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Global Standard for Responsible Supply of Marine Ingredients

Fishery Assessment Methodology and Template Report V2.0

Fishery Under Assessment	**Capelin (*Mallotus villosus*)**
Date	**September 2019**
Assessor	**Jim Daly**

Application details and summary of the assessment outcome				
Name: P/F Havsbrun				
Address:				
Country: Faroe Islands		**Zip:**		
Tel. No.:		**Fax. No.:**		
Email address:		**Applicant Code**		
Key Contact:		**Title:**		
Certification Body Details				
Name of Certification Body:		**SAI Global Ltd**		
Assessor Name	**Peer Reviewer**	**Assessment Days**	**Initial/Surveillance/Re-approval**	**Whole fish/ By-product**
Jim Daly	Virginia Polonio	2.5	Re-approval	Whole fish
Assessment Period	2018-2019			

Scope Details	
Management Authority (Country/State)	MFRI (Iceland)
Main Species	Capelin (*Mallotus villosus*)
Fishery Location	Faroe Islands, Subareas V and XIV; Division IIa West of 5^0W (Iceland and Faroes grounds, East Greenland, Jan Mayen (IGJM) area)
Gear Type(s)	Purse seine / Pelagic trawl
Outcome of Assessment	
Overall Outcome	**PASS**
Clauses Failed	**NONE**
Peer Review Evaluation	**PASS**
Recommendation	**APPROVE**

Assessment Determination

Capelin in the Iceland East Greenland-Jan Mayen area is a separate stock for assessment purposes. The latest assessment benchmark was undertaken in January 2015 when a new Harvest Control Rule (HCR) was proposed. This new approach is based on leaving more than 150,000t annually for spawning. No other reference points are defined for this stock. Spawning Stock Biomass (SSB) of Icelandic capelin is considered very variable, as it is mostly dependent on one age group.

ICES advised (Nov 2017) that the initial (preliminary) quota (2018/19) should be 0 tonnes following the precautionary approach defined in the Harvest Control Rules (HCR's). In October 2018, the Icelandic Marine Fisheries Research Institute (MFRI) advised an intermediate TAC of 0 tonnes based on an acoustic survey in September and winter surveys. There were no capelin fisheries or landings (fishing season 2018/2019).

Acoustic estimates of juveniles (10.8 billion, autumn 2018) were below the Harvest Control Rule (HCR) value of 50 billion that triggers an initial quota. At the end of November 2018, ICES advised an initial quota of 0 tonnes for the fishing season 2019/20. MFRI is expected to provide updated catch advice in autumn 2019. Assessments provide an indication of the volume of fishery removals which is appropriate for the current stock status.

Spawning stock biomass (SSB) was estimated to be 849,000 tonnes (MFRI latest advice Jan 2019). Given the uncertainty estimates, the Harvest Control Rule defines a 95% probability that at least 150, 000 tonnes would be left for spawning (B_{lim}). Model projections show that a catch of maximum 285, 000 tons would fulfil HCR obligations. Even though there is no fishery for this season, the stock is above Bpa and BMGT

The importance of capelin in East Greenlandic waters is well documented; effort has been increased considerably during autumn surveys towards evaluation of capelin's role in the ecosystem e.g. by research on feeding of capelin, estimates of prey availability, predator distributions and environmental monitoring. In Icelandic waters, capelin is the main single item in the diet of Icelandic cod, a key prey to several species of marine mammals and seabirds and important as food for several other commercial fish species.

Catches for the period 2011-2016 were composed almost exclusively of capelin (99.98%), with some anecdotic catches of cod (0.01%) and haddock (<0.01%). The only target species of this fishery is capelin and bycatch can be considered negligible (SAI Global 2017).

In Icelandic waters, fishing with pelagic trawl is only allowed in limited area off the NE-coast (fishing in January) to protect juvenile capelin and to reduce the risk of affecting the spawning migration route. In coming years when experience of the new HCR will be gained it is recommended that assumptions and practical operation of the HCR will be evaluated. e.g. by refining the model for the initial TAC, reviewing the predation/prey relationships and how SSB estimates from autumn and winter surveys should be weighted when final TAC's are calculated.

The ICES Expert Group in the assessment area is the North Western Waters Group (NWWG). The Expert Group (2019) recommends that the assessment of this capelin stock undergoes a benchmark workshop soon. Since the NWWG 2018 meeting, ICES has moved to regional workshops rather than to try and work with stock assessors during the working groups. A regional workshop is planned for NWWG participants in autumn 2019.

The Capelin fishery (ISF Iceland, FAO 27, Seine Nets Trawls; Midwater trawls) is currently MSC certified (SAI Global Ltd, MSC Track a Fishery Website accessed 18.09.2019). An on-site Surveillance Audit (Year 2) was undertaken by the SAI Global Assessment Team in August 2019. Capelin *Mallotus villosus* (European stock) has been assessed as a species of least concern (IUCN) and is not on the current list of CITES endangered species (websites accessed 18.09.19). Capelin *Mallotus villosus* is approved by the assessment team to produce fishmeal and fish oil under the IFFO-RS v 2.0 whole fish standard
Peer Review Comments
Basically, the PR agrees with the conclusions raised in the report and recommends the approval of the fishery however few comments should be addressed.
Notes for On-site Auditor

Note: This table should be completed for whole fish assessments only.

General Results

General Clause	Outcome (Pass/Fail)
M1 - Management Framework	PASS
M2 - Surveillance, Control and Enforcement	PASS
F1 - Impacts on ETP Species	PASS
F2 - Impacts on Habitats	PASS
F3 - Ecosystem Impacts	PASS

Species-Specific Results

Category	Species	% landings	Outcome (Pass/Fail)	
Category A	Capelin (*Mallotus villosus*)	99.98%	A1	PASS
			A2	PASS
			A3	PASS
			A4	PASS
Category B				
Category C				
Category D				

[List all Category A and B species. List approximate total %age of landings which are Category C and D species; these do not need to be individually named here]

HOW TO COMPLETE THIS ASSESSMENT REPORT

This assessment template uses a modular approach to assessing fisheries against the IFFO RS standard.

Whole Fish

The process for completing the template for a **whole fish** assessment is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table, to determine which categories of species are present in the fishery.
2. ALL ASSESSMENTS: Complete clauses M1, M2, M3: Management.
3. IF THERE ARE CATEGORY A SPECIES IN THE FISHERY: Complete clauses A1, A2, A3, A4 for **each** Category A species.
4. IF THERE ARE CATEGORY B SPECIES IN THE FISHERY: Complete the Section B risk assessment for **each** Category B species.
5. IF THERE ARE CATEGORY C SPECIES IN THE FISHERY: Complete clause C1 for **each** Category C species.
6. IF THERE ARE CATEGORY D SPECIES IN THE FISHERY: Complete Section D.
7. ALL ASSESSMENTS: Complete clauses F1, F2, F3: Further Impacts.

A fishery must score a pass in **all applicable clauses** before approval may be recommended. To achieve a pass in a clause, the fishery/species must meet **all** the minimum requirements.

By-products

The process for completing the template for **by-product raw material** is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table with the names of the by-product species and stocks under assessment. The '% landings' column can be left empty; all by-products are considered as Category C and D.
2. IF THERE ARE CATEGORY C BYPRODUCTS UNDER ASSESSMENT: Complete clause C1 for **each** Category C by-product.
3. IF THERE ARE CATEGORY D BYPRODUCTS UNDER ASSESSMENT: Complete Section D.
4. ALL OTHER SECTIONS CAN BE DELETED. Clauses M1 - M3, F1 - F3, and Sections A and B do not need to be completed for a by-product assessment.

