but were not classified as rare or regionally important. Moreover, seapen- and burrowing megafauna communities are on the OSPAR List of threatened and/or declining species and habitats for region II (Greater North Sea) and III (Celtic Seas), but not for region I, which includes Icelandic waters (OSPAR 2010d).

Seapens are sensitive to mechanical damage by *Nephrops* trawling, in particular *F. quadrangularis* due to the brittle nature of its axial rod and inability to retract into the sediment (Greathead et al., 2007). It is however known that in Icelandic waters there is only very limited overlap between the distribution of sensitive pennatulaceans and areas where *Nephrops* trawling takes place. Pennatulaceans are mainly restricted to waters deeper than 500 m depth, in fact the average depth where these anthozoans are found is 800 m (Ólafsdóttir et al. 2014). *Nephrops* trawling on the other hand takes place at depths of 100 - 500 m, and the fishing grounds are mainly located to the north and southwest of Iceland (see *Nephrops* trawl effort mapped in Figure 3-23). In the absence of significant populations of seapens burrowing megafauna including burrowing crustaceans, small polychaetes and bivalves will be found in *Nephrops* habitats (Ball et al., 2000).

Studies on the impact of *Nephrops* trawling indicate that fishing intensity is the major factor controlling long-term negative trends in the benthos (Ball et al. 2000). The team however considers that in the long term (within 20 years), the habitat structure, biological diversity, abundance and function of soft bottom habitats impacted by the UoA would be able to recover to at least 80% of its unimpacted structure due to a number of factors:

- Sensitive sea-pens frequently present in *Nephrops* habitats are restricted to deeper waters in Iceland. As there is very limited overlap between sensitive sea-pen habitats and *Nephropos* fishing grounds, the potential for impact is very low.
- The *Nephrops* trawl used in Icelandic waters has a ground rope but is not fitted with bobbins or tickler chain (www.fisheries.is), which therefore reduces the depth of penetration into the sediment and thus lowers the level of impact on burrowing megafauna including burrowing crustaceans, polychaetes and bivalves.
- Despite the fact that high bottom trawling effort has been ongoing for decades, including trawling for *Nephrops*, fishing grounds have remained productive. This indicates that the impacts of this UoA on burrowing crustacean and likely other burrowing megafauna species is limited.

		• Following a decline in fishing effort by 60-70% from the early 1970s to the year 2000 (Garcia et.al. 2006), and a subsequent further reduction of the number of boats in the *Nephrops* fishery by 50% during the period 2001-2013, fishing effort of this UoA has been restricted to just a few areas in recent years. The team considers that recovery of these areas would be facilitated by recruitment from nearby unimpacted areas. Overall, it is considered that the UoA is highly unlikely to reduce structure and function of the commonly encountered habitats, including seapen and burrowing megafauna communities, to a point where there would be serious or irreversible harm, and that the habitats would be able to recover to at least 80% of unimpacted structure, biological diversity and function within 5-20 years if fishing were to cease entirely. SG60 and SG80 are met. There is no evidence that this is highly unlikely, SG100 is not met. **Danish seine** The Danish seine cannot be used to fish on rough grounds and is instead used on relatively flat sandy or muddy seabeds lacking significant obstructions which could damage the gear. Since Danish seines encircle the target species rather than being towed across large areas of substrate this gear has a relatively limited spatial footprint, reducing seabed disturbance. Due to the characteristics of Danish seine fishing the team considers that this UoA is highly unlikely to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm. SG60 and SG80 are met. A recent study on the impact of the Danish seine on benthos showed that it had limited negative impact on sedimentary habitats in the study area (Thorarinsdóttir et al. 2010). The study compared fished and closed areas within Skagafjörður and found no differences in species composition between the two treatments, although abundance tended to be higher in the closed area (significant difference for two out of nine benthic taxa from grab sampling). On this basis, the team considered that there is evidence that the UoA is highly unlikely to reduce structure and function of the commonly encountered habitats, although such habitats may suffer some reversible changes. SG 100 is met.

b	VME habitat status						
	Guidepost	The UoA is **unlikely** to reduce structure and function of the VME habitats to a point where there would be serious or irreversible harm.		The UoA is highly unlikely to reduce structure and function of the VME habitats to a point where there would be serious or irreversible harm.		There is evidence that the UoA is highly unlikely to reduce structure and function of the VME habitats to a point where there would be serious or irreversible harm.	
	Met?	TB	Y	TB	Y	TB	N
		TN	Y	TN	Y	TN	N
		SD	Y	SD	Y	SD	N

Justification

Gear	VMEs					
	Maerl beds	*Modiolus* reefs	*Lophelia* reefs	Coral gardens	Sponges	Hydrothermal vents
TB			80	80	80	80
TN				80	80	80
SD	80	80				

Bottom trawl

Maerl beds (NA)

