



**REPORT OF THE  
THIRTY-EIGHTH  
ANNUAL MEETING OF THE  
NORTH AMERICAN COMMISSION**

**By Video Conference**

**27 May – 4 June 2021**

Chair: Kimberly Blankenbeker (USA)

Vice-Chair: Tony Blanchard (Canada)

Secretary: Emma Hatfield

**NAC(21)11**

## NAC(21)11

### *Report of the Thirty-Eighth Annual Meeting of the North American Commission of the North Atlantic Salmon Conservation Organization*

#### *By Video Conference*

*27 May – 4 June 2021*

#### **1. Opening of the Meeting**

- 1.1 The Chair, Kim Blankenkemper (USA), opened the meeting and welcomed delegates to the video conference.
- 1.2 The Chair noted that, for the second time, NASCO's business would be conducted through inter-sessional correspondence and video conference, and noting her disappointment that an in-person meeting was not possible. She thanked delegates for their flexibility and patience given the additional challenges virtual meetings pose. She also acknowledged the new meeting platform being used this year and thanked the Secretariat for the excellent meeting arrangements.
- 1.3 The Chair reminded participants that a period for inter-sessional correspondence had run from 3 – 14 May. An Annotated Agenda, [NAC\(21\)07A](#), which includes the inter-sessional correspondence, was issued to help all delegates in their planning for the meeting. She noted that the Agenda, [NAC\(21\)07](#), (Annex 1) was adopted by correspondence on 30 April, prior to the inter-sessional correspondence period. The inter-sessional correspondence can be found in full in Annex 2.
- 1.4 The representatives of Canada and the United States provided written Opening Statements (Annex 3).
- 1.5 No formal Opening Statement was made on behalf of the Non-Governmental Organizations (NGOs). However, the representative of the NGOs supported the request made by the United States in its Opening Statement for an update from Canada on the Placentia Bay aquaculture project. The Chair indicated that this would be taken under Agenda item 6.
- 1.6 A list of participants at the Thirty-Eighth Annual Meetings of the Council and Commissions of NASCO is included as Annex 4.

#### **2. Review of the 2020 Fishery and ACOM Report from ICES on Salmon Stocks in the Commission Area**

- 2.1 A representative of ICES, Dennis Ensing, presented the scientific advice contained in the ICES Advisory Committee (ACOM) report, [CNL\(21\)11](#), in a webinar on 28 May. Dr Ensing's presentation on the advice relevant to the North American Commission is available as document [NAC\(21\)09](#) (Annex 5). The discussions that followed the presentation are contained in document [CNL\(21\)60](#) (Annex 6).

#### **3. Mixed-Stock Fisheries Conducted by Members of the Commission**

- 3.1 The Commission noted that under the Council's 'Action Plan for taking forward the recommendations of the External Performance Review and the review of the 'Next

Steps' for NASCO', [CNL\(13\)38](#), it was agreed that there should be an Agenda item in each of the Commissions to allow for a focus on mixed-stock fisheries.

- 3.2 Canada submitted paper 'Labrador Subsistence Fisheries in 2020: Mixed-Stock Fisheries Context Paper', NAC(21)08, which provided a description of the Labrador subsistence fisheries, including information related to management, reported annual harvests, sampling of the fishery catches and the origin and composition of the catches. The Commission welcomed the report.

#### **4. Sampling in the Labrador Fishery**

- 4.1 The Chair recalled that information on the sampling programme had been provided in both the ICES report, [CNL\(21\)11](#), and the Labrador subsistence fisheries paper. The inter-sessional correspondence on this Agenda item can be found in Annex 2.
- 4.2 In response to a question posed by the representative of the United States during the inter-sessional correspondence period regarding the identification of the proportion of samples coming from coastal vs estuarine regions for SFA 1A and SFA 2, a representative of Canada (Martha Robertson) provided information on this matter and noted that some difficulties had been faced in collecting this information in 2020. She indicated that this matter would be addressed in time for the next fishing season. Dr Robertson indicated Canada's intent to revise its Labrador subsistence fisheries paper to include the requested information. The revision was tabled as [NAC\(21\)08rev.](#)
- 4.3 The representative of the United States thanked Canada for its report as well as its efforts to improve implementation of the Labrador sampling programme. She recalled Canada's comment from the inter-sessional correspondence process that samplers will be instructed to sample 1 of every 10 (10 %) small salmon landed and 3 of every 10 (30 %) large salmon landed. She hoped that resources were available for this and looked forward to the resulting data.

