



**IP(19)23rev**

***NASCO Implementation Plan for the period 2019-2024***

***Denmark (in respect of the Faroe Islands and Greenland)  
– Faroe Islands  
(Revised version submitted 4 November 2019)***



## IP(19)23rev

### **Revised DRAFT NASCO Implementation Plan for the period 2019 – 2024**

**The main purpose of this Implementation Plan is to demonstrate what actions are being taken by the Parties / jurisdictions to implement NASCO's Resolutions, Agreements and Guidelines.**

**In completing this Implementation Plan please refer to the *Guidelines for the Preparation and Evaluation of NASCO Implementation Plans and for Reporting on Progress*, RGFR(18)09.**

*Questions in the Implementation Plan are drawn from the following documents:*

- *NASCO Guidelines for Management of Salmon Fisheries, CNL(09)43 (referred to as the 'Fisheries Guidelines');*
- *Report of the Working Group on Stock Classification, CNL(16)11;*
- *Minimum Standard for Catch Statistics, CNL(93)51 (referred to as the 'Minimum Standard');*
- *Revised matrix for the application of the six tenets for effective management of an Atlantic salmon fishery, WGCST(16)16<sup>1</sup>;*
- *NASCO Plan of Action for the Application of the Precautionary Approach to the Protection and Restoration of Atlantic Salmon Habitat, CNL(01)51;*
- *NASCO Guidelines for Protection, Restoration and Enhancement of Atlantic Salmon Habitat, CNL(10)51 (referred to as the 'Habitat Guidelines');*
- *Williamsburg Resolution, CNL(06)48;*
- *Guidance on Best Management Practices to address impacts of sea lice and escaped farmed salmon on wild salmon stocks (SLG(09)5) (referred to as the 'BMP Guidance');*
- *Guidelines for Incorporating Social and Economic Factors in Decisions under the Precautionary Approach (CNL(04)57); and*
- *Road Map' to enhance information exchange and co-operation on monitoring, research and measures to prevent the spread of G. salaris and eradicate it if introduced', NEA(18)08.*

<b>Party:</b>	<b>Denmark in respect of Faroe Islands and Greenland</b>
<b>Jurisdiction / Region:</b>	<b>Faroe Islands</b>

---

<sup>1</sup> This document can be obtained from the NASCO Secretariat; email [hq@nasco.int](mailto:hq@nasco.int)

<b>1. Introduction</b>		
<b>1.1 What are the objectives for the management of wild salmon? (Max 200 words)</b>		
<i>Give the core national objectives guiding the legislation for your jurisdiction</i>		
<p>In order to contribute to the rebuilding of the North Atlantic salmon stocks the Faroe Islands have refrained from having commercial fishery for salmon in the Faroese fisheries zone for the last two decades.</p> <p>Faroe Islands will manage any salmon fishery through international cooperation and on the basis of the advice from ICES regarding the stocks contributing to the Faroese salmon fishery in a precautionary and sustainable manner.</p> <p>The assessments of the status of the salmon stocks in the Faroese FFZ are made by ICES. Reference is made to the ICES Advisory Committee report 2018.</p> <p>Because of the small size of the Faroese rivers, there is no historic record of any natural wild salmon population in Faroese rivers or fjords. Therefore, there are no self-supporting wild salmon stocks in Faroese rivers, implementing NASCO's guidelines is in many cases not relevant.</p>		
<b>1.2 What reference points (e.g. conservation limits, management targets or other measures of abundance) are used to assess the status of stocks? (Max 200 words)</b>		
<i>(Reference: Sections 2.4 and 2.5 of the Fisheries Guidelines)</i>		
<p>ICES has formulated reference points and conservation limits for the salmon stocks in Faroese FFZ. There is an on-going negotiation process regarding management targets. Otherwise see 1.1.</p>		
<b>1.3 What is the current status of stocks under the new classification system outlined in CNL(16)11?</b>		
Stock Classification Score	Salmon Classification Category	No. rivers
0	Not at Risk	
1	Low Risk	
2	Moderate Risk	
3	High Risk	
N/A	Artificially Sustained	
N/A	Lost	
N/A	Unknown	
Additional comments:		
<b>1.4 How is stock diversity (e.g. genetics, age composition, run-timing, etc.) taken into account in the management of salmon stocks? (Max 200 words)</b>		
See 1.1		
<b>1.5 To provide a baseline for future comparison, what is the current and potential quantity of salmon habitat? (Max 200 words)</b>		
<i>(Reference: Section 3.1 of the Habitat Guidelines)</i>		
See 1.1		