		Since coralline algae require light for photosynthesis maerl beds are generally only found at depths to about 40 m; Icelandic maerl beds have rarely been reported below 20 m depth. Bottom trawling does not take place in waters shallower than 80 m depth and is rare in waters shallower than 100 m depth, and is not allowed within certain distance from land (generally around 12 nm) in Iceland (DF and MFRI, per comm). There is thus no potential overlap between this UoA and the distribution of maerl beds in Icelandic waters. *Modiolus* reefs (NA) *Modiolus* reefs have been reported at depths ranging from 5 - 50m in Icelandic waters. Bottom trawling does not take place in waters shallower than 80 m depth, is rare in waters shallower than 100 m depth, and is not allowed within a certain distance from land (generally around 12 nm) in Iceland (DF and MFRI, per comm). There is thus no potential overlap between this UoA and the distribution of horse mussel beds in Icelandic waters. *Lophelia* reefs (80) In Icelandic waters, most fishing with otter trawls (around 70%) takes place at depths between 100 and 500 m; lemon sole are common at depths of ca. 20 -200 m (MFRI, pers. comm.); *Lophelia* reefs are found at depths of 200-1,400 m, but are concentrated 400 – 800 m. There is thus overlap between bottom trawl gear and *Lophelia* reefs between 200 and 500 m, with the highest potential for overlap at 400 - 500 m. The slope areas off the south coast of Iceland are very steep, with depths descending from around 400 m to more than 1500 m within few nautical miles, and parts of the slope areas are considered difficult for trawling. Therefore, vulnerable habitats have some depth refuge from fisheries impacts in Icelandic waters. There is explicit protection of several *Lophelia* areas where no fishing gears with bottom contact are allowed, including bottom trawling. Permanent area closures for bottom trawling are in operation along the shelf break off W Iceland including the seabed on the shallow part of the Reykjanes Ridge where *Lophelia* reefs occur (Figure 3-29). Detailed habitat mapping has so far concentrated on the areas most at risk from trawling or other threats. Ongoing habitat mapping may identify further areas and the intention is to protect these. In particular since 2015, the bycatch of invertebrates is being monitored during the annual autumn ground fish survey in deep water carried out by MFRI. All invertebrates in the trawl catches observed are identified by benthologists (about half of the trawls carried out). This data will give considerable amount of information on benthos, including corals, as well as other species vulnerable to fishing in the near future (MFRI, pers. communication). However, no recording of benthic bycatch by commercial fishing vessels is in place. Overall, based on the overlap of the UoA with known distribution of *Lophelia* reefs, including encouterability (depth profile overlap), together with the network of closed areas, it is considered unlikely that bottom trawling would reduce the structure and function of *Lophelia* reefs habitats to a point where there would be serious or irreversible harm. SG60 is met. The effort of the trawl fishery as a whole has been decreasing since the early 1990s (ICES 2017, ecosystem overview), with fewer vessel fishing over a smaller area. No new areas are opened for fishing (MFRI pers. Comm. Oct 2018, see PCR ISF demersal multispecies 2019). Overall, based on the overlap of the UoA with known distribution of Lophelia reefs, including encounterability (depth profile overlap, as well as accessibility – steep slopes), together with the network of closed areas (both for protection of and the reduction in fishing effort and consequent fishing area, it is considered highly unlikely that bottom trawling would reduce the structure and function of Lophelia reefs habitats to a point where there would be serious or irreversible harm. SG80 is met (risk of damage 30% or less). In order to meet SG100, benthos mapping through multi-beam projects together with benthos-bycatch recording would need to be more advanced over a wider area, to qualify as 'evidence'.

