**Council**

**CNL(20)17**

# *Second Interim Report of the Implementation Plan / Annual Progress Report Review Group for the Review of Implementation Plans under the Third Cycle of Reporting (2019 – 2024)*

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## *Second Interim Report of the Implementation Plan / Annual Progress Report Review Group for the Review of Implementation Plans under the Third Cycle of Reporting (2019 – 2024)*

### *NASCO HQ, 11 Rutland Square, Edinburgh, UK*

### *18 – 22 November 2019*

***Note.*** *The Interim Report of the Review Group is available as document CNL(19)14. This Second Interim Report covers the work of the Review Group at its November 2019 meeting only.*

## 1. Opening of the Meeting

1.1 The Chair, Cathal Gallagher (European Union), opened the meeting and welcomed members of the Review Group to Edinburgh and thanked them for agreeing to undertake the important work assigned to them. He reminded the Group that, despite the improvements seen in reporting over the second cycle of reporting, the NASCO Council has expressed a wish to strengthen the IP / APR process still further in the third reporting cycle. He reminded the Review Group of the considerable progress made in the number of reporting jurisdictions, with all Parties and jurisdictions having submitted an Implementation Plan for the first round of review. He noted that this increased number of reporting jurisdictions, combined with the more stringent review process, meant that the first round of reviews was very challenging. This second round of review would again evaluate the quality of the information contained in the Implementation Plans and determine whether it provides a fair and equitable basis for assessing the progress that the Party or jurisdiction will make in implementing NASCO's Resolutions, Agreements and Guidelines. In addition, the second round of review would also need to assess whether the improvements requested in the first round of review had been addressed in the revised Implementation Plans submitted. Noting that one Implementation Plan had been accepted following the first round of review, he indicated that 16 Implementation Plans would need to be re-evaluated during the Group's meeting, which would make for a very challenging week ahead.

1.2 He reminded the Group that it has been tasked to evaluate the Implementation Plans in three key areas of assessment, as described in detail in the 'Guidelines for the Preparation and Evaluation of NASCO Implementation Plans and for Reporting on Progress', CNL(18)49 (hereinafter referred to as the IP Guidelines), by:

1. identifying whether the answers by each Party / jurisdiction to the questions posed in the IP template are satisfactory;
2. identifying clearly that the threats and challenges to the management of wild Atlantic salmon identified under each theme are related to NASCO's Resolutions, Agreements and Guidelines;
3. determining that each action addresses the main (relevant) threats and challenges identified for that Party / jurisdiction and assessing the description of each action to ensure that it adheres to the 'SMART' descriptors such that progress over time can

be assessed objectively.

Additionally, in this second round of review, the Group would need to assess whether the improvements requested in the first round of review had been addressed in the revised Implementation Plans.

1.3 He emphasised that the members of the Review Group had been appointed specifically to represent NASCO not their Party, jurisdiction or organization. He also noted that the Secretariat's role was to co-ordinate the work and, although the Secretariat had been asked to conduct an initial assessment to ensure there were no gaps in the plans submitted, they would not serve as reviewers. He thanked the Secretariat for the considerable preparatory work undertaken in advance of the meeting to facilitate the work of the Review Group. In conclusion, he indicated that there was much to do during the meeting but that the Group's findings would play a central role in demonstrating NASCO's commitment to wild salmon conservation.

1.4 The Chair gave the floor to the NGOs to make a short opening statement which was distributed to the members of the Review Group and is attached as Annex 1.

1.5 A list of the members of the Review Group is contained in Annex 2.

## 2. Adoption of the Agenda

2.1 The Review Group adopted its Agenda, IP(19)35 (Annex 3).

## 3. Review of the Terms of Reference and Consideration of Working Methods

3.1 As with the meetings to carry out the first round of review, the Review Group again noted that while no separate Terms of Reference had been provided by the Council, the Group's assessments would rely upon instructions for evaluation given in the IP Guidelines. This document states that the purpose of the Implementation Plan evaluations is to ensure that the Plans provide a fair and equitable account of the actions that each Party or jurisdiction plans to take to implement NASCO's Resolutions, Agreements and Guidelines and, among other things, emphasises the importance of:

- identifying clearly that the threats and challenges identified under each theme are related to NASCO's Resolutions, Agreements and Guidelines;
- including at least one action on sea lice management for those jurisdictions with salmon farms;
- including at least one action on containment of farmed salmon for those jurisdictions with salmon farms;
- including at least one action on mixed-stock fisheries for those jurisdictions that prosecute mixed-stock fisheries;
- assessing and rating answers to each of the questions in the Implementation Plan template as either:
    1. Satisfactory answers / information; or
    2. Unsatisfactory (including unclear or incomplete answers / information or clear omissions or inadequacies); and
- developing 'SMART' actions.

3.2 In accordance with the IP Guidelines, an initial assessment of each revised Implementation Plan had been conducted by the Secretariat prior to the Group's meeting. The aim of this assessment was to ensure that time was not spent on a full critical review of Implementation Plans that clearly contained significant omissions. The Implementation Plans were checked to ensure that they provided: an answer to all questions, except where these are indicated to be inappropriate for the Party or jurisdiction; a list of threats to wild salmon and challenges for management related to the three theme areas; and actions to address the main threats and challenges, which include measurable outcomes, and monitoring that will be undertaken to assess the effectiveness of the action and planned timescale for the action. In addition, the Secretariat had prepared documents highlighting the changes made to each Implementation Plan since the first round of review to facilitate the work of the Review Group.

3.3 Prior to the meeting, a template had been developed by the Secretariat (CNL40.2161, Annex 4) to facilitate the work of the Review Group and ensure consistency across the three key areas of assessment set out in the IP Guidelines. These are:

1. identifying whether the answers by each Party / jurisdiction to the questions posed in the IP template are satisfactory;
2. identifying clearly that the threats and challenges to the management of wild Atlantic salmon identified under each theme are related to NASCO's Resolutions, Agreements and Guidelines; and
3. determining that each action addresses the main (relevant) threats and challenges identified for that Party / jurisdiction, and then assessing the description of each action to ensure that it adheres to the 'SMART' descriptors such that progress over time can be assessed objectively.

The template also included information on whether the improvements requested in the first round of review had been addressed.

3.4 The Review Group agreed to follow the same working methods and 'ground rules' as for its February 2019 meeting. These are described in paragraphs 3.4 and 3.5 of the Review Group's interim report (document CNL(19)14).

3.5 The Review Group noted that the IP Guidelines define 'SMART' actions and task the Review Group to assess whether or not the actions contained in each plan are 'SMART'. To assess whether an action was 'SMART', the Review Group posed the following questions in relation to each action:

- **Specific:** is the specific action the Party / jurisdiction will undertake to remove or reduce a given threat to wild salmon both clear and concise and related to the identified threats / challenges?
- **Measurable:** does the expected outcome and proposed monitoring programme provide a suitable platform via which progress can be demonstrated clearly?
- **Ambitious yet achievable:** is it stated clearly that funding is in place, or is expected to be in place, to allow implementation of proposed actions / monitoring programmes during the specified period covered by the Implementation Plan?
- **Relevant:** what threat or challenge identified in the Implementation Plan will be addressed by this action and is it accounting for NASCO's Resolutions, Agreements and Guidelines?

- **Timely:** under what timescale will progress be delivered by this action and is it clear that the action will be completed within the third cycle of reporting?

3.6 In accordance with the IP Guidelines, and revised IP schedule (Annex 5), all Implementation Plans will be uploaded to the NASCO website following this second round of review. Where the Review Group considers that an Implementation Plan still requires revision, the Implementation Plan will be returned to Parties / jurisdictions with clear guidance on the Review Group's recommendations for improvements. The Group agreed to provide its assessments to the Parties / jurisdictions using the agreed template.

## 4. Evaluation of the Implementation Plans

### Background

4.1 Implementation Plans are the key documents in the third reporting cycle. Their purpose, together with the Annual Progress Reports, is to provide a succinct, transparent, fair and balanced approach for reporting on the implementation of NASCO's Resolutions, Agreements and Guidelines by the Parties / jurisdictions. Implementation Plans are focussed around the three theme areas and should emphasise: the actions to be taken over the period of the Implementation Plan (2019 to 2024); clearly identifiable measurable outcomes and timescales; and appropriate monitoring to evaluate the effectiveness of the measures taken.

4.2 Following the first round of review, one Implementation Plan had been accepted by the Review Group (Denmark (in respect of the Faroe Islands and Greenland) – Greenland, CNL(19)81). Nineteen were returned to the Parties / jurisdictions with clear guidance on how the Review Group considered they should be improved. In accordance with the IP Guidelines, those initial assessments were not made public.

4.3 Parties / jurisdictions were asked to submit their revised Implementation Plans by 1 November 2019 for reassessment by the Review Group at its November meeting. Sixteen revised Implementation Plans were re-evaluated by the Group at that meeting.

### Evaluation of the Revised Implementation Plans

4.4 The Review Group agreed that their evaluation of each revised Implementation Plan would show whether each of the three key areas of assessment (see 3.3 above) had been adequately addressed and if the areas highlighted in the first round of review had been addressed or a satisfactory explanation of the original content provided. Where any one of the areas was considered to have been inadequately addressed the Implementation Plan would be returned to the Party / jurisdiction together with clear guidance for its improvement. Further revisions to Implementation Plans should be resubmitted by 1 May 2020, to be discussed during a Special Session of the Council during the 2020 Annual Meeting.

4.5 In total, the Review Group reassessed 16 revised Implementation Plans as follows:

| **Party / jurisdiction** | **Document number** |
|---|---|
| **Canada** | IP(19)17rev |
| **Denmark (in respect of the Faroe Islands and Greenland)** | |
| *Faroe Islands* | IP(19)23rev |
| **European Union** | |
| *Denmark* | IP(19)09rev |

| | |
|---|---|
| *Finland* | IP(19)12rev |
| *France* | IP(19)16rev |
| *Germany* | IP(19)11rev |
| *Ireland* | IP(19)15rev |
| *Portugal* | IP(19)06rev |
| *Spain – Asturias* | IP(19)20rev |
| *Sweden* | IP(19)07rev |
| *UK – England and Wales* | IP(19)13rev |
| *UK – Northern Ireland* | IP(19)08rev |
| *UK – Scotland* | IP(19)10rev |
| **Norway** | IP(19)18rev |
| **Russian Federation** | IP(19)05rev |
| **United States of America** | IP(19)25rev |

**Interpretation of Assessments**

4.6 The Review Group again emphasised that a score of '1' (satisfactory answers / information) for an answer simply meant that a satisfactory answer had been provided and did not indicate that the Party / jurisdiction was necessarily meeting NASCO guidelines or agreements. In many cases, the Review Group assessed a response to a question as being satisfactory provided that an action had been included in the Implementation Plan to address any major shortcoming.