By-product approval is awarded on a species-by-species basis. Each by-product species scoring a pass under the appropriate section may be approved against the IFFO RS Standard.

SPECIES CATEGORISATION

The following table should be completed as fully as the available information permits. Any species representing more than 0.1% of the annual catch should be listed, along with an estimate of the proportion of the catch each species represents. The species should then be divided into Type 1 and Type 2 as follows:

- **Type 1 Species** can be considered the 'target' or 'main' species in the fishery. They make up the bulk of annual landings and are subjected to a detailed assessment.
- **Type 2 Species** can be considered the 'bycatch' or 'minor' species in the fishery. They make up a small proportion of the annual landings and are subjected to relatively high-level assessment.

Type 1 Species must represent 95% of the total annual catch. Type 2 Species may represent a maximum of 5% of the annual catch (see Appendix B).

Species which make up less than 0.1% of landings do not need to be listed (NOTE: ETP species are considered separately). The table should be extended if more space is needed. Discarded species should be included when known.

The 'stock' column should be used to differentiate when there are multiple biological or management stocks of one species captured by the fishery. The 'management' column should be used to indicate whether there is an adequate management regime specifically aimed at the individual species/stock. In some cases it will be immediately clear whether there is a species-specific management regime in place (for example, if there is an annual TAC). In less clear circumstances, the rule of thumb should be that if the species meets the minimum requirements of clauses A1-A4, an adequate species-specific management regime is in place.

NOTE: If any species is categorised as Endangered or Critically Endangered on the IUCN Red List, or if it appears in the CITES appendices, it **cannot** be approved for use as an IFFO RS raw material. This applied to whole fish as well as by-products.

TYPE 1 SPECIES (Representing 95% of the catch or more)
Category A: Species-specific management regime in place.
Category B: No species-specific management regime in place.

TYPE 2 SPECIES (Representing 5% OF THE CATCH OR LESS)
Category C: Species-specific management regime in place.
Category D: No species-specific management regime in place.

Common name	Latin name	Stock	% of landings	Management	Category
Capelin	*Mallotus villosus*	ICES V, XIV, IIa W of 5°W	99.98%	MFR1 (Iceland)	A

MANAGEMENT

The two clauses in this section relate to the general management regime applied to the fishery under assessment. A fishery must meet all the minimum requirements in every clause before it can be recommended for approval.

M1	Management Framework – Minimum Requirements		
	M1.1	There is an organisation responsible for managing the fishery	PASS
	M1.2	There is an organisation responsible for collecting data and assessing the fishery	PASS
	M1.3	Fishery management organisations are publically committed to sustainability	PASS
	M1.4	Fishery management organisations are legally empowered to take management actions	PASS
	M1.5	There is a consultation process through which fishery stakeholders are engaged in decision-making	PASS
	M1.6	The decision-making process is transparent, with processes and results publically available	PASS
		Clause outcome:	**PASS**

Evidence:

M1.1-M1.2:

The Faroe Islands are a self-governing nation under the sovereignty of the Kingdom of Denmark. Although Denmark is a member state of the European union, the Faroe Islands have chosen to remain outside the union, and as such negotiate their own trade and fisheries agreements with the EU and other countries. The primary governmental body with responsibility for the management of Faroese fisheries is the Ministry of Fisheries and Natural Resources (MFNR). The framework for the regulation of commercial fisheries, in domestic, foreign and international waters, is the Commercial Fisheries Act of 1994.

The capelin stock is studied and managed primarily by Icelandic authorities, Faroese removals currently represent only around 5% or less of total landings. The Competent Authority in Iceland is the Marine and Fisheries Research Institute (MFRI). ICES provide annual stock assessments; MFRI provide updated advice based on acoustic surveys to form the basis for final TAC's. Several acoustic surveys aimed at different age groups of capelin have been conducted through the history of the fishery. The purpose of the surveys on young capelin is to locate and estimate abundance of juveniles. These surveys take place usually in late October-December each year.

MFRI publish advice each June; the basis of the TAC for summer and autumn seasons. Advice for the most important season (Jan-Mar) is based on estimates, using acoustic sonars, of the stock of mature capelin migrating to the spawning areas South-West of Iceland. These estimates are made in December-January and may be revised later. The ICES Expert Group in the assessment area is the North-Western Working Group (NWWG). This group assesses biomass, abundance, and fishing mortality of non-straddling fish stocks with information being used as a basis for providing advice to fisheries managers and other stakeholders.

The Capelin fishery is managed in agreement by the Coastal States (Iceland, Greenland, and Norway). The latest Agreement (renewed in 2018) included the following changes:

- Greenland's share of the TAC is to be 15% (was 11%)
- Iceland's share to be 80% (was 81%)
- Norway's share to be 5% (was 8%).

The reason for these changes is that capelin migrate much less than before to the eastern part of the North Atlantic and more to Greenland's waters. Beginning in 2021 the fishing season begins on October 15th (instead

of June 20th to stop fishing during Summer when capelin is mixed in terms of size, age and maturity. As before the season ends on April15th. This agreement includes the harvest control rule (HCR) for capelin and a measure for determining the initial quota (if any) which presently permits fishing from June 20 when the season starts.

There is an organisation responsible for managing the fishery. There is an organisation responsible for collecting data and assessing the fishery.
R1-R5

M1.3:
The stated objective of Faroese fisheries management is to ''conserve and utilise marine fish stocks to ensure biological and economic sustainability and secure optimal socio-economic benefits from fisheries''. Scientific management advice for the fishery is provided by both the ICES North-Western Working Group (NWWG) and Iceland's national fisheries scientific body MFRI. ICES Advisory Committee (ACOM) translates ICES science into advice on the sustainable use and protection of marine ecosystems.

A new era of fisheries management was launched in the Faroe Islands in 2018. The reform is built on three main pillars:

- Sustainable fishing and conservation of fish stocks.
- Rights and access to fishing licences.
- Industry requirements and value adding.

To ensure sustainable fishing and conservation of fish stocks, the Act on Management of Marine Resources (in force since Jan 2018) states that a long-term strategy for the management and utilization of marine resources is to be implemented for each stock to maintain industry and fish stocks at sustainable levels.

Fishery management organisations are publically committed to sustainability.
R1-R5

M1.4:
The basis of advice on the capelin stock is the harvest control rule (HCR) agreed by Coastal States (2015). An Agreed Record of Conclusions of Coastal State consultations on the management of capelin stock in the Iceland-East Greenland-Jan Mayen area was published in 2015. This agreement did not include that part of the fishing grounds allocated to the Faroese however Faroese vessels fishing in Icelandic waters are required to adhere to Icelandic fishery legislation.

The framework for the regulation of Faorese commercial fisheries, in domestic, foreign and international waters, is the Commercial Fisheries Act of 1994 and its subsequent amendments. Based on this legislation, detailed regulations are implemented governing vessel and fishing licences, area closures, gear and data requirements and other technical regulations for commercial fisheries. The new Act on Management of Marine Resources has been in force since Jan 2018. The fisheries reform is based on the principle of sustainable management of all fish stocks, both biologically, economically and socially. The Faroese fleet of long liners and trawlers catching demersal fish in Faroese waters will move from a days-at-sea system, to a quota system; small fishing vessels will continue to base their activity on annually allocated fishing days.

As of 2019 no person or company can obtain more than 35% of total quotas in the pelagic or demersal fisheries outside or inside the Faroese fisheries zone. No person or company can hold more than 20% of the total Faroese quotas. As of 2019 foreign ownership will also be phased out.