<b>1.6 What is the current extent of freshwater and marine salmonid aquaculture?</b>	
Number of marine farms	21, currently utilizing 27 sites
Marine production (tonnes)	64.732 (2018), 71.172 (2017) and 68.271 (2016)
Number of freshwater facilities	9 currently in operation
Freshwater production (tonnes)	3.144 (2016) 3.544 (2017) 4.587 (2018)
Append one or more maps showing the location of aquaculture facilities and aquaculture free zones in rivers and the sea.	
<b>1.7 Please describe the process used to consult NGOs and other stakeholders and industries in the development of this Implementation Plan. (Max 200 words)</b>	
<p>The relevant stakeholders in the Faroe Islands have been consulted during the development of this IP. It includes inputs from the Chief Veterinary Officer/Food and Veterinary Authority, Marine Research Institute, the Ministry of Fisheries and the Ministry of Foreign Affairs and Trade as well as the aquaculture community. The inputs are based on statistics, meetings, telephone conversations and email correspondence.</p>	

<b>2. Management of Salmon Fisheries:</b>
<i>In this section please review the management approach to each of the fisheries in your jurisdiction (i.e. commercial, recreational and other fisheries) in line with the relevant NASCO Resolutions, Agreements and Guidelines. For Parties / jurisdictions that prosecute mixed-stock fisheries, there should be at least one action related to their management.</i>
<b>2.1 What are the objectives for the management of the fisheries for wild salmon? (Max. 200 words)</b>
<p>Faroe Islands have refrained from commercial fishery for Atlantic salmon in the waters around the Faroe Islands since 1991 in order to contribute to the rebuilding of the Atlantic salmon stocks. No decision has since been made by Faroese authorities to reopen commercial fishery for Atlantic salmon.</p> <p>NASCO Decision NEA(18)12 indicated that no quota would be set for the salmon fishery in the Faroese Fisheries Zone for 2018/19, and that it would also apply in 2019/20 and 2020/21 unless the application of the FWI shows that a reassessment is warranted. The decision acknowledges that Faroese management decisions will be made with due consideration to the advice of ICES concerning the status of the stocks.</p>
<b>2.2 What is the decision-making process for the management of salmon fisheries, including predetermined decisions taken under different stock conditions (e.g. the stock levels at which regulations are triggered)? (Max. 200 words) (This can be answered by providing a flow diagram if this is available.) (Reference: Sections 2.1 and 2.7 of the Fisheries Guidelines)</b>
See 2.1
<b>2.3 (a) Are any fisheries permitted to operate on salmon stocks that are below their reference point (e.g. Conservation Limits)? If so, (b) how many such fisheries are there and (c) what approach is taken to managing them that still promotes stock rebuilding? (Max 200 words) (Reference: Section 2.7 of the Fisheries Guidelines)</b>
(a)

There is no current salmon fishery in Faroese waters and there are no wild salmon populations in the Faroe Islands. Therefore, consideration has not been given to the question.	
(b)	
(c)	
<b>2.4</b>	<b>(a) Are there any mixed-stock salmon fisheries? If so (b) how are these defined, (c) what was the mean catch in these fisheries in the last five years and (d) how are they managed to ensure that all the contributing stocks are meeting their conservation objectives? (Max. 300 words in total)</b> <i>(Reference: Section 2.8 of the Fisheries Guidelines)</i>
(a) There is no current salmon fishery in Faroese waters and there are no wild salmon populations in the Faroe Islands. Therefore, consideration has not been given to the question.	
(b)	
(c)	
(d)	
<b>2.5</b>	<b>How are socio-economic factors taken into account in making decisions on management of salmon fisheries? (Max. 200 words)</b> <i>(Reference: Section 2.9 of the Fisheries Guidelines)</i>
During the 1980's the commercial fishery for Atlantic salmon in the Faroese FFZ was an important source of income for the Faroese economy. Since the commercial fishery was stopped in 1991, the companies have gradually developed alternative income opportunities. Since the Faroese economy is completely dependent on fisheries and aquaculture, a possible future reopening of the salmon fishery, in case of a recovery of the salmon stocks, would be welcomed by the industry.	
<b>2.6</b>	<b>What is the current level of unreported catch and what measures are being taken to reduce this? (Max. 200 words)</b> <i>(Reference: Section 2.2 of the Fisheries Guidelines and the Minimum Standard)</i>
The ICES report does not present unreported catches by the jurisdiction. The Annual Return to NASCO includes an estimate of unreported catch of zero for the Faroe Islands.	
<b>2.7</b>	<b>Has an assessment under the Six Tenets for Effective Management of an Atlantic Salmon Fishery been conducted? If so, (a) has the assessment been made available to the Secretariat and (b) what actions are planned to improve the monitoring and control of the fishery? (c) If the six tenets have not been applied, what is the timescale for doing so? (Max. 200 words)</b> <i>(Reference: Six Tenets for Effective Management of an Atlantic Salmon Fishery, WGCST(16)16)</i>
(a) Given that there is no salmon fishery in Faroese waters and that there are no wild salmon populations in the Faroe Islands, an assessment under the Six Tenets for Effective Management of Atlantic Salmon Fishery has not been conducted.	
(b)	
(c)	
<b>2.8</b>	<b>Identify the threats to wild salmon and challenges for management associated with their exploitation in fisheries, including bycatch of salmon in fisheries</b>