#### **5. The St Pierre and Miquelon Salmon Fishery**

- 5.1 The Chair thanked France (in respect of St Pierre and Miquelon) for providing document [CNL\(21\)21](#), which contains information on the management and sampling of the St Pierre and Miquelon salmon fishery.
- 5.2 France (in respect of St Pierre and Miquelon) had been unable to respond to questions during the period of inter-sessional correspondence. The Chair invited its representative to respond during the meeting.
- 5.3 The United States had asked:

*'We thank France (in respect of St Pierre and Miquelon) for their report on the management and sampling of the St Pierre and Miquelon Salmon Fishery ([CNL\(21\)21](#)). We appreciate the improved catch statistics provided, especially by size group, and we acknowledge the continued effort to sample a large proportion of the catch. We note that the reported harvest in 2020 was an increase over the 2018 and 2019 levels and is primarily due to an increase in the recreational harvest. Can France (in respect of St Pierre and Miquelon) explain why the harvest level increased (e.g. increased effort, increased catch per unit, etc.) and if there are any plans to set a total catch limit on recreational and professional fishers in 2021 or perhaps to establish a bag limit for recreational harvesters to prevent the total harvest from increasing again given the scientific advice of zero harvest. We urge France (in respect of St Pierre and*

*Miquelon) to consider putting in place additional management measures along these lines.'*

5.4 The representative of France (in respect of St Pierre and Miquelon) thanked the United States for its question. She responded that the increased harvest in 2020 compared to 2019 in the St Pierre and Miquelon salmon fishery does not mean that the pressure on the salmon has increased. 2020 is the fourth year with the lowest level of catch, all fisheries combined. The increase of the level in the recreational harvest is explained by the exceptional context of the pandemic which created a resurgence in interest among the population in outdoor activities after the release from lockdown, which had led to a postponement of the opening of the season. France (in respect of St Pierre and Miquelon) shares concerns about the abundance of North American stocks and will work to improve the monitoring and management of the St Pierre and Miquelon salmon fishery, in close collaboration with fishermen.

5.5 Canada had asked France (in respect of St Pierre and Miquelon):

*'Canada welcomes this opportunity to continue discussions about the effectiveness of current monitoring and control measures in place at the mixed-stock fisheries in St. Pierre and Miquelon, where a high percentage of these harvests originate from Canadian river-systems with depleted populations. Despite the catch stabilization in 2018 and 2019, Canada remains concerned with the increase in recreational catch, particularly given the use of gillnets by the recreational fishery, and the absence of individual licence catch limits. We would appreciate clarity on France's plans to integrate more effective limits for this fishery, such as the option to impose limits on the total catch per recreational licence.'*

5.6 The representative of France (in respect of St Pierre and Miquelon) thanked Canada for its question. She reiterated that the increased harvest in 2020 compared to 2019 in the St Pierre and Miquelon Salmon Fishery does not mean that the pressure on the salmon has increased, noting again that 2020 is the fourth year with the lowest level of catch, all fisheries combined. The increase of the level in the recreational harvest is explained by the exceptional context of the pandemic. What is more, efforts have already been made and must be underlined, such as the reorientation of professional fishing effort towards other species and the scientific partnership with recreational fishermen, who are more and more numerous, to carry out sampling. France (in respect of St Pierre and Miquelon) is in favour of the implementation of new management and catch limitation measures and continues to work closely with recreational fishermen on this sensitive subject, as salmon fishing is a well-established tradition in the territory. For now, France (in respect of St Pierre and Miquelon) is working on a new regulation to limit the number of licences for the recreational fishery to prevent the total harvest from increasing again. In 2021 the inspection team will have their own patrol boat and inspections will be easier. Finally, regarding the concern about the use of gill nets by the recreational fishery, IFREMER, the scientific institute, is working on an experiment on angling with recreational fishers as a more selective fishing alternative.