		This scoring has been harmonised with the ISF Iceland Multi-Species Demersal Fishery (Tun 2019), ISF cod and haddock (Tun 2019) This scoring has been harmonised with the ISF Iceland Multi-Species Demersal Fishery (Tun 2019), ISF cod and haddock (Tun 2019) <u>Coral gardens (80)</u> In Icelandic waters, most fishing with otter trawls (around 70%) takes place at depths between 100 and 500 m / lemon sole are common at depths of ca. 20 -200 m (MFRI, pers. comm.), and coral gardens are primarily found in the depth range of ca. 500-1700 m (see Table 3-21). However, lemon sole can be found at deeper depths and the UoA operates in deeper depths when targeting other species, so there may be some overlap between the UoA and coral gardens. The slope areas off the south coast of Iceland are very steep, with depths descending from around 400 m to more than 1500 m within few nautical miles, and parts of the slope areas are considered difficult for trawling. Therefore, vulnerable habitats have some depth refuge from fisheries impacts in Icelandic waters. Nevertheless, in the past the bottom trawl fishery has reduced coral habitat structure. This impact is inferred from evidence elsewhere in the world, including Norway and New Zealand, and observations (underwater photography) of two locations in Icelandic waters (Ragnarsson et al., 2016). However, the historical extent of the level of impact in Icelandic waters is unknown There is explicit protection of several *Lophelia* areas where no fishing gear with bottom contact are allowed, including bottom trawling since permanent area closures for bottom trawling are in operation along the shelf break off W Iceland including seabed on the shallow part of the Reykjanes Ridge where *Lophelia* reefs occur (Figure 3-29). However, no such closures are in place to protect coral gardens characterised by aggregations of colonies or individuals of one or more coral species of leather corals (Alcyonacea), (Gorgonacea), sea pens (Pennatulacea), black corals (Antipatharia), and hard corals (Scleractinia) other than *Lophelia*. Detailed habitat mapping has so far concentrated on the areas most at risk from trawling or other threats. Ongoing habitat mapping may identify further areas and the intention is to protect these. In particular since 2015, the bycatch of invertebrates is being monitored during the annual autumn ground fish survey in deep water carried out by MFRI. All invertebrates in the trawl catches observed are identified by benthologists (about half of the trawls carried out). This data will give a considerable amount of information on benthos, including coral garden species, as well as other species vulnerable to fishing in the near future (MFRI, pers. communication). Recording of benthic bycatch by commercial fishing vessels is currently being put in place. Coral gardens are mainly deep-water habitats (OSPAR 2010b; see see PCR ISF demersal multispecies 2019 for details). Their main characteristic is a relatively dense aggregation of colonies or individuals of one or more soft/coral species belonging to different taxonomic groups, found on a wide range of soft and hard seabed structures. Taxonomic groups that make up coral garden habitats in Icelandic waters are found primarily in the depth range of approx. 500-1700 m, there is thus potential for limited overlap with the fisheries under assessment. Studies as part of the BIOICE project looked at the distribution of Gorgonacea corals and seapens around Iceland in relation to bottom trawling and showed little overlap (Garcia et al 2006). The effort of the trawl fishery as a whole has been decreasing since the early 1990s (ICES 2017, ecosystem overview), with fewer vessel fishing over a smaller area. No new areas are opened for fishing (MFRI pers. Comm. Oct 2018, see PCR ISF demersal multispecies 2019). Overall, based on the overlap of the UoA with known distribution of Lophelia reefs, including encounterability (depth profile overlap, as well as accessibility – steep slopes), together with the network of closed areas (both for protection of and the reduction in fishing effort and consequent fishing area, it is considered highly unlikely that bottom trawling would reduce

		the structure and function of Lophelia reefs habitats to a point where there would be serious or irreversible harm. SG60 and SG80 is met (risk of damage 30% or less). In order to meet SG100, benthos mapping through multi-beam projects together with benthos-bycatch recording would need to be more advanced over a wider area, to qualify as 'evidence'. This scoring has been harmonised with the ISF Iceland Multi-Species Demersal Fishery (Tun 2019), ISF cod and haddock (Tun 2019) <u>Sponges (80)</u> This habitat occurs in the depth range 300-1300m around Iceland (Garcia et al. 2006; Klitgaard and Tendal 2004), giving an overlap with the fishery in the shallower part of its depth range. A comparison of the known distribution of sponges in Icelandic waters shows that the areal overlap is limited to a few locations off the northwest of Iceland (see PCR ISF demersal multispecies 2019 for details. There is no explicit protection of areas which are rich in sponge communities where no fishing gear with bottom contact are allowed, although a number of permanent, seasonal and annual closures to bottom trawling exist which might have beneficial effects on any sponge habitats occurring there. Ongoing habitat mapping expeditions may identify further areas of sponge aggregations. In addition, bycatch recording and monitoring projects have been implemented during the annual autumn groundfish survey since 2015, this work is conducted by MFRI as part of the survey. All invertebrates in the trawl catches observed are identified by benthologists (about half of the trawls carried out). This data provides in depth information on benthos to species level, including corals, sponges, soft corals etc. The information is collated by MFRI, and an internal report on corals and sponges has been made available to the assessment team (Olafsdottir 2017 – Status report). This recording and analysis programme is being expanded across the fisheries. The client fishery is actively participating in this work, triggered as conditions on the first MSC certificate of Golden Redfish, Saithe and Ling. These conditions have been closed out over the duration of the first certificate. The effort of the trawl fishery as a whole has been decreasing since the early 1990s (ICES 2017, ecosystem overview), with fewer vessel fishing over a smaller area. No new areas are opened for fishing (MFRI pers. comm. Oct 2018). Overall, based on the limited overlap of the UoA with known distribution of sponge areas, including encounterability (depth profile overlap), together with the network of temporary or permanently closed areas, and the reduction in fishing effort and consequent fishing area, it is considered highly unlikely that bottom trawling would reduce the structure and function of sponge habitats to a point where there would be serious or irreversible harm. SG60 and SG80 is met (risk of damage 30% or less). As yet there is not enough 'evidence', as the benthos-bycatch recording and evaluation projects have not been running for long enough to provide enough data. SG100 is not met. ** <u>Hydrothermal vents (80)</u> The depth distributions of trawl fishing and hydrothermal vent fields overlap, and trawling is known to take place close to hydrothermal vent fields (see map of trawling effort superimposed on vent field distribution in Table 3-23). The hydrothermal vents at Steinahóll are situated inside a closed area for otter trawling which has been in operation since 1994. As such the UoA is highly unlikely to reduce structure and function of the hydrothermal vent habitats to a point where there would be serious or irreversible harm. SG60 and SG80 are met. Mapping of hydrothermal vent areas is however ongoing, with surveys planned to survey several potential vent sites on the Reykjanes Ridge for 2017 (MFRI, pers. communication). As

such it cannot be argued that there is evidence that the fishery is highly unlikely to impact hydrothermal vent habitats. SG 100 is not met.