4.7 In developing its guidance for each Party / jurisdiction when actions were not SMART, the Review Group agreed that it would be inappropriate to prescribe what it considered a clear action to be for each unclear action presented. Rather, the Review Group developed its guidance for each Party / jurisdiction to refer to each of the SMART descriptors that had not been addressed with the comment that these aspects should be addressed in a further revised Implementation Plan in each case.

4.8 The IP Guidelines state that the Review Group should provide examples of good practice within the Implementation Plans. In its assessment of each Plan, the Review Group noted clear examples of responses to the questions and of SMART actions. These have been compiled and are contained in document IP(19)37 (Annex 6).

**Timeliness of Reporting**

4.9 The Council had requested that revised Implementation Plans be submitted by 1 November. Thirteen revised Implementation Plans were submitted by this deadline, and another three were received shortly after the deadline and also reviewed by the Group.

4.10 The Review Group again welcomed the high level of engagement of NASCO's Parties and jurisdictions with the third cycle of reporting, evidenced by the provision of all the Implementation Plans anticipated.

**Overview of Evaluations**

4.11 The Review Group considers that there has been considerable progress by almost all Parties / jurisdictions from the first round to the second round. However, there are still concerns over the lack of acceptable IPs after two review periods and, in particular, the failure by some Parties / jurisdictions to adopt actions specifically aimed at protecting wild salmonids from the adverse impacts of aquaculture escapes and sea lice - in line with the International Goals agreed by NASCO and ISFA. An infographic (Annex 7) illustrates the status of the various sections of the IPs after two rounds of review by comparing the number of answers / threats and challenges / actions considered to be

acceptable to the Review Group after their first and second rounds of review. This infographic provides the basis for the statistics in the following two paragraphs, with each cell comprising the 'grouped response' referred to below for the relevant section.

4.12 In response to the questions on salmon management in the 16 revised IPs, 58% of the grouped responses were acceptable after round two, compared to 22% of the grouped responses in round one. In response to the threats / challenges, 87% of the grouped responses were fully acceptable in round one and all were acceptable after round two. For the actions, 7% of the grouped responses were acceptable after round one. After round two, 48% were acceptable and 24% had improved. However, these still require revision to be fully acceptable.

4.13 In relation to the three theme areas of fisheries management, habitat, and aquaculture, disease, transfers & transgenics, in the 16 revised IPs, 39% of the grouped responses in fisheries management were acceptable after round one, as were 39% of the grouped habitat responses; 33% of the grouped aquaculture responses were acceptable after round one. After round two of their review, 74% of the fisheries management grouped responses were acceptable, 15% had improved, 9% had shown no clear progress and there were no acceptable actions in this category for one jurisdiction. For the habitat responses, after round two of their review, 74% of the grouped responses were acceptable, 11% had improved, 11% had shown no clear progress and there were no acceptable actions in this category for two jurisdictions. For the aquaculture responses, after round two of their review, 51% of the grouped responses were acceptable, 22% had improved, 20% had shown no clear progress and there were no acceptable actions in this category for three jurisdictions.

4.14 Where the information has been provided, in several instances the responses to questions are still overly long. Where this is the case, the response has been marked as satisfactory. However, the Review Group has requested that Parties / jurisdictions take the effort to rectify this such that any future reviews are facilitated.

4.15 There have been a number of instances where long-term monitoring programmes have been included as actions. The Review Group does not consider these to be in line with the 'Ambitious' SMART descriptor.

## 5. Development of Feedback to the Parties / jurisdictions

5.1 Following this second round of review, those Implementation Plans now considered to be fully acceptable have been allocated a Council number and are listed in paragraph 5.2 below. Those Implementation Plans that still require revision have been highlighted in paragraph 5.3 below. Those Parties / jurisdictions that did not submit a revised Implementation Plan are highlighted in paragraph 5.5 below. All Implementation Plans can be found on the NASCO website.

**Accepted Implementation Plans**

5.2 The Review Group considers that the following Implementation Plans are fully acceptable:

| **Party / jurisdiction** | **Document number** |
|---|---|
| **Denmark (in respect of the Faroe Islands and Greenland)** | |
| *Greenland* | CNL(19)81 |
| **European Union** | |
| *Sweden* | CNL(19)82 |

Detailed feedback on each Implementation Plan has been provided to each Party / jurisdiction. The general feedback provided in each case is available on the NASCO website.

**Revised Implementation Plans Requiring Further Modification**

5.3 The Review Group considered that the following 15 revised Implementation Plans still require further modification:

| **Party / jurisdiction** | **Document number** |
|---|---|
| **Canada** | IP(19)17rev |
| **Denmark (in respect of the Faroe Islands and Greenland)** | |
| *Faroe Islands* | IP(19)23rev |
| **European Union** | |
| *Denmark* | IP(19)09rev |
| *Finland* | IP(19)12rev |
| *France* | IP(19)16rev |
| *Germany* | IP(19)11rev |
| *Ireland* | IP(19)15rev |
| *Portugal* | IP(19)06rev |
| *Spain – Asturias* | IP(19)20rev |
| *UK – England and Wales* | IP(19)13rev |
| *UK – Northern Ireland* | IP(19)08rev |
| *UK – Scotland* | IP(19)10rev |
| **Norway** | IP(19)18rev |
| **Russian Federation** | IP(19)05rev |
| **United States of America** | IP(19)25rev |

5.4 The Review Group's detailed assessments of these revised Implementation Plans were sent to Parties / jurisdictions with clear guidance on how the Group considered they should be revised. The general feedback provided in each case is available on the NASCO website.

**Plans that were not resubmitted following the initial evaluation**

5.5 No revised Implementation Plans were submitted for those jurisdictions listed below. Following correspondence with the Secretariat, the jurisdictions below indicated that they had not modified their IPs following the first round of review, as they considered that the IPs met NASCO's criteria. The Review Group discussed this correspondence and concluded that the assessments provided from the first round of review were still valid and that these Implementation Plans would be acceptable once the revisions proposed following the first round of review were made. The general feedback provided to these jurisdictions is available on the NASCO website. The Review Group recommends strongly that these jurisdictions consider submitting revised Implementation Plans addressing this feedback by 1 May 2020.

| **Party / jurisdiction** | **Document number** |
|---|---|
| **European Union** | |
| *Spain – Cantabria* | IP(19)22 |
| *Spain – Galicia* | IP(19)19 |
| *Spain – Navarra* | IP(19)14 |

## 6. Arrangements for Presenting the Group's Report to the Council

6.1 The Review Group agreed that the Chair would present its report to the Council during the Special Session at the Thirty-Seventh (2020) Annual Meeting. The Review Group agreed that its presentation would highlight shortcomings in those Implementation Plans still requiring revision and give suggestions for how these might be addressed. It would also provide examples of good practice within the Implementation Plans. The Review Group noted that, in accordance with the revised Implementation Plan schedule, Parties and jurisdictions could submit revised IPs to the Secretariat by 1 May 2020 for distribution to all delegates and discussion at the 2020 Special Session. However, these would not be reviewed by the Review Group prior to that session. Parties / jurisdictions wishing to further revise their IPs following the Special Session could do so by 1 November 2020. The Review Group will meet after this date to re-evaluate any revised IPs.

## 7. Report of the Meeting

7.1 The Review Group agreed a report of its meeting.

## 8. Other Business

8.1 There was no other business.

## 9. Close of the Meeting

9.1 The Chair thanked the Members of the Review Group for their hard work during and prior to the meeting and wished them a safe journey home.

## Annex 1

### *Opening Statement by NASCO's accredited Non-Government Organizations at the Third Cycle Implementation Plan Review Group*

### *Edinburgh, November 2019*

Chair, Secretary and Review Group Members,

The NGOs welcome the opportunity for their representatives to contribute to this important review process, but they have asked us to present this statement, as they have not been able to view the final Implementation Plan (IP) drafts ahead of our meeting.

It is concerning to NGOs that all but one of the original IPs fell short of what is required if NASCO's international obligations are to be met. This Group must now ensure that there have been substantial improvements in the revised Plans – the stakes for wild salmon are high and this Review Group would be failing in its duty if it let any actions that are less than ambitious and timely through this second evaluation process. Review Group members are appointed to represent NASCO and the wild Atlantic salmon, and the strong message from our NGO colleagues is that this meeting must report more analytically about jurisdictions' conservation actions, rather than the closer focus on process in our previous report to Council in June – otherwise we will be failing the species we are charged with protecting.

Our work this week takes place against a background of a crisis for wild salmon, with alarmingly low abundance all around the North Atlantic. Although the Implementation Plan process started back in 2007, the fact that only Greenland made the grade in April this year highlights a worrying lack of commitment by the Parties to the conservation of these fish, and to achieving NASCO's international goals. As the output from the Tromsø Symposium put it, we have to start conserving wild salmon rather than just managing them.

So, our focus this week must be that proposed actions are SMART, in particular Ambitious, and that they are targeted at the conservation of wild Atlantic salmon. There is much room for improved commitment to the international goals in these IPs, particularly for those jurisdictions with salmon farming industries, and the Council has, of course, asked that this area be given particular focus.

Which brings us to the Guidelines for the Preparation and Evaluation of NASCO IPs and for Reporting on Progress – CNL(18)49. This document stated that no Implementation Plan will be accepted until all actions are deemed satisfactory (i.e. SMART) by this Review Group. Similarly, if answers provided in the Implementation Plan are unsatisfactory, that plan will not be accepted, although we now understand the 'two column' approach to reporting set out by the Secretariat. However, once again, the NGOs have severe concerns that the Implementation Plan theme most at threat from continuing failure is aquaculture, and we do request that the Review Group seeks a way in which we can genuinely hold relevant Parties and jurisdictions to account over this most important issue during the upcoming APR process, otherwise this 3rd IP / APR cycle will not be deemed successful – not least by the imminent external performance review.

Our NGO colleagues recently asked us to write to the NASCO Secretary and President on matters relating to the transparency and inclusivity of NASCO. These were areas for which NASCO received much credit during the 2012 external performance review of its work. While we await a written response (we have already discussed the issue verbally), the NGOs are

concerned that we were advised that the IPs should not be circulated beyond this group. This has caused concern amongst NGOs, not least because several report a lack of consultation with them during this 'revision round' – for example, one NGO reports their last contact with the process as being in January this year.

In previous years, this Review Group has been asked to identify topics for Theme-based Special Sessions (TBSS). Since the Council has asked Parties / jurisdictions with salmon farms to give greater focus to actions to minimise impacts of salmon farming on wild salmonids, the NGOs consider that, because TBSSs are only held in years when there are no negotiations for regulatory measures, and are restricted to the three Implementation Plan theme areas, aquaculture should have been the topic of the 2020 TBSS. While we appreciate that plans are already in place for a TBSS on the upcoming external performance review, we would certainly have been asking this Review Group to support a one-day session in 2020 with a clear focus on addressing impacts of salmon farming. That would have been consistent with the Council's stated aim of focusing more on this vital issue for protecting wild fish.