5.7 The representative of Canada thanked France (in respect of St Pierre and Miquelon) for its co-operation and for placing limits on licences. He asked when those limits would come into effect. The representative of France (in respect of St Pierre and Miquelon) replied that the new regulation was planned for 2020, but it was not possible to implement it then. The new regulation will be adopted for 2021 and will allow no more than 80 recreational fishing licences.

- 5.8 The representative of the United States thanked France (in respect of St Pierre and Miquelon) for its report and noted appreciation for the improved catch statistics and the effort to sample a large proportion of the catch. She noted interest in the work being done to look at the potential of moving away from gill nets in the recreational fishery and toward angling as a way to improve selectivity. She urged France (in respect of St Pierre and Miquelon) to consider implementing stronger measures to reduce catches, as it is a mixed-stock fishery with many contributing stocks in poor condition, including critically endangered populations from the United States.
- 5.9 The representative of the NGOs asked about the cap on regulatory licences for recreational fishermen. He noted that 81 licences were allocated last year and asked how this was done. The representative of France (in respect of St Pierre and Miquelon) said that licences are allocated on a first come, first served, basis, but it is mostly the same people who receive licences every year.

## **6. Salmonid Introductions and Transfers**

- 6.1 Recalling the 2010 decision that the members of the Commission would provide focused annual reports on issues of mutual concern, including salmonid disease incidences, breaches of containment, introductions from outside the Commission area and transgenics (see [NAC\(10\)6](#)), the Chair noted that both Canada, [NAC\(21\)06rev2](#), and the United States, [NAC\(21\)05](#), had tabled annual reports.
- 6.2 The Chair noted that some discussion on this item was conducted during the inter-sessional correspondence period (Annex 2). She then invited the representative of Canada to respond to the questions about Grieg's proposed Placentia Bay aquaculture project by the United States in its Opening Statement and the NGO Co-Chair under Agenda item 1.
- 6.3 The representative of Canada said the project by Grieg is moving forward with rearing sterile, European-origin, triploid Atlantic salmon at 11 marine-based sites in Placentia Bay, Newfoundland. Each marine site will consist of multiple cages, with nets extending down to 43 metres. Grieg submitted the project proposal in February 2016, and it has undergone a series of provincial and federal reviews and assessments. More information is available publicly on the provincial government's website. Grieg introduced their first batches of triploid European salmon eggs at their land-based hatchery in Marystown in 2020 and is planning to stock a marine-based site in 2021 in Placentia Bay. Prior to Fisheries and Oceans Canada's (DFO) approval to transfer smolts to marine cages, the company will be sampling fish (via blood) to verify the fish are sterile before introduction to the marine cages. The development of a triploid verification methodology for sterility was a condition of release from their provincial environmental assessment and was approved by both the provincial and federal governments.
- 6.4 The representative of the United States thanked Canada for this information, noting the importance of providing information on the Placentia Bay aquaculture project and other planned or ongoing introduction and transfer activities in their Annual Report to the Commission. She noted the response that the company would check that the fish were triploid before they were transferred to the ocean and asked whether every fish was tested or just a subsample. The representative of Canada replied that the eggs were initially tested twice for triploidy by the supplier in Iceland. As an additional third precautionary measure, DFO and the Province require another round of triploid testing of Grieg's smolts before they are transferred to marine net-pens. A sufficient portion of

the total fish will be tested by a third-party laboratory to provide 99 % probability that a triploid failure, if present, is detected. Both the Province and DFO have reviewed the sampling approach and supporting documentation that the company provided and have approved it.