Fishery management organisations are legally empowered to take management actions
R2, R4-R5
M1.5:
ICES provide annual stock assessments; MFRI provide updated advice based on acoustic surveys to form the basis for final TAC's. This process is not internationally peer reviewed prior to the release of MFRI advice. Among the reasons for using this process is the need for fast advice once survey results are available as ICES's ACOM procedure is more time consuming. The NWWG recommended that a fast track workflow based on online meetings is established if possible. The coastal states evaluated this recommendation in 2017 and concluded that the current regime for setting intermediate and final TAC should be maintained. ACOM translates ICES science into advice on the sustainable use and protection of marine ecosystems.

ACOM responds to requests for advice from ICES member countries, international commissions and organizations, and fisheries and ecosystem management bodies. Advice is based on the precautionary principle and the ecosystem approach, conforming to the management objectives of those authorities. There is also extensive cooperation between MFRI and marine research institution in other coastal states in the North Atlantic on pelagic species, including capelin.

To increase transparency and opportunities for the public and stakeholders to participate in policy making, regulation and public decision-making a web-based Consultation Portal was opened on the 5th February 2018. Of relevance to this fishery, it includes a consultation on the draft Regulation on the Fisheries Consultation Committee published by the Ministry of Industries and Innovation.

There is a consultation process through which fishery stakeholders are engaged in decision-making.
R2-R4; R6; R17

M1.6:
ICES TAF:
The Transparent Assessment Framework (TAF) is a new framework, currently in development, to organize all ICES stock assessments. Using a standard sequence of R scripts, it makes data, analysis, and results available online, and documents how the data were pre-processed. Among the key benefits of this structured and open approach are improved quality assurance and peer review of ICES stock assessments. Furthermore, a fully scripted TAF assessment is easy to update and rerun later, with a new year of data. As of spring 2018, the first assessments for this fishery (capelin not yet included) are being scripted in standard TAF scripts.

ICES expert groups (e.g. NWWF), study groups, and workshops address many diverse issues of the marine ecosystem. Groups are composed of nationally nominated experts and may also include additional expertise to ensure the highest quality, peer-reviewed science. Expert groups are assigned Terms of Reference (ToRs) for their work by their parent committee: The Science Committee (SCICOM) or Advisory Committee (ACOM).

The decision-making process is transparent, with processes and results publically available.
R4, R7

References p 26

Standard clauses 1.3.1.1, 1.3.1.2

M2	Surveillance, Control and Enforcement - Minimum Requirements		
	M2.1	There is an organisation responsible for monitoring compliance with fishery laws and regulations	PASS
	M2.2	There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken	PASS
	M2.3	There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing	PASS
	M2.4	Compliance with laws and regulations is actively monitored, through a regime which may include at-sea and portside inspections, observer programmes, and VMS.	PASS
		Clause outcome:	**PASS**

Evidence:

M2.1:

Faroese vessels fishing in Icelandic waters are required to adhere to Icelandic fishery legislation. Icelandic legislation states that all fishing vessels in Icelandic waters must keep a fishery Log-Book. Birds and mammals caught in Icelandic fishing gear are to be reported and recorded. Each Fishery Log-Book is returned to the Icelandic Directorate of Fisheries (DOF) once a month. Reports are then sent to MFRI where the information is used in their scientific work.

In addition to the Individual Transferable Quota (ITQ) system, Icelandic fisheries management includes many other management measures such as area and fishing gear restrictions to ensure the fishery is targeting Capelin and other catches are reduced. Regulations apply for all the vessels targeting Capelin in Icelandic waters.

Faroese inspection and rescue vessels, in cooperation with Danish naval patrol vessels, provide for a constant patrol presence in Faroese waters. They also contribute to fisheries inspection in international waters of the North Atlantic at regular intervals in collaboration with the inspection services of other nations in the region.

There is an organisation responsible for monitoring compliance with fishery laws and regulations
R8-R9

M2.2-M2.3:

Since 1997 Faroese fisheries policy has limited the size of the fishing fleet (in terms of number of vessels) to the 1996 level, although increasing capacity of individual vessels has meant that the effective fleet size has increased. Fishing effort is primarily limited by annual quotas. There is a high level of compliance in Icelandic fisheries and in general in the capelin fishery.

In Iceland violations are subject to sanctions which have been demonstrated to provide an effective deterrence against future violations. Misreporting is subject to strict penalties. The relatively few cases of illegal landings, small estimated discarding and the number of violations of gear regulations and area closures demonstrate that the sanctions that are in place. The high probability of being apprehended if engaging in illegal activities do form an effective deterrence (SAI Global 2017).

In Iceland where the highest removals (80%) take place, the Directorate of Fisheries (DOF, Fiskistofa) monitors all reporting of fishing areas, gear and catches, and regularly places observers on board fishing vessels. Observers from DOF frequently watch over landings and the weighing of catches. Weighing methods are checked regularly, both in Iceland and abroad where landings of capelin takes place. In 2015, inspectors from the Directorate spent 1,370 days at sea on fishing trips; the Coastguard conducted 169 boardings. There is no evidence of major non-compliance or systematic non-compliance.

The North-East Atlantic Fisheries Commission (NEAFC), in which the Faroe Islands actively participate, has comprehensive port state measures to tackle IUU fishing under the NEAFC Control Scheme, monitoring IUU activity in the zones of Contracting Parties, as well as in international waters.

There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken. There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing, in part due to the strict landing obligation in force.
R8-R9

M2.4:
All Faroese vessels larger than 15 GT must maintain a daily log of their activities in an authorised catch logbook, recording data for each set or haul, and they must also have satellite vessel monitoring systems (VMS) in both national and international waters. Vessels smaller than 15 GT must submit a sales note to the Faroese Fisheries Inspection (FFI) following each landed catch to document their activities. FFI are responsible for monitoring and inspecting catches and landings of individual vessels and the weighing-in of catches. This includes both on board inspection, monitoring of transhipments and inspection of landings in port.

Where a non-compliance is detected, fishing regulations permit the withdrawal of fishing licenses temporarily while proceedings are underway. Although inspection procedures do utilise warnings and can implement on-the-spot fines or confiscations in practice reports are generally filed with the police and prosecutions occur through the court system. In the last report form (2017) posted by the Icelandic Coast Guard no violations were described by any vessel targeting Capelin in the Icelandic EEZ.

Compliance with laws and regulations is actively monitored, through a regime which may include at-sea and portside inspections, observer programmes, and VMS.
R2, R8

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Standard clause 1.3.1.3

CATEGORY A SPECIES

The four clauses in this section apply to Category A species. Clauses A1 - A4 should be completed for **each** Category A species. If there are no Category A species in the fishery under assessment, this section can be deleted. A Category A species must meet the minimum requirements of all four clauses before it can be recommended for approval. If the species fails any of these clauses it should be re-assessed as a Category B species.

Species Name		**Capelin (*Mallotus villosus*)**	
A1	**Data Collection - Minimum Requirements**		
	A1.1	Landings data are collected such that the fishery-wide removals of this species are known.	PASS
	A1.2	Sufficient additional information is collected to enable an indication of stock status to be estimated.	PASS
		Clause outcome:	**PASS**

Evidence

A1.1:

Data from several surveys (fishery-independent) and landings data (fishery-dependent) are available to ICES and MFRI. Information about the Icelandic landings of the fishery fleet is collected by the Icelandic Directorate of Fisheries (DOF). They have access to both landings in harbours (the official landing) and registered catch in the digital logbook kept by all the vessels.

Samples record length, weight, age (from scales), sex, maturation, and weight of sexual organs. Information from samples is then used along with total landings and logbook data to generate landings composition estimates. Similar data are collected by other States which prosecute the fishery, although the Icelandic catch represents the largest majority (80% of the quota).