Finally, we would like to reiterate a point the NGOs made in our Opening Statement at the previous meeting of this Review Group, that our work in this International Year of the Salmon will be closely scrutinised externally by those looking to NASCO to take an overt lead in the restoration, protection and conservation of wild Atlantic salmon – and this will obviously be a major issue during the next external performance review scheduled for 2021.

So, we have a considerable challenge and very important task ahead, but the NGOs look forward to contributing to the fair but robust re-evaluation of the documents before us this week. In that regard, we welcome the helpful annotations from the Secretariat regarding whether or not changes have been made, although we now have the important task of assessing whether these have answered our concerns from earlier in the year. The NGOs will have difficulty being identified with supporting any action that does not seem to us to be ambitious and timely and clearly focused on protecting and restoring this magnificent, but sadly seriously threatened, iconic species.

Paul Knight and Steve Sutton
Co-Chairs – NASCO NGOs
November 2019

## Annex 2

### *List of Participants*

| | |
|---|---|
| Cathal Gallagher | Inland Fisheries Ireland (Review Group Chair) |
| Paddy Gargan | Inland Fisheries Ireland |
| Katrine Kærgaard | Ministry of Fisheries, Hunting and Agriculture, Greenland |
| Paul Knight | Salmon and Trout Conservation UK |
| Lis Sondergaard | Fisheries and Oceans Canada |
| Steve Sutton | Atlantic Salmon Federation, Canada |
| Lawrence Talks | Environment Agency, UK |

**Annex 3**

# IP(19)35

## *Meeting of the Implementation Plan / Annual Progress Report Review Group*

## *NASCO HQ, 11 Rutland Square, Edinburgh EH1 2AS*

## *18 – 22 November 2019*

## *Agenda*

1. Opening of the Meeting
2. Adoption of the Agenda
3. Review of the Terms of Reference and Consideration of Working Methods
4. Evaluation of the Implementation Plans
5. Development of Feedback to the Parties / jurisdictions
6. Arrangements for Presenting the Group's Report to the Council
7. Report of the Meeting
8. Other Business
9. Close of the Meeting

**Annex 4**

CNL40.2161

## *Evaluation of 2019 Revised Implementation Plans*

*Under NASCO's third reporting cycle the Review Group is asked to evaluate the Implementation Plans submitted by Parties / jurisdictions in three key areas of assessment, by:*

1. *identifying whether the answers by each Party / jurisdiction to the questions posed in the Implementation Plan template are satisfactory;*
2. *identifying clearly that the threats and challenges to the management of wild Atlantic salmon identified under each theme are related to NASCO's Resolutions, Agreements and Guidelines; and*
3. *assessing the description of each action to ensure that it adheres to the 'SMART' descriptors such that progress over time can be assessed objectively.*

*This is described in detail in the 'Guidelines for the Preparation and Evaluation of NASCO Implementation Plans and for Reporting on Progress', CNL(18)49.*

1. *Answers to each question in the Implementation Plan template, CNL(18)50, are to be assessed as:*
    1. *Satisfactory answers / information;*
    2. *Unsatisfactory (including unclear or incomplete answers / information or clear omissions or inadequacies).*
2. *NASCO's Resolutions, Agreements and Guidelines as they apply to the third cycle of reporting are listed throughout the Implementation Plan template, CNL(18)50.*
3. *The Review Group will be required to assess the description of each action using the 'SMART' criteria laid out in the new Guidelines document, CNL(18)49, thereby assessing the quality of each of the actions, not just how clearly the actions are stated.*

*Through this process it will be possible to determine whether the Implementation Plan provides a fair and equitable basis for assessing the progress that the Party / jurisdiction will make in implementing NASCO's Resolutions, Agreements and Guidelines.*

*Where Implementation Plans are not deemed to be satisfactory by the Review Group, in any or all of the three areas described above, the Implementation Plan will be returned to the Party / jurisdiction with clear guidance on the way the Review Group considers that the Implementation Plan should be improved. The tables below, one for each of the three main areas to be assessed, provide a template for evaluation in each case.*

**Party:** **Jurisdiction/Region**:

**Assessment area 1. Are the questions posed in the Implementation Plan template answered satisfactorily?**

| # | Question in IP Template | Initial Assessment (1 or 2) | Draft feedback on any improvements required (for answers assessed as 2) | Comments relating to 1st round review: changed as requested by IP RG? |
|---|---|---|---|---|
| **1.** | **Introduction** | | | |
| **1.1** | What are the objectives for the management of wild salmon? | | | |
| **1.2** | What reference points (e.g. conservation limits, management targets or other measures of abundance) are used to assess the status of stocks? | | | |
| **1.3** | What is the current status of stocks under the new classification system outlined in CNL(16)11? | | | |
| **1.4** | How is stock diversity (e.g. genetics, age composition, run-timing, etc.) taken into account in the management of salmon stocks? | | | |
| **1.5** | To provide a baseline for future comparison, what is the current and potential quantity of salmon habitat? | | | |
| **1.6** | What is the current extent of freshwater and marine salmonid aquaculture? ***Append one or more maps showing the location of aquaculture facilities and aquaculture free zones in rivers and the sea.*** | | | |
| **1.7** | Please describe the process used to consult NGOs and other stakeholders and industries in the development of this Implementation Plan. | | | |

| # | | | | |
|---|---|---|---|---|
| **2.** | **Management of Salmon Fisheries:** *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.* | | | |
| **2.1** | What are the objectives for the management of the fisheries for wild salmon? | | | |
| **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 level at which regulations are triggered)? | | | |
| **2.3** | (a) Are 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? | | | |
| **2.4** | (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? | | | |
| **2.5** | How are socio-economic factors taken into account in making decisions on management of salmon fisheries? | | | |
| **2.6** | What is the current level of unreported catch and what measures are being taken to reduce this? | | | |
| **2.7** | 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? | | | |

| **3.** | **Protection and Restoration of Salmon Habitat:**<br>*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.* | | | |
|---|---|---|---|---|
| **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? | | | |
| **3.2** | How are socio-economic factors taken into account in making decisions on salmon habitat management? | | | |
| **3.3** | What management measures are planned to protect wild Atlantic salmon and its habitats from (a) climate change and (b) invasive aquatic species? | | | |

| **4.** | **Management of Aquaculture, Introductions and Transfers and Transgenics**<br>*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):*<br>• *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;*<br>• *100% farmed fish to be retained in all production facilities.*<br>*In this section please provide information on all types of aquaculture, introductions and transfers, and transgenics (including freshwater hatcheries, smolt-rearing etc.* | | | |
|---|---|---|---|---|
| **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? | | | |
| **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? | | | |
| **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? | | | |
| **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? | | | |
| **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? | | | |
| **4.6** | What progress has been made to implement NASCO's guidance on introductions, transfers and stocking? | | | |
| **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? | | | |
| **4.8** | What is the policy / strategy on use of transgenic salmon? | | | |
| **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, research and measures to prevent the spread of *Gyrodactylus salaris* and eradicate it if introduced, including the development and testing of contingency plans? | | | |

**Assessment area 2. Are the threats and challenges to the management of wild Atlantic salmon identified under each theme related clearly to NASCO's Resolutions, Agreements and Guidelines?**

| **2.8 Threats identified to wild salmon and challenges for management associated with their exploitation in fisheries, including bycatch of salmon in fisheries targeting other species** | **Initial Assessment (yes / no)** | **Draft feedback on any improvements required** | **Comments relating to 1st round review: changed as requested by IP RG?** |
|---|---|---|---|
| Threat / challenge F1 | | | |
| Threat / challenge F2 | | | |
| Threat / challenge F3 | | | |
| Threat / challenge F4 | | | |

Copy and paste lines to add in other challenges in the relevant Implementation Plan

| **3.4 Threats identified to wild salmon and challenges for management in relation to estuarine and freshwater habitat.** | **Initial Assessment (yes / no)** | **Draft feedback on any improvements required** | **Comments relating to 1st round review: changed as requested by IP RG?** |
|---|---|---|---|
| Threat / challenge H1 | | | |
| Threat / challenge H2 | | | |
| Threat / challenge H3 | | | |
| Threat / challenge H4 | | | |

Copy and paste lines to add in other challenges in the relevant Implementation Plan

| **4.10 Threats identified to wild salmon and challenges for management in relation to aquaculture, introductions and transfers, and transgenics.** | **Initial Assessment (yes / no)** | **Draft feedback on any improvements required** | **Comments relating to 1st round review: changed as requested by IP RG?** |
|---|---|---|---|
| Threat / challenge A1 | | | |
| Threat / challenge A2 | | | |
| Threat / challenge A3 | | | |
| Threat / challenge A4 | | | |

Copy and paste lines to add in other challenges in the relevant Implementation Plan

## Assessment area 3. Does each action adhere to the 'SMART' descriptors laid out in the new Guidelines document, CNL(18)49?

As a reminder, the 'SMART' approach includes reporting on both quantitative and qualitative information. Quantitative information is expected wherever possible and should be presented to demonstrate progress made over the period of the plan towards NASCO's goals. This should be clear and concise. Where a deviation must be made from a quantitative metric, the reason for the deviation should be explained.

| **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?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **#** | **Action in IP Template** | **Is the action clearly related to stated threat / challenge?** | **Is it 'SMART'? (yes / no)** | **If 'no', which descriptor needs to be reflected more clearly in the action?** | **If the proposed monitoring is qualitative (as allowed in the Guidelines), is the reason and proposed non-quantitative alternative for monitoring progress acceptable?** | **If 'no', which aspect needs to be reflected more clearly in the action?** | **Comments relating to 1st round review: changed as requested by IP RG?** |
| **F1** | | | | | | | |
| **F2** | | | | | | | |
| **F3** | | | | | | | |
| **F4** | | | | | | | |

Copy and paste lines to add in other actions in the relevant Implementation Plan

| **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?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **#** | **Action in IP Template** | **Is the action clearly related to stated threat / challenge?** | **Is it 'SMART'? (yes / no)** | **If 'no', which descriptor needs to be reflected more clearly in the action?** | **If the proposed monitoring is qualitative (as allowed in the Guidelines), is the reason and proposed non-quantitative alternative for monitoring progress acceptable?** | **If 'no', which aspect needs to be reflected more clearly in the action?** | **Comments relating to 1st round review: changed as requested by IP RG?** |
| **H1** | | | | | | | |
| **H2** | | | | | | | |
| **H3** | | | | | | | |
| **H4** | | | | | | | |

Copy and paste lines to add in other actions in the relevant Implementation Plan

| **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?** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **#** | **Action in IP Template** | **Is the action clearly related to stated threat / challenge?** | **Is it 'SMART'? (yes / no)** | **If 'no', which descriptor needs to be reflected more clearly in the action?** | **If the proposed monitoring is qualitative (as allowed in the Guidelines), is the reason and proposed non-quantitative alternative for monitoring progress acceptable?** | **If 'no', which aspect needs to be reflected more clearly in the action?** | **Comments relating to 1st round review: changed as requested by IP RG?** |
| **A1** | | | | | | | |
| **A2** | | | | | | | |
| **A3** | | | | | | | |
| **A4** | | | | | | | |