<b>targeting other species.</b>	
Threat / challenge F1	<p>Since 1991, there has been no commercial fishery for Atlantic salmon in the Faroese fisheries zone in order to contribute to the conservation and rebuilding of the Atlantic salmon stocks and in accordance with the ICES advice. Consequently no threats or challenges in relation to the Faroese salmon fishery have been identified in the recent years' ICES reports although ICES highlights the risks from mixed stock fisheries by States of Origin.</p> <p>There are no reports of bycatch of salmon in other fisheries in Faroese waters.</p>
Threat / challenge F2	
Threat / challenge F3	
Threat / challenge F4	

*Copy and paste lines to add further challenges which should be labelled F5, F6, etc.*

<b>2.9 What SMART actions are planned during the period covered by this Implementation Plan (2019 – 2024) to address each of the threats and challenges identified in section 2.8 to implement NASCO's Resolutions, Agreements and Guidelines and demonstrate progress towards achievement of its goals and objectives for the management of salmon fisheries?</b>		
<b>Action F1:</b>	Description of action:	<p>In accordance with NASCO decision NEA(18)12 there will no quota set for commercial fishery for Atlantic salmon in 2018-2019, 2019-2020 and 2020-2021 unless the application of the FWI shows that a reassessment is warranted.</p> <p>The Faroe Islands will continue to manage any salmon fishery through international cooperation and on the basis of the advice from ICES regarding the stocks contributing to the Faroese salmon fishery in a precautionary and sustainable manner.</p> <p>Reporting of all bycatch will remain mandatory.</p>
	Planned timescale (include milestones where appropriate):	No fishery from 2019-2021, decision still pending for 2022-2024. It will be based with due consideration to the advice of ICES concerning the status of the stocks.
	Expected outcome:	Zero fishery until at least 2021, and pending the advice of ICES, most likely until 2024.
	Approach for monitoring effectiveness & enforcement:	
	Funding secured for both action and	Choose an item.

	monitoring programme?	
<b>Action F2:</b>	Description of action:	
	Planned timescale (include milestones where appropriate):	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	
	Funding secured for both action and monitoring programme?	Choose an item.
<b>Action F3:</b>	Description of action:	
	Planned timescale (include milestones where appropriate):	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	
	Funding secured for both action and monitoring programme?	Choose an item.
<b>Action F4:</b>	Description of action:	
	Planned timescale (include milestones where appropriate):	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	
	Funding secured for both action and monitoring programme?	Choose an item.

*Copy and paste lines to add further actions which should be labelled F5, F6, etc.*