***Nephrops* trawl**

Maerl beds

Since coralline algae require light for photosynthesis maerl beds are generally only found at depths to about 40 m; Icelandic maerl beds have rarely been reported below 20 m depth. *Nephrops* trawling does not take place in waters shallower than 100 m depth and is not allowed within a certain distance from land (generally around 12 nm) in Iceland (DF and MFRI, pers. communication). There is thus no potential overlap between this UoA and the distribution of maerl beds in Icelandic waters.

Modiolus reefs

Modiolus reefs have been reported at depths ranging from 5 - 50m in Icelandic waters. *Nephrops* trawling does not take place in waters shallower than 100 m depth and is not allowed within certain distance from land (generally around 12 nm) in Iceland (DF and MFRI, pers. communication). There is thus no potential overlap between this UoA and the distribution of horse mussel beds in Icelandic waters.

Lophelia reefs

Nephrops trawling does not take place on hard substrata where *Lophelia* reefs are found.

Coral gardens

Soft corals occur on the softer muddy habitats favoured by *Nephrops*. However fishing with Nephrops trawls in Icelandic waters primarily takes place in shallower waters at depths above 500 m; in Icelandic waters Nephrops is found in the warmer waters off the south, southeast and southwest coast, mostly at depths of 110-270 m (see www.fisheries.is). Coral gardens on the other hand are found primarily in the depth range of ca. 500-1700 m (see Table 3-21). Overlap between the UoA and coral gardens is thus extremely limited. Consequently the team considers that the UoA is highly unlikely to reduce structure and function of coral garden habitats to a point where there would be serious or irreversible harm, and SG60 and SG80 are met. There is no evidence that this is high unlikely, so SG100 is not met.

Sponges

Deep-sea sponge aggregations may be found on hard substrata, such as boulders and cobbles which may lie on sediment, but are also found on soft substrata (OSPAR, 2010e) favoured by *Nephrops*.

However fishing with *Nephrops* trawls in Icelandic waters primarily takes place in shallower waters at depths above 500 m; in Icelandic waters *Nephrops* is found in the warmer waters off the south, southeast and southwest coast, mostly at depths of 110-270 m (see www.fisheries.is). Deep-sea sponge aggregations on the other hand are found primarily in the depth range of ca. 300-750 m, and a comparison of the known distribution of sponges in Icelandic waters (Table 3-22) with known fishing grounds of bottom trawl (Figure 3-24) shows that the areal overlap is limited to a few locations off the northwest of Iceland where *Nephrops* trawling does not take place. Overlap between the UoA and sponges is thus very limited and consequently the team considers that the UoA is highly unlikely to reduce structure and function of deep-sea sponge habitats to a point where there would be serious or irreversible harm, and SG80 is met. There is no evidence that this is highly unlikely, so SG100 is not met.

Hydrothermal vents

		The depth distributions of *Nephrops* trawl fishing and hydrothermal vent fields overlap, and *Nephrops* trawling is known to take place close to hydrothermal vent fields in the North of Iceland (compare map of *Nephrops* trawl fishing effort with map of vent field distribution in Table 3-23). The hydrothermal vents at Steinahóll are situated inside a closed area for otter trawling which has been in operation since 1994. As such the UoA is highly unlikely to reduce structure and function of the hydrothermal vent habitats to a point where there would be serious or irreversible harm. SG 80 is met. Mapping of hydrothermal vent areas is however ongoing, with surveys planned to survey several potential vent sites for 2018 (MFRI, pers. communication). As such it cannot be argued that there is evidence that the fishery is highly unlikely to impact hydrothermal vent habitats. SG 100 is not met. **Danish seine** Maerl beds The distribution of Danish seine fishing effort extends across northern parts of Iceland. This appears to overlap with areas where maerl habitats are recorded (see Table 3-18), in particular inside fjords along the northern coast of Iceland. However, the depth profile of mearl in relation to operational depths of Danish seine do not overlap. Coralline algae require light for photosynthesis, therefore maerl beds are found from 0 to 20 m (JNCC, 2018) and sometimes to 40m in clear, low turbid water conditions. Icelandic maerl beds have rarely been reported below 20 m depth. The Danish seine fishery occurs from 40-60m depth and therefore overlap is highly unlikely. The appeareance of the VMS effort data showing a potential overlap with mearl is likely to be due to the scale at which the VMS data is presented. This is corroborated by Figure 3-4 which shows that catches of lemon sole do not occur across the areas identified as maerl bed habitat. The team consider that the UoA is highly unlikely to reduce structure and function of the maerl habitats to a point where there would be serious or irreversible harm. SG 80 is met. Although scientific evidence indicates that it is highly unlikely that the Danish seine would reduce habitat structure and function to a point where there would be serious or irreversible harm, this has not been proven. SG 100 is not met. Due to the scale of Danish seine effort mapping, which currently appears to indicate overlap with maerl habitat. A recommendation has been raised (Recommendation 3) to provide detailed mapping of Danish seine effort across north Iceland to corroborate that activity does not coincide with recorded maerl habitat. *Modiolus* reefs The distribution of Danish seine fishing effort overlap with areas where *Modiolus* reefs have been recorded (see Table 3-19), in particular off the south-western coast of Iceland. Moreover, horse mussel beds have been reported at depths of 5-50 m in Icelandic waters, which overlaps with the depth range where Danish seines are used. It is however unlikely that there would be fishing by Danish seine over horse mussel beds, as it would lead to fishing gear damage, such as the footrope being damaged after getting hooked in the mussel bed matrix. Danish seines are instead used on smooth bottoms, and it is likely that fishermen avoid fishing on grounds where there are beds with horse mussel (MFRI pers. communication). As such the UoA is highly unlikely to reduce structure and function of the maerl habitats to a point where there would be serious or irreversible harm. SG 80 is met. In the absence of more up to date information on the distribution of *Modiolus* reefs in Icelandic waters and due to the overlap of Danish seine fishing effort with the location of Modiolus beds off the south-west of Iceland, SG 100 is not met. *Lophelia* reefs