Copy and paste lines to add in other actions in the relevant Implementation Plan

| **Mandatory action check** | **Is such a mandatory action required for this Party / jurisdiction? (yes / no)** | **Is such an action contained in the Implementation Plan (yes / no)** |
|---|---|---|
| For Parties / jurisdictions that prosecute mixed-stock fisheries, there should be at least one action related to their management. | | |
| Each Party / jurisdiction with salmon farming should include at least one action relating to sea lice management. | | |
| Each Party / jurisdiction with salmon farming should include at least one action relating to containment. | | |

## Annex 5

### *Revised IP schedule sent to all delegates 19 July 2019*

| Date / deadline | Responsibility | Action required |
|---|---|---|
| 6 June 2019 | Review Group | Presents report to the Council in Special Session |
| 1 November 2019 | Parties / jurisdictions | Deadline for submission of revised Implementation Plans to NASCO |
| 18 – 22 November 2019 | Review Group | Meets and develops its evaluation of the revised Implementation Plans |
| 30 November 2019 | Secretary | Uploads all Implementation Plans to NASCO website (whether accepted or not) AND Returns Implementation Plans requiring further modification to Parties / jurisdictions with clear guidance on the Review Group's recommendations for improvements* |
| 1 May 2020 | Parties / jurisdictions | If Implementation Plans still considered to be unacceptable by the Review Group after the November 2019 review, deadline for return of revised Implementation Plans to NASCO |
| May 2020 | Secretary | Distributes revised Implementation Plans to NASCO delegates |
| June 2020 | | All Implementation Plans, whether accepted or not, will be discussed at the Special Session of the Council |
| 1 November 2020 | Parties / jurisdictions | Deadline for revised Implementation Plans after open review in Special Session. Revised IPs can be uploaded to the website at this stage. |
| TBD November 2020 | Review Group | Meets and develops its evaluation of the revised Implementation Plans |
| 30 November 2020 | Secretary | Uploads accepted Implementation Plans to NASCO website |
| 1 November 2021 / 2022 / 2023 | Parties / jurisdictions | Deadline for modified Implementation Plan in the event of circumstances changing significantly |
| 30 November 2021 / 2022 / 2023 | Secretary | Either: Uploads accepted modified Implementation Plans to NASCO website<br>Or: Returns modified Implementation Plans to Parties / jurisdictions with clear guidance on the Review Group's recommendations for improvements |

| | | |
|---|---|---|
| 31 December 2021 / 2022 / 2023 | Parties / jurisdictions | Deadline for return of modified Implementation Plans to NASCO for inclusion in APR template |

*****Note. The Implementation Plans as at 30 November 2019 will be used as the basis for reporting in 2020, regardless of whether they are accepted by the IP / APR Review Group.

## Annex 6

# IP(19)37

## *Feedback to Parties / jurisdictions with examples of good practice within the Implementation Plans after the first two rounds of review.*

Under the Council's 'Guidelines for the Preparation and Evaluation of NASCO Implementation Plans and for Reporting on Progress', CNL(18)49, the Review Group has been asked to present its evaluation of the Implementation Plans to the Annual Meeting of the Council, and to highlight examples of good practice within the Plans. In this document, the Review Group has provided examples of good responses in the Implementation Plans submitted for evaluation, addressing all three areas reviewed, namely:

1. The answers by each Party / jurisdiction to the questions posed in the IP template CNL(19)50;
2. The threats and challenges to the management of wild Atlantic salmon identified under each theme; and
3. The SMART actions.

The text table below shows, at a glance which questions have been considered by the Review Group as examples of good practice for the various Parties / jurisdictions. The full feedback is presented below that in the following format, for each Party / jurisdiction: the comment from the Review Group; the question given in the IP template (or action); and the answer supplied.

| IP question | Topic | Party / jurisdiction |
|---|---|---|
| 1.1 | Objectives for the management of wild salmon | Russian Federation |
| 1.2 | Reference points used to assess the status of stocks | EU - UK (Scotland) |
| 1.3 | Parr monitoring | Denmark (in respect of the Faroe Islands and Greenland) - Greenland |
| 1.4 | Stock diversity in the management of salmon stocks | EU - Ireland |
| 1.5 | Current and potential quantity of salmon habitat. | EU - Denmark |
| 1.7 | Process used to consult NGOs and other stakeholders and industries in the development of this Implementation Plan. | Denmark (in respect of the Faroe Islands and Greenland) – Faroe Islands and Denmark (in respect of the Faroe Islands and Greenland) - Greenland |
| 2.1 | Objectives for the management of the fisheries for wild salmon | Canada |
| 2.5 | Socio-economic factors in making decisions on management of salmon fisheries | EU - UK (England and Wales) and EU - UK (Northern Ireland) |
| 2.6 | Levels of unreported catch and measures to reduce | EU - Ireland and Norway |
| 2.7 | Six Tenets process | Denmark (in respect of the Faroe Islands and Greenland) - Greenland |
| 3.2 | Socio-economic factors in making decisions on salmon habitat management | EU - Sweden |
| 3.3 | Management measures to protect wild Atlantic salmon and its habitats from (a) climate change and (b) invasive aquatic species. | Canada, EU - UK (Scotland) and United States |

| | | |
|---|---|---|
| 4.2 | Sea-lice management | Denmark (in respect of the Faroe Islands and Greenland) – Faroe Islands |
| 4.3 | International goals for achieving 100% containment and how progress is monitored | Norway |
| 4.5 | Determining the location of aquaculture facilities | EU - Portugal |
| 4.6 | Progress made to implement NASCO's guidance on introductions, transfers and stocking | United States |
| 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 | EU - UK (England and Wales) and Norway |
| 4.8 | Policy / strategy on use of transgenic salmon | EU - Germany |
| 4.9 | Measures to implement recommendations contained in the *G.salaris* Roadmap | EU - Sweden, EU - UK (England and Wales) and EU - UK (Northern Ireland) |

## Canada

***Question 2.1. The Review Group considered this to be one of the best examples of an answer to this question across the various plans.***

### Question 2.1 in IP Template

What are the objectives for the management of the fisheries for wild salmon? *(Max. 200 words)*

### Answer in IP

*The primary objective is that conservation remains the first principle that all decisions are based on, utilizing strategies that promote sustainability, the principles of the precautionary approach (PA) and shared stewardship. Four objectives are outlined in Canada's Wild Atlantic Salmon Conservation Policy as follows:*

1. Conservation: *The conservation of wild Atlantic salmon populations, their genetic diversity and their habitats must be given the highest priority in management decisions;*
2. Sustainable Use and Benefits: *Management decisions must respect the rights of Indigenous peoples, reflect best available science, and consider local and Indigenous traditional knowledge as well as the biological, social and economic consequences for Canadians;*
3. Precautionary Approach and Transparent Decision Making: *Management decisions must apply the precautionary approach and must be made in an open, inclusive, and transparent manner;*
4. Shared Stewardship: *Conservation initiatives will be optimized with the active engagement of provincial governments, First Nations, other Indigenous organizations, volunteers and other stakeholders in the development and implementation of management decisions.*

*For SARA-listed populations, management decisions should be consistent with the requirements of the Species at Risk Act (i.e. in compliance with the prohibitions of the act and consistent with the objectives for survival and recovery).*

***Question 3.3. The Review Group considered this to be one of the best examples of an answer to this question across the various plans.***

### Question 3.3 in IP Template

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)*

### Answer in IP

*(a) DFO continues to work collaboratively to address water and land use management issues*

*through ongoing partnerships with the Provinces and resource users to focus on non-fisheries related management measures in response to climate change threats to salmon habitat.*

*In addition to the fisheries management actions taking place with respect to warm water protocols to restrict angling (see 2.9 Action F4), measures are also taking place from a habitat perspective. For example, in the Miramichi River, cold water pools are being enhanced and maintained to provide refuge to adult Atlantic salmon. In Québec, the new Regulation respecting the sustainable development of forests in the domain of the State stipulates that a strip of woodland at least 60 m wide must be preserved on both sides of a salmon river. This riparian buffer zone contributes to countering water warming.*

*(b) DFO is working with federal, provincial and territorial partners to implement the Aquatic Invasive Species Regulations (AISR) that came into force in 2015. These Regulations provide authorities and tools to prevent the introduction and spread of AIS and to manage existing populations. For example, the AISR enable directions or measures to treat or destroy an aquatic invasive species, treat a conveyance or structure, establish temporary barriers, or post signs to prohibit access. The use of these measures will be assessed on a case by case basis, taking into account the particular circumstances related to the aquatic invasive species in question and potential habitat impacts.*

***The Review Group considered Action H3 to be a clear example of a SMART action, with well-defined objectives and an approach to monitoring.***

**Action H3:**

| | |
|---|---|
| Description of action: | **Aquatic Invasive Species (AIS)**<br><br>The threat of AIS are being managed as they arise, under various control regimes. DFO is working with federal, provincial and territorial partners to implement the Aquatic Invasive Species Regulations (AISR) that came into force in 2015.<br><br>In New Brunswick and Prince Edward Island, as the provincial governments are not signatories to the AISR, DFO and the provinces are collaborating closely to manage existing aquatic invasive species.<br><br>Since 2008, DFO has worked with partners to contain smallmouth bass to the Miramichi Lake through the use of a physical barrier and associated physical control methods. A project proposal of eradication by use of Rotenone has been submitted to DFO for review by various stakeholders in June 2019.<br><br>As the species was confirmed in the Miramichi River in August 2019, DFO is currently working with stakeholders to implement a short-term action plan aimed at assessing the extent of the spread, removing fish by angling, seining and electrofishing, as well as developing a long-term control strategy to mitigate this threat.<br><br>In Nova Scotia, through the province and DFO, targeted removals of smallmouth bass and chain pickerel through electrofishing boat capture and other methods on rivers during smolt emigration has been undertaken. In addition, DFO has provided support to the province in a smallmouth bass control/eradication program in Piper Lake in the headwaters of St. Mary's River. |
| Planned timescale (include milestones where appropriate): | Implementation of the AISR is on-going and DFO will continue to undertake rapid response efforts with regards to reports of AIS as they arise<br><br>In response to the current findings of Smallmouth Bass in the Miramichi |

| | |
|---|---|
| | River, removal of fish by physical means are ongoing since August until the end of October. The development of a long-term control strategy for smallmouth bass in the Miramichi Lake and in the river is expected to be developed in the coming months. Its implementation will be on-going. It is possible that the eradication of Miramichi Lake could occur in Fall 2020 once all required information concerning the safety of its application in that environment has been received and pending results of consultations.<br><br>In Nova Scotia, DFO is supporting the province on a smallmouth bass control and eradication plan for Piper Lake. Anticipated provincially led action fall 2019. |
| Expected outcome: | Implementation for the AISR will help to prevent introductions of new AIS and to control and manage existing populations. The long-term control strategy for smallmouth bass in the Miramichi Lake and in the river will help prevent further spread of this invasive species.<br>In Nova Scotia, electrofishing for targeted removal of smallmouth bass and chain pickerel will continue on an annual basis. Data from this activity will be used to inform successfulness of this control and determine future required action. |
| Approach for monitoring effectiveness & enforcement: | The population of smallmouth bass in the Miramichi Lake and in the river will continue to be monitored to assess the continued effectiveness of control efforts. |
| Funding secured for both action and monitoring programme? | Yes<br><br>Funding secured for existing control and monitoring activities of smallmouth bass in the Miramichi Lake. Funding for control and monitoring activities in Piper Lake, Nova Scotia has been funded by the province.<br><br>Funding sources for additional control activities, if required, will be determined as part of the development of the long-term control strategy. |