Discards are considered negligible (ICES 2018): there is no discarding of capelin and there are no reported cases of slippages in the capelin fishery in Iceland. Landings figures are considered by NWWG (2019) to be a fair reflection of actual catch: There is a strict landing obligation in force.

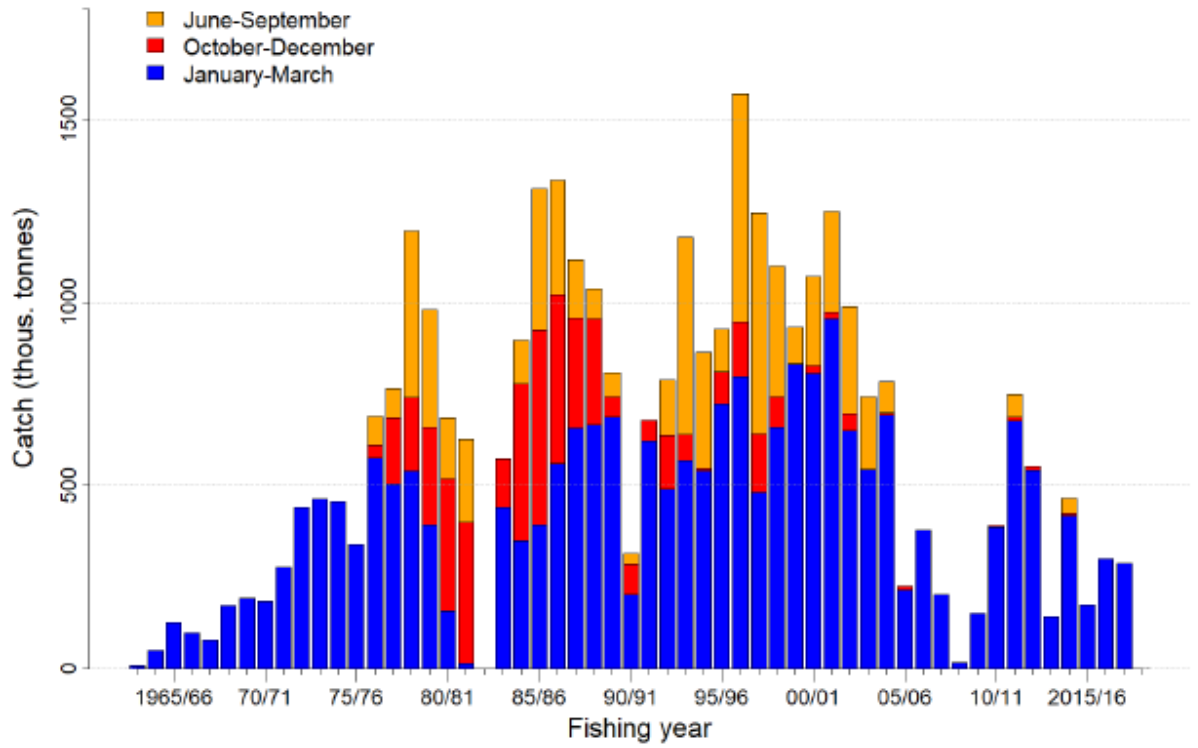

Figure 1 Icelandic capelin. The total catch (in thousand tonnes) of the Icelandic capelin since 1963/64 by season. **R8**

Landings data are collected such that the fishery-wide removals of this species are known.
R4, R8, R10-R11

A1.2:
Several acoustic surveys aimed at different age groups of Capelin have been conducted through the history of the fishery since 1978. Abundance estimates of immature capelin (ages 1 and 2 (autumn surveys)) as well as estimates from the fishable part of the stock (winter, sometimes autumn surveys) are undertaken.

The purpose of surveys on young capelin is to locate and estimate their abundance. Results from these surveys are used to predict a starting quota for the fishing season starting in the year after the surveys are conducted. Surveys aimed at the fishable part of the stock are conducted in the fishing season, most often in winter, but can also take place in autumn. Abundance estimates are calculated from these acoustic surveys.

The Sept 2018 survey reported in NWWG (2019)) was conducted with the aim of assessing both the immature and the maturing part of the stock. The survey area was along the shelf edge off East Greenland from about 59 ° 20 ´ N to about 75° 00 ´ N, also covering the Denmark Strait and the slope off west and north Iceland. Western regions of the Iceland Sea, West Jan Mayen and Greenland basin were also surveyed (**Figure 2**):

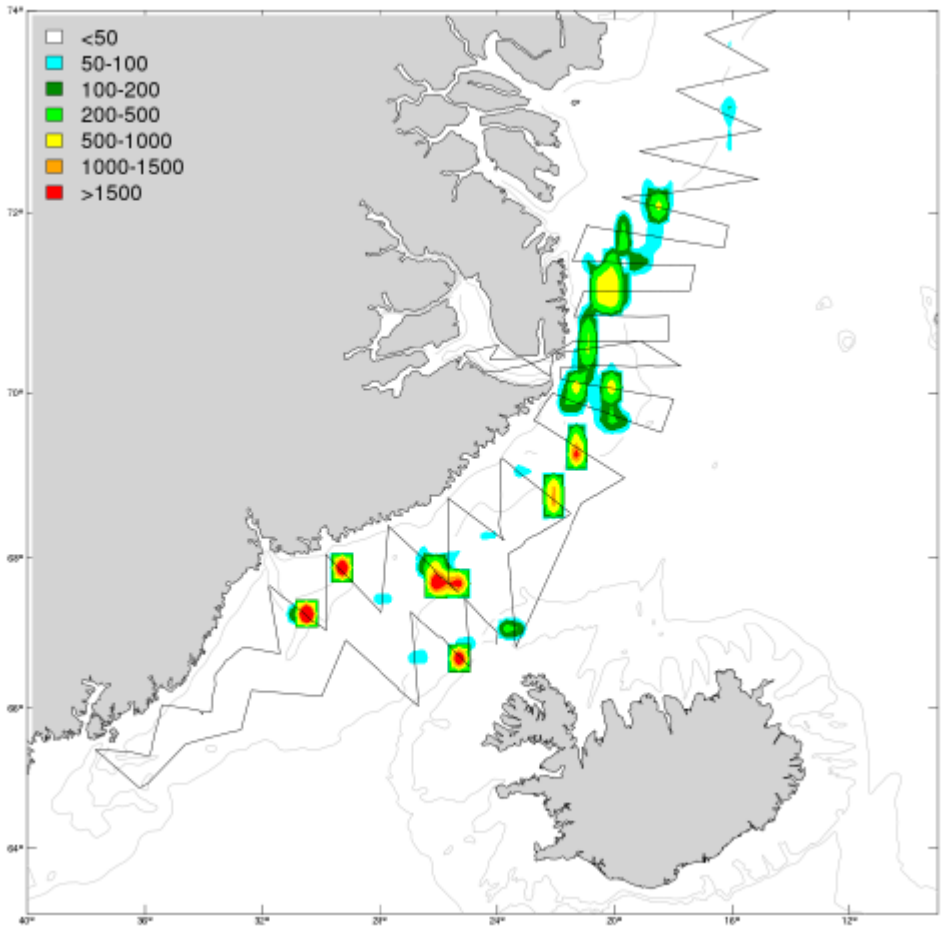

Figure 2: Icelandic capelin. Cruise tracks, relative density and distribution of capelin during an acoustic survey (Sept-Oct 2017). **R12**

Immature capelin was found in low numbers, or 10.8 billion (10.3 billion belonged to capelin at age 1). The total number of Capelin amounted to 22 billion (1-group was about 11.9 billion). The total estimate of 2-group capelin was about 9.2 billion. The total biomass estimate was 337, 000 tonnes of which about 225,000 tonnes were 2 years and older.