		Danish seines cannot be used on rough / uneven bottoms, and fishing takes place in waters which are too shallow for *Lophelia* reefs to be encountered. Coral gardens Danish seines cannot be used on rough / uneven bottoms, and fishing takes place in waters which are too shallow for coral gardens to be encountered. Sponges Danish seines cannot be used on rough / uneven bottoms, and fishing takes place in waters which are too shallow for deep-sea sponges to be encountered. Hydrothermal vents Danish seines cannot be used on rough / uneven bottoms, and fishing takes place in waters which are too shallow for hydrothermal vents to be encountered.
c	**Minor habitat status**	

Guidepost			There is **evidence** that the UoA is highly unlikely to reduce structure and function of the minor habitats to a point where there would be serious or irreversible harm.
			N

Justification

Gear	Minor habitats					
	Coarse sediments	Fine mud	Mixed sediment	Rock / hard substrata	Sand	Sandy mud - muddy sand
TB		80		80		80
TN	80			80		
SD				80		

All Gears

The minor habitats are those that are not commonly encountered by the gears (i.e. those not considered under SI(a) for each gear.

There is no specific evidence that any of the UoAs under assessment are highly unlikely to reduce the structure and function of minor habitats to a point where there would be serious or irreversible harm. SG 100 is not met.

References	Ball et al. 2000; Barbera et al., 2017; Chuenpagdee et al. 2003; Collie et al. 2000; Dernie et al. 2003; Garcia et.al. 2006; Grieve et al., 2014; ICES 2017; Jennings et al. 2001; Kaiser et al. 2006; OSPAR 2010d; Ragnarsson and Lindegarth 2009; Ragnarsson et al, 2016 ; OSPAR, 2010e; Santos et al. 2008; Sharp et al. 2009; Thorarinsdóttir et al. 2010 ; Tun 2019 PCR multispecies demersal fishery ; Tun 2019 cod and haddock SA

OVERALL PERFORMANCE INDICATOR SCORE:

	Bottom trawl	**80**
	***Nephrops* trawl**	**80**
	Danish Seine	**85**

4.2 Rescored 2.4.2 (Condition 4 closed)

TB and TN were the only gears which scored below 80 at SIa at the original assessment of this fishery. Therefore, only this gear is being re-evaluated and re-scored. The other gears remain unchanged and no edits have been made to their texts (https://fisheries.msc.org/en/fisheries/isf-iceland-lemon-sole/@@assessments).