**Denmark (in respect of the Faroe Islands and Greenland) – Faroe Islands**

***Question 1.7. The Review Group considered this to be a comprehensive response to describe the process used to consult NGOs and other stakeholders and industries in the development of this Implementation Plan.***

**Question 1.7 in IP Template**

Please describe the process used to consult NGOs and other stakeholders and industries in the development of this Implementation Plan. *(Max 200 words)*

**Answer in IP**

*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.*

***Question 4.2. The Review Group considered that the answer provided demonstrates a very clear description of the Faroese sea-lice management.***

**Question 4.2 in IP Template**

(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)*

**Answer in IP**

*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, Cycloterus lumpus L., have also been introduced to farms as a measure to combat sea lice.*

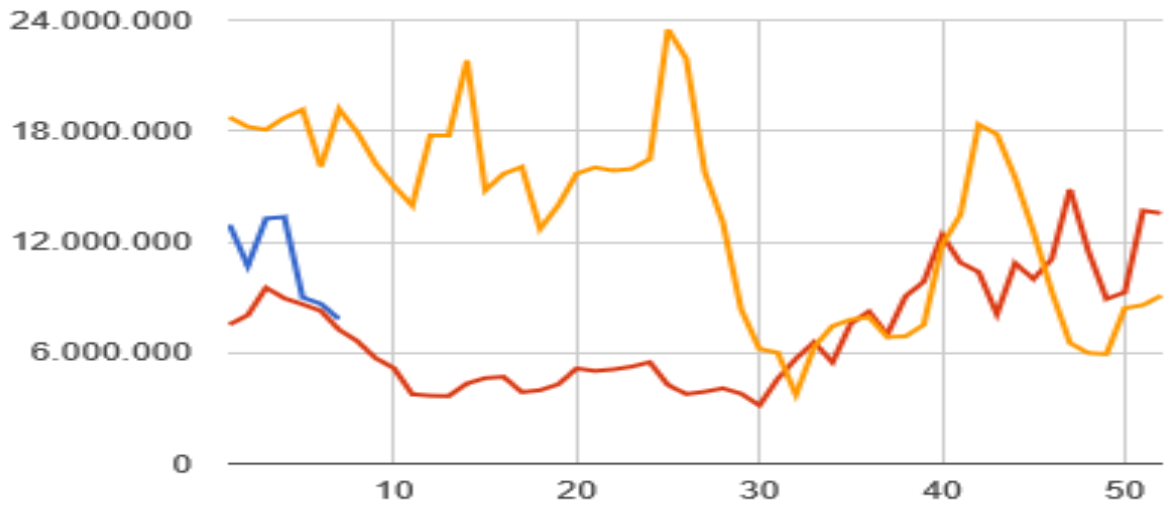
*To combat sea lice, fish farmers are increased smolt production capacity and the size of smolts put to sea, hence shortening the time at sea. From averaging 50-60 grammes in the 1990ies, when put to sea, and approximately 0,1 kg from 2003 to 2010, the average smolt size has now surpassed 0,2 kg, the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

| Year | Breaches* | No. of inspections |
|---|---|---|
| 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)*

**Denmark (in respect of the Faroe Islands and Greenland) – Greenland**

***Question 1.3. The additional information provided on the parr monitoring in the Kapisillit River was welcomed by the Review Group.***

**Question 1.3 in IP Template**

What is the current status of stocks under the new classification system outlined in CNL(16)11?

**Answer in IP**

*A CAS score of 1 and IAS score of 1 was selected for the Kapisillit river. The river is pristine and human impact is limited to fishery in the river and estuary near the Kapisillit settlement. However, the river and stock is clearly small compared to other salmon stocks in the NA. A parr-monitoring program in 2017 and 2018, indicate lower juvenile densities than estimated in a similar study conducted in 1958/59. The study also revealed continuous yearly recruitment with high densities of parr and smolt (0.28-1.03 parr*m$^{-2}$) compared to rivers in Iceland and Norway. Although no Conservation limits has been set for the river, the high parr density indicates a stock above its lower conservation limits in spite of the higher (uncertain) 1958/59 stock estimates and the reduced genetic variability during the past 50 years. Future monitoring will reveal whether the decrease is continuing or not.*

***Question 1.7. The Review Group considered this to be a good example of a consultation process in the development of its Implementation Plan;***

**Question 1.7 in IP Template**

Please describe the process used to consult NGOs and other stakeholders and industries in the development of this Implementation Plan. *(Max 200 words)*

**Answer in IP**

*The Government of Greenland has a procedure for consultation of stakeholders. This entails that the Government hold written public hearings/consultations of stakeholders. The material is sent to the relevant stakeholders and published on the Government consultation website. Replies from stakeholders is also published on the website.*

*The Implementation Plan has been developed through a collaboration between the Ministry of Fisheries, Hunting and Agriculture, the Greenland Fisheries License Control Authority (GFLK), the Ministry of Nature and Environment and the Greenland Institute of Natural Resources.*

***Question 2.7. The Review Group commended Greenland for their willingness to participate in the process of the development of the Six Tenets process and for adopting the recommended into their fisheries management approach.***

**Question 2.7 in IP Template**

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)*

**Answer in IP**

*(a) Yes, an assessment under the Six Tenets for Effective Management has been undertaken for the Greenlandic fishery for salmon. It was on the basis of the assessment of the Greenland fishery that the assessment under the Six Tenets for Effective Management has been developed. The assessment was conducted by a working group that meet in Greenland in October 2014. It has been provided to the NASCO Secretariat and a report was made by the working group: WGCMC(14)14.*

*(b) A Plan for Implementation of Monitoring and Control Measures in the Salmon Fishery at West Greenland (WGC(15)17) was presented by Greenland and adopted by the*

*West Greenland Commission. The Plan included a range of measures that have been and is being implemented by Greenland. Greenland reports annually to the West Greenland Commission on the progress for the implementation of the plan.*

**EU – Denmark**

***Question 1.5. The Review Group considered this to be a very comprehensive description of the current and potential future habitat.***

**Question 1.5 in IP Template**

To provide a baseline for future comparison, what is the current and potential quantity of salmon habitat? *(Max 200 words)*

**Answer in IP**

*The major problems in Danish salmon rivers were the numerous migratory obstacles, transport of sediments and channelization.*

*In the during the last 25 years many barriers has been removed and more will be removed in the coming years, in accordance with EU's WFD. This has and will open up new spawning and rearing areas.*

*During 2013-2016 useable habitats for spawning and rearing for salmon were monitored in the four rivers with original salmon populations.*

- *The total useable potential salmon habitats in river Skjern Å was estimated to 372.8 Ha).*
- *The potential area for salmon 0+ parr production was estimated to be 134.7 Ha in Ribe Å*
- *In Storå 195.1 Ha (of these 93.6 Ha upstream a partially passable weir and 101.4 below).*
- *In Ribe Å the population of naturally produced 0+ parr was estimated to be 120,000 (111,700 – 130,700), corresponding to a recruitment of approx. 1/3 of the maximal population within this area. Compared to the maximal population in the entire system 971,900 (909,500- 1,034,300) the recruitment was app. 12%.*
- *In Storå, the population of naturally produced 0+ parr was estimated to be 225,700 (104,400-389,700). With a potential population of 0+ parr of approx. 721,500 (599,400-855,400), this corresponds to a recruitment status of 64% below and 4.7% above the barrier mentioned above.*

*Status for the R Skjernå juvenile salmon population is not yet available.*

**EU – Germany**

***Question 4.8. The Review Group considered that this response provides a good overview of the EU legislative framework in relation to transgenics.***

**Question 4.8 in IP Template**

What is the policy / strategy on use of transgenic salmon? *(Max. 200 words)*
*(Reference: Article 7 and Annex 5 of the Williamsburg Resolution)*

**Answer in IP**

*Deliberate release of genetically modified organisms (GMOs) is regulated in Germany in the Gene Technology Act (1993) and in the European Union by European Directive 2001/18/EC and Regulation (EC) 1829/2003 on genetically modified food and feed. Regulation (EC) No 1946/2003 on transboundary movements of genetically modified organisms governs unintentional transboundary movements of GMOs as well as exports of GMOs to third countries. Apart from the fact that there are no commercially salmon farms operating in Germany the approval of the production of food from*

*genetically modified animals is currently out of the question in Germany because of consumer resistance against GMOs. Additionally it is forbidden to import or sell transgenic fish for consumption in the EU.*

The Review Group considered ***Action H4*** to be a clear example of a SMART action, with well-defined SMART descriptors.