<b>3. Protection and Restoration of Salmon Habitat:</b>	
<i>In this section please review the management approach to the protection and restoration of habitat in your jurisdiction in line with the relevant NASCO Resolutions, Agreements and Guidelines</i>	
<b>3.1 How are risks to productive capacity identified and options for restoring degraded or lost salmon habitat prioritised, taking into account the principle of ‘no net loss’ and the need for inventories to provide baseline data? (Max. 200 words)</b> <i>(Reference: Section 3 of the Habitat Guidelines)</i>	
<p>As indicated in 1.1 there are no self-sustaining salmon populations in the rivers in the Faroe Islands but small stocks are maintained in up to five rivers through hatchery releases. There are no external factors affecting the Faroese Atlantic salmon rivers and their estuaries, i.e. there is no industry in the areas. In the early 1970`s fish passes were constructed over three obstacles in the river “Leynará” on Streymoy, and salmon fry released further upstream in the system. This work transformed the river “Leynará” to be the most attracted Atlantic salmon river in the Faroe Islands.</p> <p>On an almost annual basis, some form of enhancement takes place, initially by rearing fry for release in the rivers. Due to the fact that there are no self-supporting wild salmon stocks in Faroese rivers, NASCO’s guidelines are not relevant in many cases.</p>	
<b>3.2 How are socio-economic factors taken into account in making decisions on salmon habitat management? (Max. 200 words)</b> <i>(Reference: Section 3.9 of the Habitat Guidelines)</i>	
See 1.1 and 3.1	
<b>3.3 What management measures are planned to protect wild Atlantic salmon and its habitats from (a) climate change and (b) invasive aquatic species? (Max. 200 words each)</b> <i>(Reference: Section 3.2 of the Habitat Guidelines)</i>	
(a)	
(b)	
<b>3.4 Identify the main threats to wild salmon and challenges for management in relation to estuarine and freshwater habitat.</b>	
Threat / challenge H1	
Threat / challenge H2	
Threat / challenge H3	
Threat / challenge H4	

*Copy and paste lines to add further threats/challenges which should be labelled H5, H6, etc.*

**3.5 What SMART actions are planned during the period covered by this Implementation Plan (2019 – 2024) to address each of the threats and challenges identified in section 3.4 to implement NASCO’s Resolutions, Agreements and Guidelines and demonstrate progress towards achievement of its goals and objectives for the Protection, Restoration and Enhancement of Atlantic Salmon Habitat?**

<b>Action H1:</b>	Description of action:	
	Planned timescale (include milestones where appropriate):	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	
	Funding secured for both action and monitoring programme?	Choose an item.
<b>Action H2:</b>	Description of action:	
	Planned timescale (include milestones where appropriate):	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	
	Funding secured for both action and monitoring programme?	Choose an item.
<b>Action H3:</b>	Description of action:	
	Planned timescale (include milestones where appropriate):	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	
	Funding secured for both action and monitoring programme?	Choose an item.
<b>Action H4:</b>	Description of action:	

	Planned timescale (include milestones where appropriate):	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	
	Funding secured for both action and monitoring programme?	Choose an item.

*Copy and paste lines to add further actions which should be labelled H5, H6, etc*

<b>4. Management of Aquaculture, Introductions and Transfers, and Transgenics:</b>
<i>Council has requested that for Parties / jurisdictions with salmon farms, there should be a greater focus on actions to minimise impacts of salmon farming on wild salmonid stocks. Each Party / jurisdiction with salmon farming should therefore include at least one action relating to sea lice management and at least one action relating to containment, providing quantitative data in Annual Progress Reports to demonstrate progress towards the international goals agreed by NASCO and the International Salmon Farmers Association (ISFA):</i>
<ul style="list-style-type: none"> <li>• 100% of farms to have effective sea lice management such that there is no increase in sea lice loads or lice-induced mortality of wild salmonids attributable to the farms;</li> <li>• 100% farmed fish to be retained in all production facilities.</li> </ul>
<i>In this section please provide information on all types of aquaculture, introductions and transfers, and transgenics (including freshwater hatcheries, smolt-rearing etc.</i>
<b>4.1 (a) Is the current policy concerning the protection of wild salmonids consistent with the international goals on sea lice and containment agreed by NASCO and ISFA? (b) If the current policy is not consistent with these international goals, when will current policy be adapted to ensure consistency with the international goals and what management measures are planned to ensure achievement of these goals and in what timescale? (Max. 200 words for each) (Reference: BMP Guidance)</b>
(a) See 4.2 and 4.3
(b)
<b>4.2 (a) What quantifiable progress can be demonstrated towards the achievement of the international goals for 100% of farms to have effective sea lice management such that there is no increase in sea lice loads, or lice-induced mortality of wild salmonids attributable to sea lice? (b) How is this progress monitored, including monitoring of wild fish? (c) If progress cannot be demonstrated, what additional measures are proposed and in what timescale? (Max. 200 words each) (Reference: BMP Guidance)</b>
<i>The measures by which these goals may be achieved, and against which the Review Group will be measuring the effectiveness of the Implementation Plan, are set out in the BMP Guidance SLG(09)5 (Best management practice; reporting and tracking; factors facilitating implementation) as agreed by NASCO and ISFA</i>