Sufficient additional information is collected to enable an indication of stock status to be estimated.
R4, R8, R11

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Standard clause 1.3.2.1.1

A2	Stock Assessment - Minimum Requirements		
	A2.1	A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock) and considers all fishery removals and the biological characteristics of the species.	PASS
	A2.2	The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.	PASS
	A2.3	The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.	PASS
	A2.4	The assessment is subject to internal or external peer review.	PASS
	A2.5	The assessment is made publically available.	PASS
		Clause outcome:	**PASS**

Evidence

A2.1:

MFRI publish advice each June; the basis of the TAC for summer and autumn seasons. Advice for the most important season (Jan-Mar) is based on estimates, using acoustic sonars, of the stock of mature capelin migrating to the spawning areas South-West of Iceland. These estimates are made in December-January and may be revised later. The ICES Expert Group in the assessment area is the North-Western Working Group (NWWG). This group assesses biomass, abundance, and fishing mortality of non-straddling fish stocks with information being used as a basis for providing advice to fisheries managers and other stakeholders. The last benchmark assessment was undertaken in 2015 (ICES Report on the Benchmark Workshop of Icelandic Stocks (WKICE) 2015).

A stock assessment is conducted at least once every 3 years

R4, R11, R13

A2.2:

During the benchmark assessment a B_{lim} of 150,000 tonnes SSB was defined. No other reference points are defined for this stock**.** The objective of the Harvest Control Rule (HCR) for the stock is to leave at least 150,000 tonnes (= Blim) for spawning (escapement strategy).

The acoustic estimate of immature capelin (age 1 and 2 from the autumn survey (Sept 2018) was 10.8 billion individuals. The estimate is below the long-term average and below the index abundance trigger point (Utrigger) of 50 billion immature fish; (Figure 3):

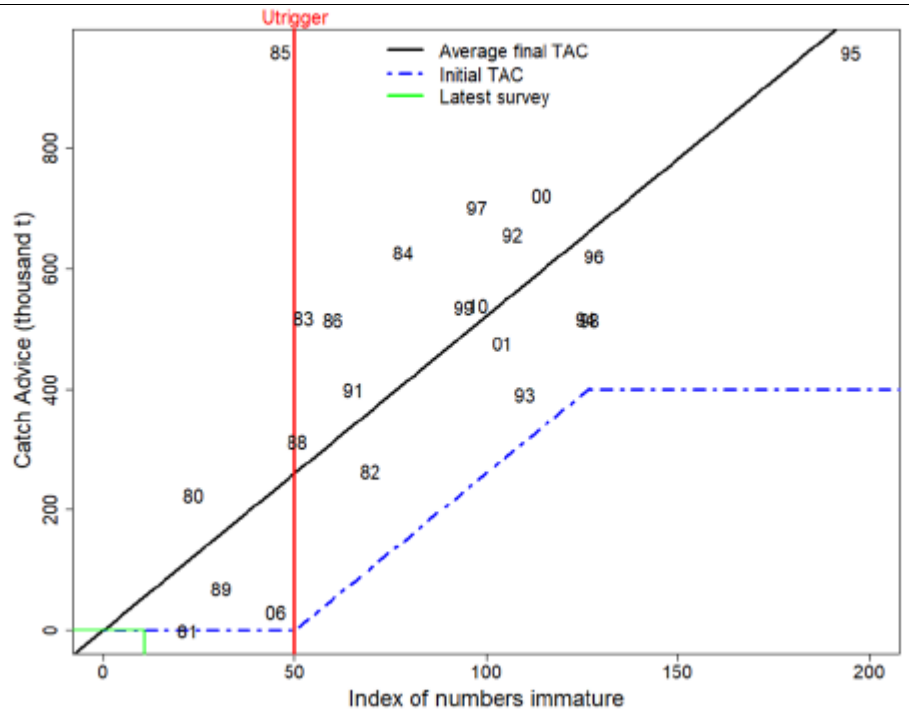

Figure 3 Catch advice (initial TAC) according to the rule developed by ICES. The predicted final TAC is shown as the black solid line (based on immature index and final TAC for the period 1980–2006); the initial TAC as the blue dashed line. The latter is set using an index abundance trigger point (Utrigger, red vertical line) of 50 billion immature fish, with a cap on the initial TAC of 400, 000 t. Green lines show the index value from the autumn acoustic survey in 2018, with the corresponding initial TAC for 2019/2020 shown on the y-axis. ICES 2018 **R11**

SSB was estimated (ICES 2018) at 364, 000 tonnes at the time of spawning (March 2018) which corresponds to 95% probability of the SSB being above Blim (150, 000 t). However, estimates from the acoustic survey in autumn 2018 (immature 1- and 2-year-old capelin) are low (Figure 4:)

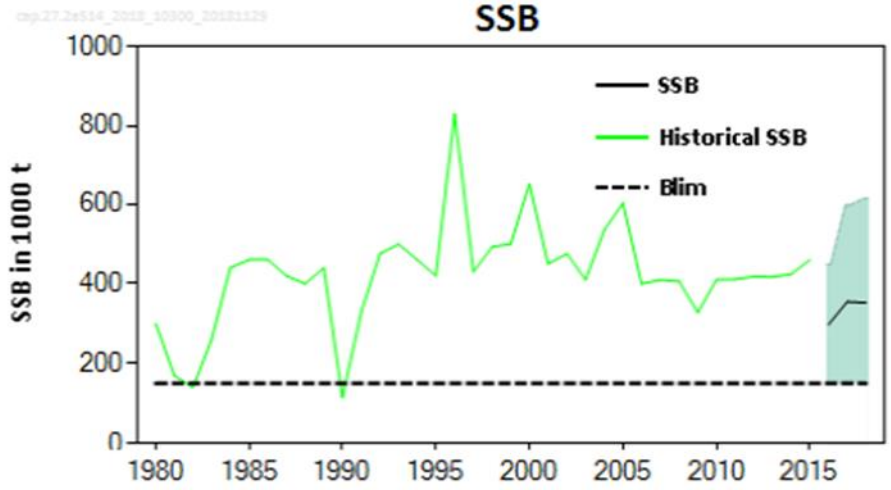

Figure 4 Summary of the stock assessment. SSB (thousand t, with 90% confidence intervals for the last two years) at spawning time (March–April). SSB values for 2016 and onwards not directly comparable to historical values because they are based on different assumptions about natural mortality. **R11**

Assessments provide an estimate of the status of the biological stock relative to a reference point or proxy. **R4, R10-R11**

A2.3:
The initial TAC advice (ICES) for the subsequent fishing season is issued around 1 December annually. Before 2017 this advice was issued later each year (May/June). The intermediate TAC advice issued by MFRI (Autumn) is based on biomass estimates of maturing capelin. The final TAC advice issued by MFRI (Jan/Feb) is also based on biomass estimates of maturing capelin.

ICES advised (Nov 2017) that the initial (preliminary) quota (2018/19) should be 0 tonnes following the precautionary approach defined in the Harvest Control Rules (HCR's). At the end of November 2018, ICES advised an initial quota of 0 tonnes for the fishing season 2019/20. MFRI is expected to provide updated catch advice in autumn 2019. Even though there is no fishery for this season, the stock is above Bpa and $B_{MGT.}$

There were no capelin fisheries or landings in the fishing season 2018/2019. This recommendation was in accordance with existing HCR and management plan between Iceland, Norway and Greenland. Zero catch has not been advised as a final TAC since fishing season 2008/2009.

Spawning stock biomass (SSB) was estimated to be 849,000 tonnes (MFRI latest advice Jan 2019). Given the uncertainty estimates, there was a 95% probability that at least 150, 000 tonnes were left for spawning which is the Blim of 150,000 tonnes. Model projections show that a catch of maximum 285, 000 tons would fulfil HCR expectations.