<table>
<tr><th colspan="2">PI 2.4.2</th><th colspan="6">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.</th></tr>
<tr><td colspan="2">Scoring Issue</td><td colspan="2">SG 60</td><td colspan="2">SG 80</td><td colspan="2">SG 100</td></tr>
<tr><td rowspan="6">a</td><td colspan="7">Management strategy in place</td></tr>
<tr><td>Guidepost</td><td colspan="2">There are measures in place, if necessary, that are expected to achieve the Habitat Outcome 80 level of performance.</td><td colspan="2">There is a partial strategy in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above.</td><td colspan="2">There is a strategy in place for managing the impact of all MSC UoAs/non-MSC fisheries on habitats.</td></tr>
<tr><td rowspan="3">Met?</td><td>TB</td><td>Y</td><td>TB</td><td>Y</td><td>TB</td><td>N</td></tr>
<tr><td>TN</td><td>Y</td><td>TN</td><td>Y</td><td>TN</td><td>N</td></tr>
<tr><td>SD</td><td>Y</td><td>SD</td><td>Y</td><td>SD</td><td>N</td></tr>
<tr><td>Justification</td><td colspan="6">
<table>
<tr><th rowspan="2">Gears</th><th colspan="6">VMEs</th></tr>
<tr><th>Maerl beds</th><th>Modiolus reefs</th><th>Lophelia reefs</th><th>Coral gardens</th><th>Sponges</th><th>Hydrothermal vents</th></tr>
<tr><td>TB</td><td></td><td></td><td>80</td><td>80</td><td>80</td><td>80</td></tr>
<tr><td>TN</td><td></td><td></td><td></td><td>80</td><td>80</td><td>80</td></tr>
<tr><td>SD</td><td>80</td><td>80</td><td></td><td></td><td></td><td></td></tr>
</table>
All gears
The Ministry of the Environment has developed a National Strategy Plan for the preservation of biological diversity (Ministry of Environment 2010). Two of the key elements of this strategy are (a) develop fishing methods with less impact on marine ecosystems, and (b) protect vulnerable benthic ecosystems. Act 97/1997 (“um veiðar í fiskveiðilandhelgi Íslands”) also provides a framework which allows managers to close vulnerable habitats to fishing as and when the need arises. The Nature Conservation Act no. 44/1999 also provides measures to protect marine habitats. Iceland has ratified a number of conventions on the protection and management of marine species, such as the Convention on Biological Diversity, the OSPAR Convention and the CITES Convention.
These conventions have established objectives for conserving endangered, threatened or protected (ETP) species and habitats, and within them a number of measures have been developed to detect and reduce impacts. For example, the OSPAR Strategy on the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area has identified a number of key species and habitats which are considered threatened or declining (OSPAR 2008 a and b). Iceland has nominated 14 areas to the OSPAR Network of Marine Protected Areas (OSPAR 2013).
</td></tr>
</table>

		There have been rapid developments in gear technology, with many fishermen operating with semi-pelagic trawl doors, not touching the bottom. This is due to promoting efficiency and oil consumption – with fishing practices being monitored based on fish per kg of oil. This is an informal voluntary move, and not set within a code of conduct (ISF, pers. comm.). Other current developments relate to the MFRI asking the MII to adopt a move in rule when any coral is noted in the nets (ISF, pers. comm.). There are thus measures in place that are expected to achieve the Habitat Outcome 80 level of performance and SG 60 is met for all UoAs. Bottom and *Nephrops* Trawls (80) The Icelandic partial management strategy for marine habitats in general, and VMEs in particular, is mainly implemented through a system of closed areas which effectively prevent both bottom trawls and Nephrops trawls from being used in known areas of cold-water coral concentrations along the edge of the continental shelf. A known hydrothermal vent area is also closed to trawling. The trawl fisheries are actively contributing to benthos mapping programmes by recording all benthos bycatch to species level where relevant, in cooperation with researchers at MFRI. The client fishery is also implementing a project based on interviews of relevant fishers which taps into the practical knowledge on fishing areas overlaying benthos type. Iceland is a Contracting Party to the North East Atlantic Fisheries Commission (NEAFC). In 2014 NEAFC adopted Recommendation 19 (amended in 2015) that requires vessels to move 2 nautical miles away from trawl tracks when encountering “the presence of more than 30 kg of live coral and/or 400 kg of live sponge of VME indicators”. Icelandic vessels abide by commonly accepted move-on rules when encountering VMEs, however these are currently informal, and not part of a formal code of conducts, until it is clear how best such rule can be monitored effectively (ISF, pers. comm., site visit Oct 2018). A number of practical steps encourage avoidance of VMEs, including local knowledge, avoidance of damage to the gear, buffer zones around closed areas avoiding straying, contributing towards habitat mapping programmes to improve knowledge on distribution of VME indicator species and concentrations, considerable reduction of trawl gear effort since the early 1990s to fewer locations, no new fishing areas opened up. This represents a partial strategy for all habitat including VME elements of Lophelia reefs, coral gardens, sponges, hydrothermal vents, maerl beds and Modiolus reefs. SG80 is met. It is not a full strategy with a comprehensive management plan supported by a comprehensive impact assessment and based upon full EEZ habitat mapping. SG 100 is not met *** Danish seine Large areas of Icelandic waters are closed for fishing, some of them temporarily (hours per day, days in total or seasonal) and others permanently (years). Danish seine vessels have a range of restrictions on aerial operation, including limits of operation within some fjords, gear restrictions include no use of otter doors (see Regulation 1062/2013 for fjord restrictions). Areas are usually closed for fishing with different gear types due to the presence of juvenile fish over extended periods of time or in order to protect spawning grounds. Although area closures are aimed at protecting juvenile fish, the measures have a secondary effect, i.e. protecting seabed habitats from being damaged by fishing activities. Given the lower impact of Danish seine on bottom habitats, no specific strategy is considered necessary in

		this case and SG80 is met. However, it is not a full strategy with a comprehensive management plan supported by a comprehensive impact assessment and based upon full EEZ habitat mapping. Consequenctly SG 100 is not met. Scoring has been harmonised with previous MSC assessments of these gears, including most recently the ISF anglerfish and ISF cod and haddock (Icelandic UoAs) fishery assessments.