Sea lice management has had high priority in the Faroe Islands in recent years. Since 2009, comprehensive measures have been in place to ensure sea lice treatment in the Faroese aquaculture industry. Both legislative and management measures have rendered positive results. An updated regulatory framework for sea lice management entered into force in 2016 (Executive Order 75/2016),

- lowering the threshold from 2 to 1½ sexually mature female lice per fish,
- obliging farms to implement effective lice control plans,
- permitting treatment on a cage by cage basis and
- introducing a carrot and stick “traffic light” type regime; farms recurrently breaching threshold and/or applying repeated medical therapeutic treatment must decrease the number of smolts put to sea whilst farms with fewer treatments or infestations may, *veteris paribus*, remain at equilibrium or increase the smolt number.

The order also requires:

- fortnightly lice counts by an independent party,
- specification of specie, life stage and size of counted lice,
- stamping out (slaughter of all animals) to be carried out within two months in case of three consecutive breaches of threshold,
- mandatory evaluation and new counting immediately after each treatment,
- mandatory scrutiny of the causes of ineffective treatment by an internal or external veterinary consultant,
- reporting to the Food and Veterinary Authority (FVA) of ineffective treatment, of suspicion of immunity/resistance or other inconsistency with anticipated results.

The results of each lice count are published on the Food and Veterinary Authority’s website.

The results of mandatory lice counts must be available to the company and the authority by the next day as basis for veterinary decisions within each company and by the CVO.

The CVO may order additional or more frequent counts – also of other lice species – and may order coordinated fallowing of nearby fjords. In a number of cases, imminent slaughter has been ordered by the CVO and a number of requests to increase or maintain the number of smolts have been denied.

Since 2016 lumpfish, *Cyclopterus Lumpus L.*, have also been introduced to farms as a measure to combat sea lice.

To combat sea lice, fish farmers are increased smolt production capacity and the size of smolts put to sea, hence shortening the time at sea. From averaging 50-60 grammes in the 1990ies, when put to sea, and approximately 0,1 kg from 2003 to 2010, the average smolt size has now surpassed 0,2 kg, the short term goal being sizes from 0,5 to 1 kg.

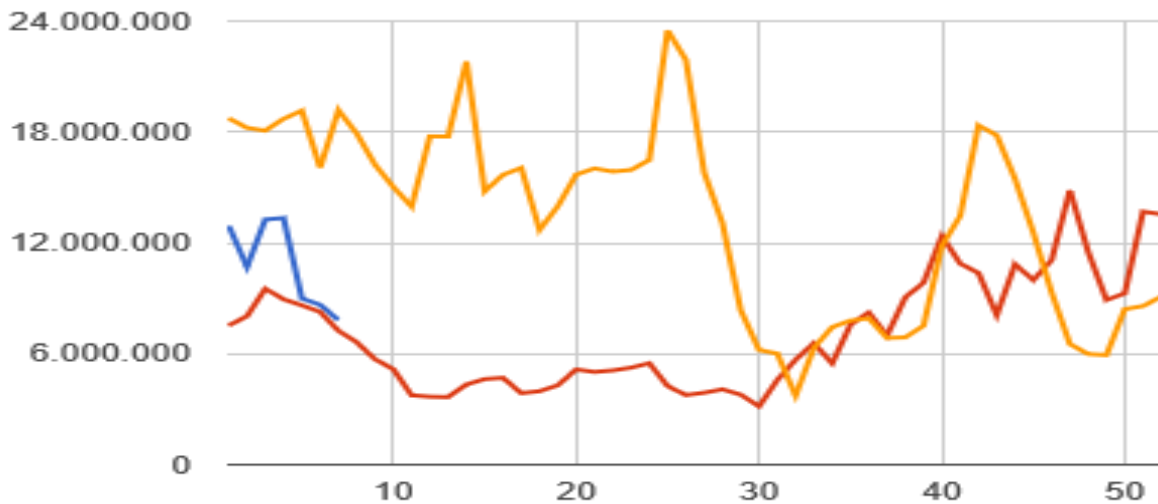
The table below shows counts of salmon lice, *Lepeophtheirus salmonis*, and annual breaches from 2011 to 2018.