The assessment provides an indication of the volume of fishery removals appropriate for current stock status
R8, R11

A2.4:
The Transparent Assessment Framework (TAF) is a new framework, currently in development, to organize all ICES stock assessments. Using a standard sequence of R scripts, it makes data, analysis, and results available online, and documents how the data were pre-processed. Among the key benefits of this structured and open approach are improved quality assurance and peer review of ICES stock assessments. As of spring 2018, the first assessments for fisheries in the assessment area (capelin not yet included) are being scripted in standard TAF scripts.

ICES expert groups (e.g. NWWF), study groups, and workshops address many diverse issues of the marine ecosystem. Groups are composed of nationally nominated experts and may also include additional expertise to ensure the highest quality, peer-reviewed science. Expert groups are assigned Terms of Reference (ToRs) for their work by their parent committee: The Science Committee (SCICOM) or Advisory Committee (ACOM).

MFRI is a government institute under the auspices of Iceland's Ministry of Industries and Innovation. MFRI conducts various marine and freshwater research and provides the Ministry with scientific advice based on its research. MFRI is leading in marine and freshwater research in Icelandic territories and the arctic, providing peer reviewed advice on sustainable use and protection of the environment with an ecosystem approach by monitoring marine and freshwater ecosystems. MFRI is highly regarded in the scientific community, is active at international level with a strong infrastructure.
The assessment is subject to internal or external peer review.
R4, R7

References p27

Standard clause 1.3.2.2, 1.3.2.1.2, 1.3.2.1.4

A3	Harvest Strategy - Minimum Requirements		
	A3.1	There is a mechanism in place by which total fishing mortality of this species is restricted.	PASS
	A3.2	Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.	PASS
	A3.3	Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).	PASS
		Clause outcome:	**PASS**

Evidence

A3.1:

Faroese vessels fishing in Icelandic waters are required to adhere to Icelandic fishery legislation. In addition to the Individual Transferable Quota (ITQ) system, Icelandic fisheries management includes many other management measures such as area and fishing gear restrictions to ensure the fishery is targeting Capelin. Regulations apply for all the vessels targeting Capelin in Icelandic waters. The Icelandic Directorate of Fisheries (DOF, Icelandic: Fiskistofa) monitors all reporting of fishing areas, gear and catches, and regularly places observers on board fishing vessels. Weighing methods are checked regularly, both in Iceland and abroad where landings of capelin takes place.

Faroese inspection and rescue vessels, in cooperation with Danish naval patrol vessels, provide for a constant patrol presence in Faroese waters. They also contribute to fisheries inspection in international waters of the North Atlantic at regular intervals in collaboration with the inspection services of other nations in the region.
The basis of the advice is the harvest control rule agreed by Coastal States (ICES 2015).

There is a mechanism in place by which total fishing mortality of this species is restricted.
R8-R9

A3.2:

Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment:

Table 1: Capelin in subareas 5 and 14 and Division 2.a west of 5°W. ICES advice and catch. All weights are in tonnes **R11**

Season	ICES advice	Initial TAC advice ^	Agreed final TAC ^^	ICES catch ^^^
1986/1987	TAC	1100000	1290000	1333400
1987/1988	TAC	500000	1115000	1115800
1988/1989	TAC	900000	1065000	1036500
1989/1990	TAC	900000	900000	807800
1990/1991	TAC	600000	250000	313600
1991/1992	No fishery pending survey results	0	740000	677100
1992/1993	Precautionary TAC^	500000	900000	787700
1993/1994	TAC	900000	1250000	1178700
1994/1995	Apply the harvest control rule	950000	850000	863900
1995/1996	Apply the harvest control rule	800000	1390000	929300
1996/1997	Apply the harvest control rule	1100000	1600000	1570900
1997/1998	Apply the harvest control rule	850000	1265000	1244900
1998/1999	Apply the harvest control rule	950000	1200000	1099400
1999/2000	Apply the harvest control rule	866000	1000000	932700
2000/2001	Apply the harvest control rule	650000	1090000	1071300
2001/2002	Apply the harvest control rule	700000	1300000	1249000
2002/2003	Apply the harvest control rule	690000	1000000	987700
2003/2004	Apply the harvest control rule	555000	900000	741400
2004/2005	Apply the harvest control rule	335000	985000	784000
2005/2006	Apply the harvest control rule	No fishery	235000	247000
2006/2007	Apply the harvest control rule	No fishery	385000	376800
2007/2008	Apply the harvest control rule	207000	207000	203400
2008/2009	Apply the harvest control rule	No fishery	0*	15100
2009/2010	Apply the harvest control rule	No fishery	150000	150700
2010/2011	Apply the harvest control rule	No fishery	390000	390600
2011/2012	Set the TAC at 50% of the initial quota in the HCR	366000	765000	746500
2012/2013	Precautionary approach	No fishery	570000	551000
2013/2014	Precautionary approach	No fishery	160000	141700
2014/2015	Set the initial quota at 50% of the predicted quota in the harvest control rule	225000	580000	517400
2015/2016	Precautionary approach**	53600	173000	173600
2016/2017	Precautionary approach**	0	299000	299800
2017/2018	Harvest control rule agreed by Coastal States**	0	285000	286500
2018/2019	Harvest control rule agreed by Coastal States**	0		
2019/2020	Harvest control rule agreed by Coastal States**	0		

^ Advised for the early part of the season.
^^ Final TAC recommended by national scientists for the fishing season (July–March).
^^^ July–March of the following year.
* Only scouting TAC was allocated in the latter half of February 2009.
** Initial TAC advice based on low probability of advised catch being higher than the final TAC.

R11

A3.3:

In November 2017, ICES advised that the initial (preliminary) quota in 2018/19 should be 0 tonnes. In October 2018 MFRI advised an intermediate TAC of 0 tonnes based on an acoustic survey in September and based on winter surveys in January‑March 2019. This advice has not changed. There were no capelin fisheries or landings in the fishing season 2018/2019. This recommendation was in accordance with existing HCR and management plan between Iceland, Norway and Greenland. Zero catch has not been advised as a final TAC since fishing season 2008/2009. At the end of November 2018, ICES advised an initial quota of 0 tonnes for the fishing season 2019/20: MFRI is expected to provide updated catch advice in autumn 2019

Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy.

R4, R8; R10-R11

References p27

Standard clause 1.3.2.1.3

A4	Stock Status - Minimum Requirements		
	A4.1	The stock is at or above the target reference point, OR IF NOT: The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT: The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.	**PASS**
Evidence: **A4.1** ICES advised (initial quota) that when the HCR agreed by the Coastal States is applied, the initial TAC for the fishing season July 2019‑March 2020 should be 0 tonnes. In October 2018 MFRI advised an intermediate TAC of 0 tonnes based on an acoustic survey (September) and based on winter surveys in January‑March 2019. This advice has not changed. There were no capelin fisheries or landings in the fishing season 2018/2019. MFRI is expected to provide updated catch advice in autumn 2019. The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited. **R11** :			
References p27			
Standard clause 1.3.2.1.4			

FURTHER IMPACTS

The three clauses in this section relate to impacts the fishery may have in other areas. A fishery must meet the minimum requirements of all three clauses before it can be recommended for approval.