**Action H4**

| | |
|---|---|
| Description of action: | The German Ministry for Food and agriculture is funding a project, which is dealing with food web manipulation as a tool for the restoration of the hyporheic zone in eutrophicated rivers. Inter alia, this project is addressing the regulation of avi predation, as a central issue. The spatial transferability and thus the potential nationwide applicability of the project results is to be achieved by an experiment in 5 sections of two rivers (one of them is a salmon project river), in which an increased fish stock is created by a combination of stocking and cormorant deterrence. Cormorant predation will be quantified and the direct top-down effects is going to predicted using a model. A user's guide will be drawn up which presents the measure, describes its possible implementation and presents the effects and limits of the measure. This will be accompanied by intensive public relations work (press, scientific publications, training events, public lectures), which will mainly focus on the applicability and potential impacts of food web manipulation as an innovative measure to protect biodiversity. |
| Planned timescale (include milestones where appropriate): | Total project duration:<br>Jun 2019 – Dec 2022<br>1. Project Start: Jun 2019<br>2. Fish tagging: 2020-2021<br>3. Telemetric tracking of tagged fishes: May 2020 - May 2022<br>4. Estimation of cormorant predation: Jun 2019 – Dec 2022<br>5. Deterrence of cormorants: 2019-2022 |
| Expected outcome: | For the first time, this project generates scientifically reliable data relating to a sustainable cormorant management in Germany. Therefore, the project is among others also relevant for the reintroduction of Atlantic salmon. |
| Approach for monitoring effectiveness & enforcement: | Monitoring of the effectiveness and enforcement of the measure is laid down in the project contract and is implemented by the contractor within the framework of the project. |
| Funding secured for both action and monitoring programme? | Yes |

**EU – Ireland**

***Question 1.4. The Review Group considered this response to be a clear and succinct explanation.***

**Question 1.4 in IP Template**

How is stock diversity (e.g. genetics, age composition, run-timing, etc.) taken into account in the management of salmon stocks? *(Max 200 words)*

**Answer in IP**

*All Irish salmon stocks are managed on a catchment by catchment basis and assessed for 1SW and 2SW components. Specific advice is provided for 16 2SW stocks which contribute significantly to important known spring fisheries which need to be managed separately. This helps to preserve the genetics of the early run fish.*

*Annual and daily bag limits restrict the overall numbers of fish which can be taken in a given period to avoid overfishing on specific run components of the stock. Prior to the 12th of May annually a maximum of one spring salmon per day and a maximum of three spring salmon in total up to 12th May can be retained by anglers as a further conservation measure. Only one salmon per day can be retained per day by anglers in September as a conservation measure. Additional seasonal restrictions (open date in spring generally varies by catchment) only allow exploitation during the "open" season, the closure date for recreational salmon fisheries is 30th September. Commercial salmon fisheries are not permitted to operate before May 12th as a conservation measure on the spring fish stock component.*

*Extensive genetic analysis and genotyping of salmon stocks in Ireland has been completed and has led to unique genetic identification of all Irish salmon stocks, except for three rivers (R. Nore, Suir & Barrow), which are closely related in genetic terms. This genetic analysis has led to differentiation of stocks in any remaining mixed-stock fisheries. Where genetics of stocks in smaller rivers adjacent to larger rivers are similar using current Genetic Stock Identification techniques, stocks are considered as single stock for management purposes.*

***Question 2.6. The Review Group considered this response to be a very clear and full response. There is good compliance demonstrated with appropriate sanctions where necessary.***

**Question 2.6 in IP Template**

What is the current level of unreported catch and what measures are being taken to reduce this? *(Max. 200 words)*
*(Reference: Section 2.2 of the Fisheries Guidelines and the Minimum Standard)*

**Answer in IP**

*Under the current legislation supporting the Carcass Tagging and Logbook Scheme, all fishermen must record details of landings (commercial, angling including catch and release). For the purposes of reporting illegal unreported catch to NASCO, a national figure of 10% is used based on observations from fishery inspectors. There is no systematic appraisal of unreported catch.*

*Following the closure of the Irish mixed-stock fishery at sea in 2006, there is more focus on improving data from inshore fisheries and recreational fisheries. Logbook returns for commercial fishermen are 100% while returns are available for approximately 70% of anglers. A correction factor is used to raise the reported rod angling catch to account for unreturned angling logbooks. This correction factor raises reported rod catches by approx.. 20%. All anglers who do not return logbooks are written to as a means of improving logbook returns and a proportion are taken to court annually and fined for non-return of logbooks.*

*Since the closure of the mixed-stock fishery the few remaining commercial fisheries are based in fisheries above their CL. These are in the main inshore close to or in the estuarine portion of identified rivers. IFI maintains a very close watch on these fisheries and allocates individual carcass tags on a restricted basis based on the utilisation of the previous issued allocation. All salmon harvested by whatever means must have a carcass tag attached.*

***The Review Group considered Action H2 to be a very clear description of an action as requested in the NASCO guidelines, CNL(18)49, listing clear milestones and targets.***

**Action H2**

| | |
|---|---|
| Description of action: | **Hydromorphological threats.**<br><br>**Action 1. Barriers**<br><br>The IFI Barriers programme (2019 to 2021) will identify, assess and document barriers to fish migration on a national basis. Barriers will be ranked according to the risk they pose to fish migration. The inventory will form the basis of a prioritised restoration programme to be implemented between 2022 and 2027.<br><br>**Action 2. Rehabilitation of Drained Rivers**<br><br>Under the 1945 Arterial Drainage Act, the Office of Public Works is obliged to carry out maintenance work on the network of arterially-drained channels. Annually, the OPW undertakes maintenance on approximately 2,000 km of channels in its network, following the environmental drainage maintenance procedures to minimise environmental impact. The guidance provides potential for significant retention of riparian habitat and also for alteration of instream hydromorphology in appropriate locations. Progress on this action will be reported. |
| Planned timescale (include milestones where appropriate): | Action 1: 2019 to 2021. Supported by detailed project plan and milestones.<br>Action 2: Annual plan and targets generated. |
| Expected outcome: | Improvement in salmon habitat quality and fish passage. |
| Approach for monitoring effectiveness & enforcement: | ***Action 1:*** The IFI Barriers programme will report annually on numbers of Barriers to fish passage identified and assessed.<br>***Action 2***: The OPW will report annually on the KMs of drained channels maintained using the environmental drainage maintenance procedures. |
| Funding secured for both action and monitoring programme? | Yes |

**EU – Portugal**

***Question 4.5. The Review Group considered this to be one of the best examples of an answer to this question across the various plans showing an excellent approach to determine the location of aquaculture facilities in the freshwater and marine environments.***

**Question 4.5 in IP Template**

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)*

**Answer in IP**

*(a) In Portugal, the existing legal framework for aquaculture activities requires the issuing of a permission for all aquaculture establishments. In the case of salmon farms, since this is a protected species, a specific authorization needs to be granted by the Administration. In inland waters, this authorization is granted by the Public Institute for Nature Conservation and Forestry (ICNF, I.P.). Proposers must require ICNF, I.P authorization for setting up and*

*exploring fish farming facilities, or any other related projects, including any modifications to the existing facilities. During the process ICNF, I.P. is required to consult the Environmental Agency (APA, I.P.), Food and Veterinary Central Directorate (DGAV) as well as other public departments that may be involved in the analysis of specific requests in order to provide the corresponding risk assessment (to the water quality, fish health and welfare, spatial planning, construction, etc.). Fish farms in inland waters are installed in private areas, as installation in public lands is not authorized.*

*In order to authorize the installation, all consulted entities must approve the request. Moreover, it is mandatory to assure proper water treatment and the accomplishment of predefined technical parameters related with the dumping/release of waters into the hydrographic network. Fish health and welfare must always be guaranteed.*

*The operator is required to meet the following requirements/minimum standards:*

1. *restrictions on the species farmed, number of specimens and type of holding facilities;*
2. *elaboration of an annual production report;*
3. *follow good hygiene practices and implement biosecurity procedures to avoid the spreading of diseases, and;*
4. *accomplish certain quality parameters (providing the adequate treatment) to water releases to the environment*

*ICNF, I.P. can suspend or revoke an authorisation if the operator is considered to be failing in meeting these requirements.*

*Fish culture sites are also likely to require water extraction licences and discharge permits from the Environment Agency. These set limits and standards for the amount of water taken and for parameters of the water released.*

*(b) The same legal framework and procedure. In marine environments the submission is made in the Directorate-General for Natural Resources, Safety and Marine Services – Aquaculture Division.*

**EU – Sweden**

***Question 3.2. The Review Group considered this to be a thorough response to the question addressed, describing well the process taken to incorporate socio-economic factors into account.***

**Question 3.2 in IP Template**

How are socio-economic factors taken into account in making decisions on salmon habitat management? *(Max. 200 words)*
*(Reference: Section 3.9 of the Habitat Guidelines)*

**Answer in IP**

*Fishing rights in fresh waters are privately owned, but generally open to the public through fishing licenses. Relevant stakeholders are invited to be involved in the management process. Socioeconomic factors are considered in the management by considering the opinions and management suggestions made by relevant stakeholders on this issue, as well as considering official national and NASCO socio-economic guidelines and policies, when making decisions on habitat management. Along with the Swedish Federation of Fishing Rights Owners and the Swedish Anglers association, also several municipalities participate in the work with salmon and healthy rivers. Through "Catchments Partnerships" (according to the Water framework directive; in Swedish "Vattenråd") societal cooperation has also increased along river valleys.*

*As stated in section 2.1 public participation in management and conservation is encouraged through*

*information and transparent decision making. To increase information transfer the Swedish Agency for Marine and Water Management is developing a public web-site focussing on salmon (Baltic, Atlantic and land-locked salmon of Lake Vänern).*

***Question 4.9. The Review Group considered this to be a good comprehensive response to show what is being done in relation to the 'Road Map'.***

**Question 4.9 in IP Template**

*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, 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)*

**Answer in IP**

1. *Preventive measures and contingency planning: Stocking of fish to uninfected river systems are forbidden. A contingency plan for Gyrodactylus is planned (see below).*
2. *Cooperation on management: Sweden is participating in the NASCO Gyrodactylus salaris-group. Extended cooperation with Norway is on-going, e.g. with regard to information on known populations of Gyrodactylus, risk analysis, determination of species and clads/haplotypes.*
3. *Monitoring methods for use in watercourses, lakes and in aquaculture: In the present program, salmon fry and parr are collected with electrofishing and then screened for Gyrodactylus. Cooperation with Norway to determine species and haplotype. eDNA may be introduced in the monitoring from 2020.*
4. *Distribution of G. salaris in the NEAC area and adjacent areas: Ongoing monitoring of G. salaris distribution since 2001 in its present form. First investigations 1989-1992.*
5. *Classification of Gyrodactylus species: Species and haplotype analysed yearly.*
6. *Publicity, education, and awareness: Public instructions on how to prevent further spread of Gyrodactylus are available on the web.*
7. *Criteria for diagnosis and establishing G. salaris free zones. G salaris is sampled and analysed according to OIE Manual of Diagnostic Tests for Aquatic Animals (ethanol-preserved fish, DNA analysis).*
8. *Trade in live susceptible fish species: Stocking of fish to uninfected river systems is forbidden.*
9. *Shared catchments: No shared catchments exist now, but extended cooperation with Norway is on-going, e.g. with regard to information on known populations of Gyrodactylus, risk analysis, determination of species and clads/haplotypes.*

**EU – UK (England and Wales)**

***Question 2.5. The Review Group considered this response to be a very clear example of an answer to this question across the various plans.***

**Question 2.5 in IP Template**

How are socio-economic factors taken into account in making decisions on management of

salmon fisheries? *(Max. 200 words)*
*(Reference: Section 2.9 of the Fisheries Guidelines)*

**Answer in IP**

Although the primary objective is to ensure the conservation or restoration of salmon stock(s), socio-economic factors are taken into account when considering new management measures, to influence the nature and balance of controls affecting stakeholder groups and the planned rate of stock recovery (See Decision Structure - Annex 3).