<b>Year</b>	<b>Breaches*</b>	<b>No. of inspections</b>
2011	16	183
2012	32	357
2013	23	555

2014	45	469
2015	63	470
2016	67	570
2017	73	560
2018	31	519

\* instances above threshold

Total weekly number of sexually mature female salmon lice, *Lepeophtheirus salmonis*, calculated on basis of fortnightly counts in all operations (2017 orange, 2018 red, 2019 blue)



Above, the number of lice is given as total calculated number, not as lice pr. fish. Hence, annual deviations also relate to the standing number of fish at any given time. On a perennial scale, the annual number of slaughtered fish may serve as an indirect indication of developments between years. In 2017 and 2018, the number, average and total weight (bled and gutted) of slaughtered salmon from aquaculture operations was as follows\*:

Year	slaughtered salmon	average weight, kg	total weight, tonnes
2017	14.555.253	4,89 kg	71.172
2018	13.302.234	4,87 kg	64.732

\*Source: industry.fo (Faroe Islands House of Industry)

(b)

(c)

**4.3 (a) What quantifiable progress can be demonstrated towards the achievement of the international goals for achieving 100% containment in all (i) freshwater and (ii) marine aquaculture production facilities? (b) How is this progress monitored, including monitoring of wild fish (genetic introgression) and proportion of escaped farmed salmon in the spawning populations? (c) If progress cannot be demonstrated, what additional measures (e.g. use of sterile salmon in fish farming) are proposed and in what timescale? (Max. 200 words each)**

*(Reference: BMP Guidance)*

*The measures by which these goals may be achieved, and against which the Review Group will be measuring the effectiveness of the Implementation Plan, are set out in the BMP Guidance SLG(09)5 (Best management practice; reporting and tracking; factors facilitating implementation) as agreed by NASCO and ISFA*

(a)(i) a All fresh water production (smolt farms) is in basins on land (no risk of escape).

Escapes are required to be reported to the CVO/FVA. Farmers must have contingency plans in case of escapes and to recapture escaped fish. Escape incidents are not directly penalised, but may be taken into consideration when a farm or farming site is evaluated. Farmers themselves often suffer loss when escapes occur, and in all likelihood, not penalising escapes yields reliable figures from the farmers.

Escape incidents tend to occur as a consequence of adverse weather conditions or during handling of nets during delousing and transport to slaughter. In order to minimise escapes, all fish farming equipment and facilities must be built and installed with the adequate strength and other properties necessary to ensure responsible operations in accordance with the legislation and should be used with the necessary care and precaution.

Since mortalities have to be reported by farmers on a daily basis in order to both alert the CVO/FVA of possible disease problems and for the farmers to be able to ensure optimal feeding, escapees may be indirectly verified by calculation of loss of fish at slaughter. Relatively reliable estimates of escapees are therefore available with some delay. Farms must also report suspected cases through observed hole in nets and subsequently report the calculated number of missing fish at slaughter.

In addition to being able to verify escapees by calculating the loss of fish at slaughter, suspicion is may be detected using in-cage cameras that also serve the purpose of observing feeding patterns etc. Divers usually verify holes once upon inspection.

From 2011, the following incidents of escape or holes in nets have been reported:

**2011:** 2 incidents, number unknown, average size 1.9 kg. Occurred during delousing treatments and when moving fish into a new net pen.

**2012:** 4 incidents, thereof 2,741 escapees in two incidents, no numbers reported for the 2 other incidents. Average weight 4.8 kg. Occurred when moving fish to slaughter, sorting of fish into two net pens and during storms.

**2013:** 4 incidents, estimated at 25,000 fish averaging 2.8 kg. Occurred during winter storms and when moving fish into a new net pen.

**2014:** 2 incidents estimated at 40,000 averaging 4.8kg. Occurred during storms and when moving fish into a net pen prior to slaughter.

**2015:** 5 suspected incidents reported (net holes), no fish found missing by slaughter.

**2016:** 1 suspicion, no escapees seen or found missing.

**2017:** 3 suspicions, thereof 2 escape incidents, one involving 109,515 escapees, average size 1.8 kg, occurred during storm, suspicion of large drifting item having ripped the net open and one involving 80.465 escapees, average size 2 kg, due to faulty procedure, which has been adjusted.