F1	Impacts on ETP Species - Minimum Requirements		
	F1.1	Interactions with ETP species are recorded.	PASS
	F1.2	There is no substantial evidence that the fishery has a significant negative effect on ETP species.	PASS
	F1.3	If the fishery is known to interact with ETP species, measures are in place to minimise mortality.	PASS
		Clause outcome:	**PASS**

Evidence

F1.1:

According to the MSC assessment team (SAI Global 2017) several ETP species have the potential to interact with this fishery in the assessment area including Belugas (*Delphinapterus leucas*), Blue whale (*Balaenoptera musculus*), Northern right whale (*Eubalaena glacialis*), White-beaked dolphin (*Lagenorhynchus albirostris*), Atlantic Puffin (*Fratercula arctica*), Kittiwake (*Rissa tridactyla*), Brunnich Guillemot (*Uria lomvia*) and the Common Guillemot (*Uria aalge*),

Legislation in Iceland regarding ETP species is guided by Legislation No. 557/2007; obliging fishers to complete the logbook with record of any interaction or catch of birds or other endangered species. Each Fishery Log-Book is returned to the Directory of Fisheries (DOF) once a month. Reports are then sent to MFRI where the information is used in their scientific work. There are no official reports of impacts of the Icelandic capelin fishery on ETP species. MFRI are not aware of any interactions resulting in serious injury or mortality to humpback whales.

Interaction between fishers and mammals are regulated by the Icelandic Fisheries Management and Nature Conservation Act. No. 47/197l. Whaling is controlled by the International Whaling Commission (IWC) and the North-Atlantic Marine Mammal Commission (NAMMCO).

The indirect effects of the fishery on ETP species are unlikely to be beyond acceptable limits according to the MSC assessment team, although there is a lack of information on how capelin could affect the feeding patterns of whales and seabirds (SAI Global 2017). An update will be provided in the next MSC Surveillance Report to be published mid-October.

Interactions with ETP species are recorded.

R8

F1.2:

ICES (2017) state: 'In the (Icelandic) pelagic fisheries catch other than the targeted species is considered rare.'

Through ongoing observer programmes in pelagic trawl, NGOs programmes and other research, there is a growing body of evidence to support the understanding that pelagic trawl fisheries have few encounters with protected species that result in direct mortality of ETP species. This statement is confirmed by log book data. This is also confirmed for sharks and skates as vessels targeting capelin in the water column (pelagic) while sharks and especially skates are found close to the ocean bottom (benthic).

Icelandic legislation states that all fishing vessels must keep a fishery log-book. Birds and mammals caught in Icelandic fishing gear are to be reported and recorded in the Fishery Log-Book. This Fishery Log-Book is returned to Iceland's Directory of Fisheries (DOF) once a month. These reports are then sent onto the MFRI where the information is used in their scientific work.

There is no substantial evidence that the fishery has a significant negative effect on ETP species.
R8; R12

F1.3:
To manage Marine Protected Areas (MPAs, total of nine in Icelandic waters) and areas sensitive to fishing activities the Icelandic ministry has published an "Icelandic National Biodiversity Strategy and Action Plan (2008).

The main measures of the plan are:

- Protect threatened species in Icelandic waters
- Develop fishing methods with less impact on marine ecosystems
- Protect vulnerable benthic ecosystems

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 bottom trawl or longline due to the presence of juvenile fish over extended periods of time or to protect spawning grounds. Although, area closures are aimed at protecting juvenile fish, measures have a secondary effect, i.e. protecting seabed habitats from being damaged by fishing activities.

There is no known interaction of the fishery with ETP species.
R14

References p27

Standard clause 1.3.3.1

F2	Impacts on Habitats - Minimum Requirements		
	F2.1	Potential habitat interactions are considered in the management decision-making process.	PASS
	F2.2	There is no substantial evidence that the fishery has a significant negative impact on physical habitats.	PASS
	F2.3	If the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts.	PASS
		Clause outcome:	**PASS**

Evidence

F2.1:

Detailed maps of the seabed of the areas where this fishery operates are available through the EMODnet sea habitats project. The sea bottom topography around Iceland is generally irregular, with hard rocky bottom prevailing in most areas; in some cases, the shelf around Iceland is cut by many sub-sea canyons. At present large coral areas exist on the Reykjanes Ridge and off SE-Iceland. Other known coral areas are small. Many of the cold-water coral areas that have been surveyed have already been destroyed by bottom trawls. Currently five areas with relatively undisturbed cold-water corals have received full protection; several other areas are under consideration for further protection. As in other pelagic fisheries, no direct effects on the sea floor or benthic communities are known to occur in the Icelandic capelin fishery; 98% of pelagic catches are captured by purse-seines.

Potential habitat interactions are considered in the management decision-making process.

R8, R15-R16

F2.2:

In Iceland where the highest removals take place, the Directorate of Fisheries Monitor all reporting of fishing areas, gear and catches, and regularly places observers on board fishing vessels. Observers from DOF frequently watch over landings and the weighing of the catch. The weighing methods are checked regularly, both in Iceland and abroad where landings of capelin takes place. Compliance with laws and regulations is actively monitored, through a regime which includes observer programmes and VMS analyses to ensure no fishing is undertaken in closed areas. In 2015, inspectors from the Directorate spent 1,370 days at sea on fishing trips; the Coastguard conducted 169 boardings at sea. There is no evidence of major non-compliance or systematic non-compliance.

There is no substantial evidence that the fishery has a significant negative impact on physical habitats.

R2; R15-R16

F2.3:

Iceland maintain three different types of area closures: Real Time, Permanent, and Temporary.

- Real Time and Temporary area closure: A quick closure system has been in force since 1976 to protect juvenile fish. Fishing is prohibited for at least two weeks in areas where the number of small fish (< 14 cm) measured exceeds 20% of the catch. If, in a given area, there are several consecutive quick closures the Minister can close the area for a longer time.
- Permanent area closure: Some closures are temporary, others have been closed for fishery for decades.

Seven designated Nature Reserves and one Conservation Area exist along the Icelandic coast and off Surtsey Island totalling 3,507 km^2 Iceland has 39 Marine Protected Areas (OSPAR definition) which are closed year-round or seasonally or have restricted access.

If the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts. **R8, R16**
References p27
Standard clause 1.3.3.2

F3	**Ecosystem Impacts - Minimum Requirements**		
	F3.1	The broader ecosystem within which the fishery occurs is considered during the management decision-making process.	PASS
	F3.2	There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.	PASS
	F3.3	If one or more of the species identified during species categorisation plays a key role in the marine ecosystem, additional precaution is included in recommendations relating to the total permissible fishery removals.	PASS
		Clause outcome:	**PASS**

Evidence:

F3.1:

The design of management measures takes extensive account of the biology of the species. For example, as a precautionary measure to protect juveniles, all fishing with pelagic trawl has been banned in the Icelandic waters where juveniles are generally found, either separately or mixed with the adults. From 2021 the fishing season will begin on October 15th (instead of June 20th) to stop fishing when capelin is mixed in terms of size, age and maturity. As before the season will end on April 15th. This agreement allows for the protection of recruitment and is designed to guarantee Bescapement at the beginning of the followed fishing season.

Capelin stock has a precautionary management plan in place; implementing appropriate reference points to manage the exploitation rate in the fishery. The fishery management plan considers the uncertainty in the assessment model and remaining tonnes of spawning stock.

Final TAC's (when allocated), which consider uncertainty in surveys and predation from cod, haddock, and saithe on capelin, are set at a level that will generate an SSB which has a 95% probability of being above Blim. Also, ecosystem needs uncertainties are considered when models are run. This whole strategy has been reviewed by ICES and it is considered to be precautionary.

The broader ecosystem within which the fishery occurs is considered during the management decision-making process.
R5, R11, R13

F3.2:

Studies of optimal harvesting of capelin should be conducted. These estimates should take account of ecological impact, growth, mortality and gear selection in relation to the timing of the fishery. There is a high level of compliance in Icelandic fisheries and in general in the capelin fishery. Capelin is an important forage fish and its dynamics are expected to have implications on the productivity of their predators.