Consideration is also given, inter alia, to:

- whether a proposed measure will have an unreasonable effect on someone's livelihood (e.g. net fishing) or the value of their property (e.g. fishing rights); this may mean it is necessary to reduce the impact of a conservation measure, for example by planning stock recovery over a longer period;
- whether one stakeholder group will be unreasonably affected relative to another; where reductions in exploitation are required, the effects on netsmen and anglers should be equitable;
- the effect of controls on the viability of fisheries; for example, C&R controls will generally have a greater economic effect on commercial than recreational fisheries;

the heritage value of the fishery; where fishing methods are unique to a very small number of locations, consideration is given to retaining a residual fishery and/or permitting a low level of catch. [See also: Method for Assessing Heritage Value of Fisheries at: *https://www.gov.uk/government/publications/method-for-assessing-the-heritage-value-of-net-fisheries]*

***Question 4.7. The Review Group considered that the answer given in response to this question is very clear and commends EU – UK (England and Wales) on its clarity.***

**Question 4.7 in IP Template**

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? *(Max. 200 words each)*
*(Reference: Guidelines for incorporating social and economic factors in decisions under the Precautionary Approach and Annex 4 of the Williamsburg Resolution)*

**Answer in IP**

*(a) Yes. All proposals to stock fish by the Environment Agency or by other parties in England are considered against generic criteria that are used to assess the potential impact on fish stocks and fisheries (e.g. predation, competition, disease) and the general ecology of the receiving and connected waters. In addition, species-specific criteria may also apply, and in the case of salmon the potential genetic impacts on wild stocks must be considered. Since salmon broodstock are usually obtained from the wild to support a stocking programme, the impacts on the donor stock must also be considered. No stocking is permitted in Wales.*

*(b) Yes. Stocking activities in England are limited to selected mitigation and restoration activities only. There is no stocking in Wales.*

***Question 4.9. The Review Group considered the response to this question to be a very succinct way of referring to all of 11 recommendations in the 'Road Map'.***

**Question 4.9 in IP Template**

*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, 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)*

**Answer in IP**

*Gyrodactylus salaris has not been detected in the UK. Great Britain continues to maintain an OIE listed diseases free zone, including G. salaris, likely to impact on salmonid aquaculture and wild salmon populations, and the FHI ensure that relevant animals enter UK only from sources officially free of these diseases (Road Map 1, 10).*

- *A surveillance programme for G. salaris is in place to test fish on various salmon rivers. Since 2007, 57 sites on 43 catchments have been sampled. Several other gyrodactylid species native to the UK have been identified (Road Map 3 & 4).*
- *A new non-destructive method has been developed that enables gyrodactylids to be collected whilst leaving fish unharmed and through using molecular speciation of gyrodactylids using DNA analysis techniques it is hoped that a new assay can be used to detect the presence of single G. salaris parasites in a pooled sample helping to screen the large numbers of parasites (Road Map 5 & 9).*
- *Cefas sit on the G.salaris Working Group and participate in collaborative exercises (Road Map 2) with Government contingency plans in place to control any outbreaks of exotic diseases including G. salaris, see:*

*http://www.oie.int/fileadmin/Home/eng/Animal_Health_in_the_World/docs/pdf/gs-contingency-plan.pdf and publicity material (Road Map 2, 7, 8 & 11)*

**EU – UK (Northern Ireland)**

***Question 2.5. The Review Group considered this to be a very clear response to describing how socio-economic factors are taken into account in making decisions on management of salmon fisheries.***

**Question 2.5 in IP Template**

How are socio-economic factors taken into account in making decisions on management of salmon fisheries? *(Max. 200 words)*
*(Reference: Section 2.9 of the Fisheries Guidelines)*

**Answer in IP**

*In evaluating management options, the conservation of the salmon resource takes precedence over any socio economic factors. The decision to allow harvesting of salmon by commercial netsmen is decided on scientific data collected on all stocks affected and not based on any economic argument. Financial compensation measures are in place for commercial fishermen that have been affected by fishery closure. Rod fisheries operate on a catch and release basis only unless there an identifiable surplus of fish to harvest. No economic consideration is factored into this decision it is based on scientific data only. Any changes to the existing policy on the management of salmon fisheries requires a public consultation exercise with stakeholders. All responses received would be reviewed by the Department and considered before finalising the new policy.*

***Question 4.9. The Review Group considered this to be a very clear answer, responding very clearly to each of the eleven recommendations in the 'Road Map'.***

**Question 4.9 in IP Template**

*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, 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)*

**Answer in IP**

*Recommendation 1 – in place. GS monitoring is carried out as part of DAERA Fish Health's disease testing regime. A rolling regime of testing takes place across both operational fin fish farms and wild catchment areas (by electrofishing) This equates to between 10 – 12 sites each for both farmed and wild stock areas being monitored each year. The testing work is carried out by AFBI on our behalf as a part of their Annual Work Program. NI continues to be free from GS since the records began in 2007 for GS monitoring with all results negative.*

*Recommendation 2 – Will fully comply with the steps outlined.*

*Recommendation 3 & 4 – Content to support where necessary steps outlined.*

*Recommendation 5 & 6 – No research is currently planned in NI but DAERA participates in the working party.*

*Recommendation 7 – Publicity material exists to prevent the spread of invasives and is available on Government websites. Any new material on GS can be added and angling clubs / fishery owners made aware.*

*Recommendation 8 – The intention is after Brexit to maintain current EU legislation*

*Recommendation 9 – Content to comply with the OIE standards*

*Recommendation 10 – Recommendations in place already*

*Recommendation 11 – Cross border GS Contingency plan has been drafted and this will be reviewed between the relevant authorities in NI and the ROI.*

**EU – UK (Scotland)**

***Question 1.2. The Review Group considered this to be a welcome addition to Scotland's salmon management and a good description of the methods used to develop reference points in Scotland.***

**Question 1.2 in IP Template**

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)*
*(Reference: Sections 2.4 and 2.5 of the Fisheries Guidelines)*

**Answer in IP**

*The stock of Atlantic salmon in each Scottish river or assessment group is assessed by setting an egg deposition requirement and estimating whether or not this requirement is met. The egg deposition requirement is set to maintain the sustainability of a stock, rather than maximise juvenile output or other alternate, local management measures. Assessments are undertaken for each river, except in those areas where fishery catch cannot be assigned, when rivers are combined to form assessment groups.*

*The numbers of eggs required to produce sustainable Atlantic salmon stocks are estimated from population in 11 rivers[1] from which information on stock-recruitment relationships and associated geographic co-variates is available. Mathematical models of these data have been developed to produce egg deposition requirement estimates for areas without stock-recruitment data, using information on their location and productivity. These models have been presented to the ICES Working Group on North Atlantic Salmon. Egg targets are expressed as the number of eggs required on average for every square metre of wetted area of salmon habitat. The wetted area available to Atlantic salmon for each assessable area is calculated using the most up-to-date information on the distribution of salmon from historical records and recent consultations. The wetted area and egg target are multiplied together to produce an overall egg deposition requirement for each river.*

***Question 3.3(a). The Review Group considered this to be one of the best examples of an answer to this question across the various plans.***

### Question 3.3 in IP Template

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)*

**Answer in IP**

(a) *Marine Scotland (MS) has established the Scotland River Temperature Monitoring Network (SRTMN) to monitor and assess the effects of changing climate on Scotland's rivers and to prioritise management action. One of the main management options available to managers involves planting trees on river banks to provide shading, which reduces damaging high temperatures. Modelling work undertaken by MS using SRTMN data has identified which Scottish rivers experience the highest temperatures and which are likely to change most under climate change. These model outputs have been turned into interactive online maps (displayed via the MS National Marine Plan interactive (NMPi) website) which can be used by local fisheries managers to decide on the optimal locations for riparian trees. The temperature mapping is also available as a background layer in the "pressures tool" of Fisheries Management Plans (see above) thereby allowing local fisheries managers to prioritise areas for funding applications and on-the-ground management[2].*

### Norway

***Question 2.6. The Review Group considered this to be a very good example. The breakdown of unreported catch provides important information.***

### Question 2.6 in IP Template

What is the current level of unreported catch and what measures are being taken to reduce this? *(Max. 200 words)*
*(Reference: Section 2.2 of the Fisheries Guidelines and the Minimum Standard)*

[1] Please see section 2.7 (b).
[2] For further information see: https://www2.gov.scot/Topics/marine/Salmon-Trout-Coarse/Freshwater/Monitoring/temperature

**Answer in IP**

Unreported catches are estimated to 30% total catch.

Key for estimates of distribution of unreported catches:

**Total catch, reported and unreported catches**

| | Catch % | Example catch Tonnes |
|---|---|---|
| Total catch | 100 | 876 |
| Reported catch | 70 | 613 |
| Unreported catch *) | 30 | 263 |

| **Distribution unreported catch** | % | Tonnes |
|---|---|---|
| Illegal takes in sea | 25 | 66 |
| By-catch by commercial sea fishing | 5 | 13 |
| Legal takes in sea by bag-net and bend net | 25 | 66 |
| Legal takes in sea by angling | 20 | 53 |
| Illegal takes in rivers | 5 | 13 |
| Legal takes in rivers, mainly by angling | 20 | 53 |

| | | |
|---|---|---|
| Total unreported | 100 | 262,71 |

*) Uncertainty = 25%

***Question 4.3(b). The Review Group considered the information provided to be a good example of monitoring of genetic introgression and numbers of escaped salmon***

**Question 4.3 in IP Template**

**(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)*

**Answer in IP**

*b) National program for monitoring escaped salmon in rivers: On a yearly basis, approximately 200 rivers are monitored through a number of methods to calculate the prevalence of escaped salmon in the spawning populations. The results from the 2018 program shows that in 19 of 205 rivers monitored, the prevalence was high (more than 10 %, which is considered unacceptable). In 33 rivers the prevalence was moderate (4-10 %), and in 153 rivers the prevalence was low (less than 4 %, which is considered acceptable).*

*Based on this, active removal of salmon takes place in several programmes, including both the Directorate of Fisheries and the aquaculture industry (OURO), through regulations*

*under the Aquaculture act.*

*There is also a program monitoring genetic integrity in salmon rivers. 175 rivers (Fig. 1) has been included so far, and the number of rivers included is expected to increase in the years to come.*

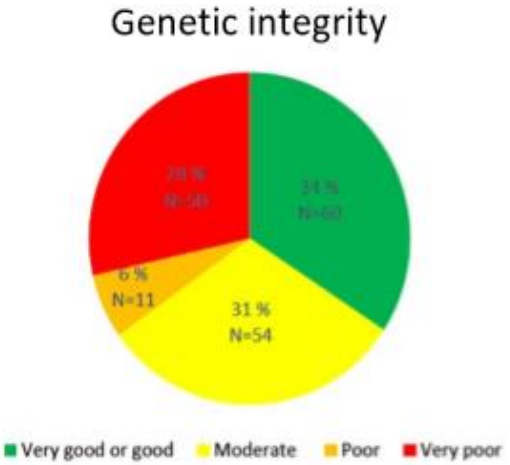



*Figure 1 Genetic status of 175 Norwegian salmon populations classified as very good or good (no genetic alterations), moderate (1-4 % introgression), poor (4-10 % introgression) or very poor (≥10% introgression).*

***Question 4.4. The Review Group recognised Norway's considerable research efforts in this area. The initiatives to reduces sea lice and escapes are well established and welcomed.***