b	Management strategy evaluation						
	Guidepost	The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar UoAs/habitats).		There is some objective basis for confidence that the measures/partial strategy will work, based on information directly about the UoA and/or habitats involved.		Testing supports high confidence that the partial strategy/strategy will work, based on information directly about the UoA and/or habitats involved.	
	Met?	TB	Y	TB	N	TB	N
		TN	Y	TN	N	TN	N
		SD	Y	SD	Y	SD	N
	Justification	Bottom and *Nephrops* trawls The measures in place for all VMEs and habitat types encountered e.g. closed areas for bottom gears are well proven to be effective, providing plausible argument that the measures/partial strategy are considered likely to work. Therefore it is considered that this meets SG60. These have been investigated in detail for cold water corals and which provides objective basis for confidence that closed areas are appropriate for this VME. It is acknowledged that this partial strategy is subject to a condition for soft corals and sponges (see 2.4.1a above), which harmonises with previous MSC assessments including ISF anglerfish, ISF cod and haddock, ISF Iceland golden redfish and the ISF Iceland saithe & ling fisheries. As such this under implementation and does not yet provide objective basis for confidence that it will work, as it is not yet a current measure. Therefore it is considered that SG80 is not met. Danish seine Large areas of Icelandic waters are closed for fishing, some of them temporarily (hours per day, days in total or seasonal) and others permanently (years). Areas are usually closed for fishing with different gear types due to the presence of juvenile fish over extended periods of time or in order to protect spawning grounds. Although area closures are aimed at protecting juvenile fish, the measures have a secondary effect, i.e. protecting seabed habitats from being damaged by fishing activities. Closed areas are widely adopted as fisheries management measures to protect benthic habitats. Combined with the known limited impacts of Danish seine on benthic habitats, the team considers that there is some objective basis for confidence that the measures will work, based on information directly about the UoA and habitats involved. This meets SG80. However, there is no comprehensive management plan supported by an impact assessment and testing based on information directly about the UoAs and habitats involved, so SG 100 is not met.						

		Scoring has been harmonised with previous MSC assessments of these gears, including most recently the ISF anglerfish and ISF cod and haddock (Icelandic UoAs) fishery assessments.				
c	Management strategy implementation					
	Guidepost		There is some quantitative evidence that the measures/partial strategy is being implemented successfully.		There is clear quantitative evidence that the partial strategy/strategy is being implemented successfully and is achieving its objective, as outlined in scoring issue (a).	
	Met?		TB	Y	TB	N
			TN	Y	TN	N
			SD	Y	SD	N
	Justification	All gears Operation of all Icelandic fishing vessels is monitored by VMS and AIS and the MFRI has access to electronic logbooks for scientific purposes (high resolution data). During site visits the DF has confirmed that vessels respect area closures, both with regards to areas closed to protected sensitive habitats such as *Lophelia* reefs and areas closed to protect juvenile fish / spawning grounds (which have the additional benefit of protecting bethic habitats). It is considered that there is thus some quantitative information that the partial strategy is being implemented successfully, especially for Lophelia reefs. SG 80 is met. However, as yet there is no clear quantitative evidence that the partial strategy is being implemented successfully for all habitat types and VMEs; SG 100 is not met. Scoring has been harmonised with previous MSc assessments of these gears, including most recently the ISF anglerfish and ISF cod and haddock (Icelandic UoAs) fishery assessments.				
d	**Compliance with management requirements and other MSC UoAs’/non-MSC fisheries’ measures to protect VMEs**					
	Guidepost	There is qualitative evidence that the UoA complies with its management requirements to protect VMEs.	There is **some quantitative evidence** that the UoA complies with both its management requirements and with protection measures afforded to VMEs by other MSC UoAs/non-MSC fisheries, where relevant.		There is **clear quantitative evidence** that the UoA complies with both its management requirements and with protection measures afforded to VMEs by other MSC UoAs/non-MSC fisheries, where relevant.	
	Met?	TB Y	TB	Y	TB	N
		TN Y	TN	Y	TN	N
		SD Y	SD	Y	SD	N

	Justification	Bottom and *Nephrops* trawls VMS, AIS and other effort distribution information confirms that fishing vessels avoid closed areas and thus these are not subject to disturbance. Based on stakeholder consultation with MFRI, ISF and vessel skipper, the move-on rules for occasions when habitat fragments/parts are brought on board are well understood. Therefore it is considered that this meets SG 80. Whilst there is full VMS and AIS coverage of all gear types impacting these habitats, and known cold water coral areas are now well protected, there is no clear quantitative evidence that the UoAs considered in the present assessment, or other similar MSC UoAs (e.g. Icelandic anglerfish, cod, halibut, golden redfish, saithe, ling), fully comply with both their management requirements and with protection measures afforded to coral garden and deep-sea sponge VMEs. SG 100 is not met. Danish seine Given the known levels of effort, and the low levels of observed impact on habitats, this achieved SG 80. However, there is no clear quantitative evidence that Danish seine, or other similar MSC UoAs (e.g. Icelandic cod, halibut, golden redfish, saithe, ling), fully comply with both their management requirements and with protection measures for all habitats. SG 100 is not met. Scoring has been harmonised with previous MSc assessments of these gears, including most recently the ISF anglerfish and ISF cod and haddock (Icelandic UoAs) fishery assessments.
References		Ministry of Environment 2010; OSPAR 2008a; OSPAR 2008b; OSPAR 2013.