**2018:** 1 suspicion, net side of cage above sea level damaged, no escapees observed and no fish missing by slaughter.

(a)(ii)
(b)
(c)
<p><b>4.4 What adaptive management and / or scientific research is underway that could facilitate better achievement of NASCO’s international goals for sea lice and containment such that the environmental impact on wild salmonids can be minimised? (Max 200 words)</b>  <i>(Reference: BMP Guidance and Article 11 of the Williamsburg Resolution)</i></p>
<p>A number of research and development projects are ongoing and under consideration. Usually, they are carried out as a collaborative effort between the farming companies, the Food and Veterinary Authority and the Aquaculture Research Station (government owned). In many cases, the Faroese Research Council is also part of the funding.</p> <p>Projects include</p> <ul style="list-style-type: none"> <li>• methods for mapping the spatial distribution of sea lice in its pelagic state (Nauplii and Copepodites) and for in situ estimation of naupli at farm sites,</li> <li>• mapping of lice distribution using hydrodynamic models in which companies also test and develop new approaches.</li> <li>• Stocking of lumpfish, <i>Cyclopterus lumpus</i> L., to combat lice</li> </ul> <p>Several biological control measures are being tested.</p>
<p><b>4.5 What is the approach for determining the location of aquaculture facilities in (a) freshwater and (b) marine environments to minimise the risks to wild salmonid stocks? (Max. 200 words for each)</b></p>
<p>As previously noted there is no historic record of any natural wild salmon population in Faroese rivers or fjords. This diminishes any potential negative impact that aquaculture in the Faroese fjords and sounds could have on wild salmon populations. However, Faroese waters are important feeding grounds for wild salmon originating in other countries. Therefore, the most important measures for the Faroese aquaculture industry in order to protect wild salmon is to prevent disease outbreaks and minimise salmon lice and escapes.</p> <p>(a) All fresh water production (smolt farms) is on land (no risk of escape). The smolt are produced to ever-larger sizes, thus shortening the life cycle at sea and hence minimizing risks.</p> <p>(b) Each fish farming company requires environmental approval from the Environment Agency. Act of Parliament no. 134 from 1988 on the protection of the environment sets the rules for prevention of pollution and the conservation of a diverse animal and plant life. The Agency has set up a system under which fish farming areas in the Faroe Islands must be inspected. The system is based on similar environmental control systems in Norway and Scotland.</p> <p>The control system requires regular monitoring of the seabed in fish farming areas. This monitoring is part of the compulsory internal control that is a prerequisite for the environmental approval of fish farms. As a result of the limit values in place, the site must</p>

<p>not be used if levels of heavy metals become too high, or too much organic matter has accumulated. Operations may continue only when the state of the seabed has normalized.</p>
<p>(b)</p>
<p><b>4.6 What progress has been made to implement NASCO’s guidance on introductions, transfers and stocking?</b> <i>(Max. 200 words)</i> <i>(Reference: Articles 5 and 6 and Annex 4 of the Williamsburg Resolution)</i></p>
<p>The approval of imports to the Faroe Islands of all animal livestock, including for fish farming purposes, depends upon the disease status of the exporting country, and must otherwise adhere to existing rules, regulations and procedures, which are largely aligned with EU-regulation.</p> <p>Executive Order no. 98 from 2003 requires approval of transportation companies and transport units for all transportation of farmed fish, farmed fish products and equipment from fish farms at all stages of production.</p>
<p><b>4.7 Is there (a) a requirement to evaluate thoroughly risks and benefits before undertaking any stocking programme and (b) a presumption against stocking for purely socio-political / economic reasons?</b> <i>(Max. 200 words each)</i> <i>(Reference: Guidelines for incorporating social and economic factors in decisions under the Precautionary Approach and Annex 4 of the Williamsburg Resolution)</i></p>
<p>(a) There are no self-sustaining salmon populations in Faroese rivers, but stocks are maintained in 2-3 small rivers through intermittent hatchery releases, as well as a “put &amp; take” lake. There are few external factors affecting the Faroese Atlantic salmon rivers and their estuaries, i.e. there is no industry in the areas.</p> <p>Hatching and release is organised by a local fishing club and carried out in small numbers, up to 30.000 per year, yet not on a fully regular basis. The Veterinary Authority must authorise any release.</p> <p>The releases do not affect any natural salmon population in the Faroe Islands. However, there is a theoretical possibility that upon leaving the rivers and moving to the marine feeding grounds, the salmon in question may be exposed to salmon lice and sea lice. There is also a theoretical possibility it may affect the total gene pool ever so slightly if fish originally released in the Faroe Islands do not return to their rivers, but to rivers in other countries, as may also occur with naturally spawned salmon.</p>
<p>(b)</p>
<p><b>4.8 What is the policy / strategy on use of transgenic salmon?</b> <i>(Max. 200 words)</i> <i>(Reference: Article 7 and Annex 5 of the Williamsburg Resolution)</i></p>
<p>Under the Parliament Act No 16 of 23 February 2001 on Animal Diseases, alteration of the animal genetic material is not permitted unless authorised through the enactment of special legislation. In accordance with the International Salmon Farmers’ Association (ISFA), which firmly rejects transgenic salmon production, there is no tradition, current activity or legislation in the Faroe Islands allowing development of transgenic livestock including farmed fish.</p>
<p><b>4.9 For Members of the North-East Atlantic Commission only: What measures are in place, or are planned, to implement the eleven recommendations contained in the ‘Road Map’ to enhance information exchange and co-operation on monitoring,</b></p>