**Question 4.4 in IP Template**

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)*
*(Reference: BMP Guidance and Article 11 of the Williamsburg Resolution)*

**Answer in IP**

*Regarding sterile fish, special licences has been issued to gain experience with farming sterile Atlantic salmon in commercial size fish farms, in addition to several research projects. There are still challenges regarding fish health and -welfare in the production of sterile fish that needs to be solved before this can be a commonly available technique.*

*Through the Norwegian Research Council, several programmes are working on issues like sea lice, identification of escaped farmed salmon, production of sterile fish and determining the ecological effects on wild populations of salmonids.*

*Through issuing special licenses for developing new technologies for salmon farming, the government have given the industry strong incentives for focusing on strategies aiming at reducing both salmon escapes and negative effects from salmon lice.*

*The Norwegian Seafood Research Fund (FHF) is the Norwegian seafood industry's tool in managing the industry's investments into industry-based R&D. It's financed by the fishery and aquaculture industry.*

*The Sea Lice Research Centre (SRLC) do research-based innovation appointed by the Research Council Norway. The Centre is hosted by the University of Bergen and started the activity in September 2011. Results from the SLRC will enable an integrated control system to be established, based on key features in sea lice biology, to improve sustainability of the salmon farming industry.*

***Question 4.7. The Review Group considered the response to this question to be a very good example of an objective-based approach.***

**Question 4.7 in IP Template**

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? *(Max. 200 words each)*

**Answer in IP**

*(a) Yes. All stocking must be based on an approved plan specific to the population and must contain documentation on the river system, the stock and bottlenecks to natural production. The plan must describe why stock enhancement is necessary and provide a description of the objective for the activity. The plan must detail the aims of the activity and a plan for when the stocking will end. In 2014 the Norwegian Environment Agency developed new guidelines for stock enhancement for anadromous salmonids. The Guidelines have implemented new scientific knowledge on the risks and benefits of stock enhancement, taking account of national and international recommendations, including NASCO's Guidelines for Stocking Atlantic Salmon contained in the 'Williamsburg Resolution', CNL(06)48.*

*Only local broodfish, preferably of non-stocking origin are allowed. Enforced broodfish control are introduced to ensure that the genetic variability in the population is maintained. All stocked fish must be identifiable. A guidebook on how to avoid/minimise the negative effects from stocking in terms of the loss of genetic variation and genetic integrity of fish populations are available.*

*(b) The stocking guidelines are founded on conservation biology principles. This implies that the focus is changed from stock enhancement for socio-political/economic reasons towards conservation reasons. To preserve the original population and its genetic variability, measures to remove limits on natural production (like habitat restoration) shall be prioritised. Stock enhancement shall not be a substitution for insufficient regulation of fisheries.*

***The Review Group considered Action F3 to be a clearly stated action with clear milestones for reporting on progress.***

**Action F3**

| | |
|---|---|
| Description of action: | Major revision of regulatory measures in rivers and in mixed-stock fisheries in the sea for the period 2021-2026. |
| Planned timescale (include milestones where appropriate): | 2019-2021<br>Revised guidelines: ultimo January<br>2020 National hearing: mid June 2020<br>Revised legislation approved January 2021 |
| Expected outcome: | Adjusted fisheries regulations<br>-Reduced overexploitation due to updated regulatory measures. |
| Approach for monitoring effectiveness & enforcement: | Revised regulations<br>-Annual assessment of numbers of rivers attaining their management target.<br>-Monitoring spawning target attainment. |
| Funding secured for both action and monitoring programme? | **Yes** |

**Russian Federation**

***Question 1.1. The Review Group considers that the Russian Federation's response to this question is a very good description of the overall objectives for the management of wild Atlantic salmon.***

**Question 1.1 in IP Template**

What are the objectives for the management of wild salmon? *(Max 200 words)*

**Answer in IP**

*The Atlantic salmon occurs in the rivers of five regions of the Russian Federation – the Murmansk region, the Arkhangelsk region, Republic of Komi, Republic of Karelia and Nenets Autonomous Okrug (hereinafter NAO).*

*In the light of the overall goals of Resolutions and Agreements adopted by NASCO under the Precautionary Approach aiming to promote the diversity and abundance of salmon stocks and to maintain all stocks above their conservation limits; to maintain and, where possible, to increase the current productive capacity of Atlantic salmon habitat; to minimise the possible adverse impacts of aquaculture, introductions and transfers and transgenics on the wild stocks of Atlantic salmon, the objectives of the management of wild Atlantic salmon in the Russian Federation are as follows:*

- *to preserve biodiversity and enhance the number of Atlantic salmon;*
- *to minimize the risk from management actions taken;*
- *to rationally utilize natural biological resource to ensure continuity of its reproduction;*
- *to preserve Atlantic salmon habitat;*
- *to resolve socio-economic issues by improving economic returns to local communities through salmon fishing.*

*The objectives for the management of wild salmon are defined by the Federal Law No. 7-FZ, 2002 "On the Protection of Environment"; the Federal Law No. 52-FZ, 1995 "On Animal World", the Federal Law No. 166-FZ, 2004 "On Fisheries and Conservation of Aquatic Biological Resources" (hereinafter "the Fisheries Law"), which prioritise the conservation of aquatic biological resources and their environment to their utilization as an object of the right of property or other rights.*

**United States**

***The Review Group considered that the responses to questions 3.3 and 4.6 are some of the best examples of answers to these questions across the various Implementation Plans.***

**Question 3.3 in IP Template**

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)*
*(Reference: Section 3.2 of the Habitat Guidelines)*

**Answer in IP**

*(a) The National Marine Fisheries Service recently conducted a scenario planning exercise to explore what we can do to improve resilience of Atlantic salmon in the face of climate change across its current range in the United States, including riverine and marine environments. The report is in draft phase and is expected to be made available to the public in late 2019. The*

*report will assist decision makers in prioritizing the allocation of limited resources toward those recovery actions with the greatest potential benefits for salmon. It will also identify other areas of emphasis for other partners (state agencies, NGOs, etc.) to assist in the recovery process. Progress has already been made in identifying and moving forward with several projects that were recommended as a result of the scenario planning exercise.*

*The following action is included in the Recovery Plan for the Gulf of Maine Distinct Population Segment of Atlantic Salmon: "Establish and implement a water temperature monitoring*

*protocol in all salmon habitat recovery units to support efforts to identify climate vulnerable and climate resilient habitats." Initial efforts have been spearheaded by numerous state, federal and NGO partners and are part of a broader effort in the Northeast United States referred to as the SHEDS Stream Temperature Database (http://db.ecosheds.org/).*

(b) *The following actions are included in the Recovery Plan for the Gulf of Maine Distinct Population Segment of Atlantic Salmon: (1) Assess the impact of non-native species on juvenile salmon, including emigrating smolts and sites where predation occurs most frequently; (2) Implement fish management activities and regulations that minimize the spread of invasive species without compromising the recovery of Atlantic salmon and the co-evolved suite of diadromous fish; (3) Conduct outreach on the impacts of invasive species; (4) Implement fish* management activities and regulations that help minimize the effects of predation and *competition by introduced species; (5) Implement activities that encourage healthy populations of native fish communities and discourage introduced species.*

### Question 4.6 in IP Template

What progress has been made to implement NASCO's guidance on introductions, transfers and stocking? *(Max. 200 words) (Reference: Articles 5 and 6 and Annex 4 of the Williamsburg Resolution)*

### Answer in IP

*Article 5 (Aquaculture) -- In 2003, the National Marine Fisheries Service (NMFS) analysed the effects from continued operations of commercial Atlantic salmon aquaculture facilities in Maine. To minimize these effects, NMFS recommended specific protective measures be incorporated into state and federal permits including: 1) use only local North American salmon stocks for production in marine pens; 2) implementation of containment measures to reduce escapes; 3) audits and reporting requirements; 4) prohibitions on stocking transgenic salmon, and; 5) marking all farmed salmon placed in marine pens within the United States.*

*Article 6 (State stocking programs) – A series of recent agreements among state authorities curtails stocking of non-native salmonids in areas that are actively managed for Atlantic salmon. The one exception is the Sandy River, a major tributary of the Kennebec River, where brown trout are still stocked (as of 2018) in areas inhabited by Atlantic salmon.*

*Annex 4 (Stocking Atlantic salmon) –As referenced in other parts of this implementation plan, the United States has developed a rigorous broodstock management plan for federal hatcheries involved with salmon recovery efforts for the endangered populations in Maine. This broodstock management plan is closely aligned with stocking plans developed by the State of Maine.*

*Programs to restore runs of wild salmon were conducted on rivers south of the freshwater range of the endangered populations for many years but have now nearly ceased. These were government-run programs that were supported by large-scale hatchery stocking programs. These stocking programs had genetic management and broodstock management plans similar to the ones in place in Maine and consistent with NASCO guidelines. The remaining "Legacy Program" in the State of Connecticut is also consistent with NASCO's guidance on transfers and stocking.*

**Annex 7**

## *Infographic to Show the Status of the Various Sections of the Implementation Plans After Two Rounds of Review*

| Key | |
|---|---|
| | Fully acceptable after 1st round of review |
| | Fully acceptable after 2nd round of review |
| | Progress between reviews; response / actions not yet fully acceptable |
| | No progress between reviews; response / actions not yet acceptable |
| | No acceptable actions |

| | Questions on Salmon Management | | | | Threats / challenges to Wild Salmon | | | SMART Actions | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Management | Fisheries Management | Habitats | Aquaculture, disease, transfers & transgenics | Fisheries Management | Habitats | Aquaculture, disease, transfers & transgenics | Fisheries Management | Habitats | Aquaculture, disease, transfers & transgenics |
| Canada | | | | | | | | | | |
| DFG Faroe Islands | | | | | | No salmon habitat | | | No salmon habitat | |
| DFG Greenland | Accepted after first round review | | | | | | | | | |
| EU-Denmark | | | | | No threats given | | | No actions given | | |
| EU-Finland | | | | | | | | | | |
| EU-France | | | | | | | | | | |
| EU-Germany | | | | | | | | | | |
| EU-Ireland | | | | | | | | | | |
| EU-Portugal | | | | | | | | | | No aquaculture |
| EU-Spain (Asturias) | | | | | | | No aquaculture | | | No aquaculture |
| EU-Spain (Cantabria) | No revisions to IP | | | | | | | | | |
| EU-Spain (Galicia) | No revisions to IP | | | | | | | | | |
| EU-Spain (Navarra) | No revisions to IP | | | | | | | | | |
| EU-Sweden | | | | | | | | | | |
| EU-UK (England & Wales) | | | | | | | | | | |
| EU-UK (Northern Ireland) | | | | | | | | | | |
| EU-UK (Scotland) | | | | | | | | | | |
| Norway | | | | | | | | | | |
| Russian Federation | | | | | | | | | | |
| United States | | | | | | | | | | |