OVERALL PERFORMANCE INDICATOR SCORE:		
	Bottom trawl	**80**
	***Nephrops* trawl**	**80**
	Danish Seine	**80**

5 Appendices

5.1 Evaluation Processes and Techniques

5.1.1 Site Visits

The assessment team made a site visit to Reykjavík, Iceland, on 21.-22. October 2019, attended by the lead assessor and P3 expert, the P2 expert and the assessment secretary, with the P1 expert connected remotely by skype.

Stakeholder notification was issued inviting a range of stakeholders to provide information and comments on the fishery. Several key stakeholders were specifically contacted to request a meeting and most of those responded positively. The team conducted meetings with the following stakeholders on the 22nd of October 2019:

The Client organisation: Iceland Sustainable Fisheries Ltd. (ISF)	Kristinn Hjálmarsson, Project Manager, ISF
Ministry of Industries and Innovation (MII) Directorate of Fisheries (DF)	Brynhildur Benediktsdóttir, Senior Expert, MII Jóhann Guðmundsson, Director of Department, MII Sævar Guðmundsson, Head of Department, DF
Marine and Freshwater Research Institute (MFRI)	Guðmundur Þórðarson, Head of Division Steinunn H. Ólafsdóttir, Fishery Scientist Bjarki Þór Elvarsson, Fishery Scientist
Icelandic Institute of Natural History	Kristinn Haukur Skarphéðinsson, Head of Dicision

5.1.2 Stakeholder participation

See 5.1.1 above.

5.2 Stakeholder Input

No written inputs from stakeholders were received.

5.3 Revised surveillance programme

No revision to the surveillance programme is proposed

5.4 Harmonised fishery assessments

The table below lists a number of overlapping fisheries, namely other currently fisheries in the Icelandic EEZ. These are all overseen by the same client, ISF, and there are ongoing efforts to ensure the fisheries are harmonised appropriately.

The surveillance team for this fishery are also team members for other ISF fisheries. The relevant CAB was contacted to ensure harmonisation for any that were not covered by overlapping team membership.

Table 10 Overlapping fisheries

Fishery Name	Species	Gear Types	MSC Status	PIs to harmonise
ISF Iceland northern shrimp - inshore and offshore	Northern prawn	Trawls - Bottom trawls	Certified	P2, P3
ISF Iceland capelin	Capelin	Seine Nets, Trawls - Midwater trawls	Certified	P3
ISF Norwegian & Icelandic herring trawl and seine	Herring	Seine Nets, Trawls - Midwater trawls	Certified	P3
ISF Iceland North East Atlantic blue whiting	Blue whiting	Trawls - Bottom trawls, Trawls - Midwater trawls	Certified	P2, P3
ISF Iceland haddock	Haddock	Gillnets And Entangling Nets - Gillnets, Hooks And Lines - Handlines and pole-lines (hand-operated), Hooks And Lines - Longlines, Seine Nets - Boat or vessel seines - Danish seines, Trawls - Bottom trawls, Trawls - Bottom trawls - nephrops trawls, Trawls - Midwater trawls	Certified	P2, P3
ISF Iceland anglerfish	Monk angler	Gillnets And Entangling Nets - Gillnets, Hooks And Lines - Longlines, Miscellaneous Gear, Seine Nets - Boat or vessel seines - Danish seines, Trawls - Bottom trawls - nephrops trawls, Trawls - Bottom trawls - otter trawls	Certified	P2, P3
ISF Greenland halibut	Greenland halibut	Gillnets And Entangling Nets - Gillnets, Hooks And Lines - Longlines, Trawls - Bottom trawls - otter trawls, Trawls - Bottom trawls - shrimp trawls, Trawls - Midwater trawls	Certified	P2, P3
ISF Iceland Cod	Atlantic cod	Gillnets And Entangling Nets - Gillnets, Hooks And Lines - Handlines and pole-lines (hand-operated), Hooks And Lines - Longlines, Seine Nets - Boat or vessel seines - Danish seines, Trawls - Bottom trawls, Trawls - Bottom trawls - nephrops trawls, Trawls - Midwater trawls	Certified	P2, P3
ISF Iceland multi-species demersal fishery	Atlantic wolffish, Tusk(=Cusk), Blue ling, Ling (Molva molva), European plaice, Saithe(=Pollock), Golden redfish	Gillnets And Entangling Nets - Gillnets, Hooks And Lines - Handlines and pole-lines (mechanized), Hooks And Lines - Longlines, Seine Nets - Boat or vessel seines - Danish seines, Trawls - Bottom trawls, Trawls - Bottom trawls - nephrops trawls, Trawls - Bottom trawls - otter trawls	Certified	P2, P3

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