**research and measures to prevent the spread of *Gyrodactylus salaris* and eradicate it if introduced, including the development and testing of contingency plans?**  
 (Max. 200 words)  
 (Reference 'Road Map' to enhance information exchange and co-operation on monitoring, research and measures to prevent the spread of *G. salaris* and eradicate it if introduced, NEA(18)08)

See 4.4 above. *Gyrodactylus salaris* has not been reported in the Faroe Islands.

**4.10 Identify the main threats to wild salmon and challenges for management in relation to aquaculture, introductions and transfers, and transgenics.**

Threat / Challenge A1	Aquaculture is a significant industry in the Faroe Islands. The challenge of sea lice is therefore present, although its threat is limited because there are no wild salmon populations in the Faroe Islands. Stocks are, however, maintained in 2-3 small rivers, and these may be impacted by aquaculture.
Threat / challenge A2	Aquaculture is a significant industry in the Faroe Islands. The challenge escaped farmed salmon is therefore present, although its threat is limited because there are no wild salmon populations in the Faroe Islands. Stocks are, however, maintained in 2-3 small rivers, and these may be impacted by aquaculture.
Threat / challenge A3	
Threat / challenge A4	

*Copy and paste lines to add further threats/challenges which should be labelled A5, A6, etc.*

**4.11 What SMART actions are planned during the period covered by this Implementation Plan (2019 – 2024) to address each of the threats and challenges identified in section 4.10 to implement NASCO's Resolutions, Agreements and Guidelines and demonstrate progress towards achievement of its goals and objectives for aquaculture, introductions and transfers, and transgenics?**

<b>Action A1:</b>	Description of action:	Continue to apply the Williamsburg Resolution in order to minimise the risk of impacts from salmon farming on wild Atlantic salmon. Specifically, the threshold for cages requiring treatment will be reduced from 1½ mature louse to 1 louse per fish by the end of 2021. The goal remains to reach zero, and it is therefore expected that the threshold will be lowered again sometime after 2021, pending the rate of adaptation to the new regulations by the industry and the success in combating sea lice.
	Planned timescale (include milestones where appropriate):	2019-2024
	Expected outcome:	Continuing progress in reducing sea lice by introducing new maximum limits and by continuing to work with the industry to introduce new measures to combat sea lice.
	Approach for monitoring effectiveness & enforcement:	Statutory reporting
	Funding secured for both action and monitoring	Choose an item.

	programme?	
<b>Action A2:</b>	Description of action:	Continue to apply the Williamsburg Resolution in order to minimise the risk of impact from salmon farming on wild Atlantic salmon. The monitoring of cages will be strengthened by working with the industry to install cameras in all farming pens to better be able to observe behavioural patterns and possible escapes. Furthermore, consideration is being given to
	Planned timescale (include milestones where appropriate):	2019-2024
	Expected outcome:	Continuing the progress to reduce the number of escape incidents in order to minimise the impact of aquaculture.
	Approach for monitoring effectiveness & enforcement:	Statutory reporting
	Funding secured for both action and monitoring programme?	Choose an item.
<b>Action A3:</b>	Description of action:	
	Planned timescale (include milestones where appropriate):	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	
	Funding secured for both action and monitoring programme?	Choose an item.
<b>Action A4:</b>	Description of action:	
	Planned timescale (include milestones where appropriate):	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	
	Funding secured for both action and monitoring	Choose an item.

	programme?	
--	------------	--

*Copy and paste lines to add further actions which should be labelled A5, A6, etc*