The importance of capelin in East Greenlandic waters is well documented; effort has also been increased considerably during autumn surveys towards evaluation of capelin role in the ecosystem e.g. by research on feeding of capelin, estimates of prey availability, predator distributions and environmental monitoring. In Icelandic waters, capelin is the main single item in the diet of Icelandic cod, a key prey to several species of marine mammals and seabirds and also important as food for several other commercial fish species.

There is a total of around 13 species retained by the Capelin fleet, although cod account for 92% by weight of non-target catches, the other non-target species are negligible forming ~0.012% by volume of total catch:

Table 2: Catch composition directed capelin fishery (Iceland Fisheries Department Data 2011-16).

Species	Catches (kg)	Catches (tonnes)	% Total
Capelin	**1,948,686,000**	**1,948,686**	**99.9870%**
Dealfish	2	0	0.0000%
Common Skate	77	0	0.0000%
Turbot	2	0	0.0000%
Greenland Halibut	6	0	0.0000%
Monkfish	14	0	0.0000%
Atlantic wolffish	19	0	0.0000%
Blue Whiting	71	0	0.0000%
Redfish	116	0	0.0000%
Plaice	140	0	0.0000%
Lumpfish	1,335	1	0.0001%
Herring	403	0	0.0000%
Saithe	5,782	6	0.0003%
Haddock	8,310	8	0.0004%
Cod	236,403	236	0.0121%
Total retained catches	**1,948,938,605**	**1,948,939**	**100.0000%**
Total retained non-target	**252,605**	**253**	**0.0130%**

*Data from the Directorate of Fisheries (DoF) from 2011 to 2016

Considering all the catches, no main species has been identified in the fishery. Management measures such as area restrictions and fishing gear restrictions ensure the fishery is targeting Capelin and other catches are reduced. All non-target species reported in the fishery represent percentages of catch less than 0.1%.

Several species of sharks and skates are known to be caught as by-catch in Icelandic waters, information on amount of the catches is incomplete, and the status of these species is not known. To prevent the removal of juvenile and spawning fish Iceland implements various technical measures such as mesh size regulation, real-time, temporary and permanent area closures.

ICES (2017) states:

'In the (Icelandic) pelagic fisheries catch other than the targeted species is considered rare.'

There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.

R2, R4, R8, R11

F 3.3:
The ecosystem where this fishery operates is relatively well described. ICES provide a detailed review of the Icelandic Waters Ecoregion including information on main oceanographic features, productivity, major regional pressures, human activities and state of the ecosystem components. A gadget model (a type of multispecies model) has been developed to understand the interactions between capelin, cod and shrimp in Icelandic waters.

Capelin's lifecycle and migration pattern is an important energy transfer in the ecosystem. Capelin feed mainly on copepods and euphausiids in waters north of Iceland and then move to Icelandic waters where it is one of the most important prey for many species, e.g. cod, haddock, saithe, Greenland halibut, seabirds, and marine mammals.

The key role of capelin as food for many predator fish is reflected for instance by the high correlation between mean weight of cod in Icelandic waters and biomass of adult capelin. The combined annual removal of capelin

by all its natural predators might range between roughly 2 and 3.8 million tonnes. These direct effects are likely to cascade through the ecosystem, although the extent of these changes is beyond our predictive abilities.

The HCR incorporates uncertainty in stock size estimates and model estimation of predation by cod, haddock and saithe on capelin. Ecosystem impacts of capelin removals are factored into scientific advice and management decisions through this harvest strategy. Due to these ecosystems needs and the role of capelin as a Low Trophic Level (LTL) species more effort is being realised to reduce uncertainties in models and to include as much as variation as possible to reduce the impact in keys structures of the ecosystems. This is achieved using a complex model to estimate the requirements of the three main demersal predators on capelin: cod, haddock and saithe. Predation by seabirds are not included as MFRI have defined that they do not overlap with the fishery. The extent of mammal interaction in the fishery is uncertain; a research program with tagged humpback whales is underway.

If one or more of the species identified during species categorisation plays a key role in the marine ecosystem, additional precaution is included in recommendations relating to total permissible fishery removals.
R8, R13-R14; R18

References

R1 Ministry of Fisheries Faroe Islands (MFNR) https://www.fisk.fo

R2 Faroese Act (2018) on the Management of Marine Resources
https://www.faroeseseafood.com/fishery-aquaculture/monitoring-control-and-enforcement/

R3 Marine and Fisheries Research Institute (MFRI Iceland): https://www.hafogvatn.is/en

R4 ICES NORTH WESTERN WORKING GROUP (NWWG) 2019 VOLUME 1 | ISSUE 14
623pp Capelin in the Iceland-East Greenland-Jan Mayen area pp 184-217
http://www.ices.dk/publications/our-publications/Pages/Expert-Group-Reports.aspx

R5 Anon. 2015. Agreed Record of Conclusions of Coastal State consultations on the management of the capelin stock in the Iceland‑East Greenland‑Jan Mayen area. Reykjavík, Iceland. 7‑8 May 2015. https://www.pelagic-ac.org/media/pdf/20140312%20-%202014%20Agreed%20records%20EU-Norway%20Skagerrak%20(Signed).pdf

R6 ICES Advisory Committee (ACOM): https://www.ices.dk/community/groups/Pages/ACOM.aspx

R7 ICES Transparent Assessment Framework http://ices.dk/marine-data/assessment-tools/Pages/transparent-assessment-framework.aspx

R8 Marine Stewardship Council Full Assessment Public Certification Report SAI Global: 266pp p168 Compliance and Enforcement https://fisheries.msc.org/en/fisheries/isf-iceland

R9 NEAFC Monitoring, Control, Surveillance (MCS) https://www.neafc.org/mcs

R10 ICES NWWG 2018 Capelin in the Iceland-East Greenland-Jan Mayen area 26pp
https://www.hafogvatn.is/static/files/Veidiradgjof/2018/01-ices_nwwg_loka.pdf

R11 ICES Advice (2018) Capelin (*Mallotus villosus*) in Subareas 5 and 14 and Division 2.a West of 5^0W (Iceland and Faroes grounds, East Greenland, Jan Mayen area):
http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2018/2018/cap.27.2a514.pdf

R12 ICES NWWG 2017 Capelin in the Iceland-East Greenland-Jan Mayen area 642pp
http://www.ices.dk/publications/our-publications/Pages/Expert-Group-Reports.aspx

R13 ICES. 2015. Report of the Benchmark Workshop of Icelandic Stocks (WKICE), 26‑30 January 2015, ICES Headquarters, Copenhagen, Denmark. ICES CM 2015/ACOM:31. 325 pp http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2015/WKICE%202015/wkice_2015_final.pdf

R14 Icelandic National Biodiversity Strategy and Action Plan (2008): https://www.cbd.int/doc/world/is/is-nr-04-en.pdf

R15 EMODnet Central Portal**:** http://www.emodnet.eu/

R16 Fishsource: Capelin Icelandic Stock: https://www.fishsource.org/stock_page/752

R17 Consultation Portal: https://samradsgatt.island.is/um-samradsgatt

R18 Public Certification Report for the ISF Iceland Capelin Fishery (SAI Global 2017) 288pp https://fisheries.msc.org/en/fisheries/isf-iceland-capelin/@@assessments
Standard clause 1.3.3.3

SOCIAL CRITERION

In addition to the scored criteria listed above, applicants must commit to ensuring that vessels operating in the fishery adhere to internationally recognised guidance on human rights. They must also commit to ensuring there is no use of enforced or unpaid labour in the fleet(s) operating upon the resource.