- 6.5 The representative of the NGOs asked about two recent developments that may affect the Placentia Bay aquaculture project. First, he noted that the Government of Norway is abandoning triploid experiments, as such fish are more susceptible to disease and because of animal welfare issues. He asked what will happen if the same problems arise in Newfoundland. Might diploids be used, and would the project be required to undergo another environmental impact assessment before it can continue? The representative of Canada said that they were aware of the recent decision by Norway and continue to follow the global research and emerging science on triploids. He noted that the Department has already set a precedent for not allowing diploid, viable, European-origin salmon in Canadian waters. It was determined at the time of Grieg's environmental assessment that there was insufficient diploid North American-origin stock to support the company's production goals. Assuming sufficient diploid North American-origin stock existed, while it would change the scope of the original Environmental Assessment, it would continue to comply with current provincial and federal regulations.
- 6.6 Secondly, the representative of the NGOs noted that, originally, the project had planned to use large (super) smolts, by growing them to 1.5 kg on land before putting them in the ocean. This would reduce the time the fish were kept in net pens and, therefore, reduce escapes and diseases. However, he noted that the company announced last year that, for financial reasons, this part of the project was on hold. The representative of the NGOs noted that if this aspect of the project is abandoned, it changes the risk profile that was evaluated in the environmental impact assessment. He asked if the representative of Canada knows about the company's plans in this regard, and what would happen if this element of the project is abandoned. The representative of Canada replied that Grieg postponed the construction of the super or post-smolt facility in 2020 due to Covid-19 challenges but is expected to pursue production of larger smolts in the future. This year, normal-sized smolts will be transferred to marine cages resulting in extended time that smolts are in marine cages, as is the *status quo* practice of the other companies. He noted that, as this is in line with the *status quo*, and does not change the scope of operations, it does not require re-evaluation by the Province and DFO.
- 6.7 Finally, the representative of the NGOs noted that there have been 25 outbreaks of infectious salmon anaemia (ISA) in aquaculture operations in the provinces of Prince Edward Island, New Brunswick and Newfoundland and Labrador. He asked whether Canada is investigating this situation and has plans to study the impacts on wild salmon of those cases. The representative of the NGOs also asked whether Canada is investigating cases and studying the impact of piscine orthoreovirus (PRV) of wild Atlantic salmon detected in the presence of aquaculture operations. Regarding ISA, the representative of Canada replied that it is a reportable disease in Canada. Anyone who owns or works with aquatic animals and knows of, or suspects, a reportable disease is required by law to notify the Canadian Food Inspection Agency (CFIA). If a reportable disease were to be detected, the CFIA would begin an investigation. DFO has undertaken, and continues to conduct, research on ISA and its impact on wild salmon. Additionally, DFO is planning an assessment of the risk to wild salmon due to ISA released from salmon farms in the coming year. Regarding PRV, the representative of Canada replied that there have been no PRV 'virus outbreaks' on the east coast of

Canada. PRV has been detected in farmed Atlantic salmon but has not been confirmed in wild salmon on the east coast and there have been no associated disease events. DFO continues to investigate its occurrence in salmon on the east coast of Canada.

- 6.8 The representative of the NGOs noted that Canada reported the escape of one salmon smolt in 2020 / 2021, which does not represent all the escapes that occur. He asked if Canada and the United States could provide in their Annual Reports to the Commission information on confirmed escapees that turn up in monitoring facilities. This is consistent with NASCO's 'Guidance on Best Management Practices to address impacts of sea lice and escaped farmed salmon on wild salmon stocks', [SLG\(09\)5](#). The representatives of the United States and Canada agreed to consider this and, if possible, provide any information that might be available.

## **7. Announcement of the Tag Return Incentive Scheme Prize**

- 7.1 The winner of the North American Commission £1,000 prize in the NASCO Tag Return Incentive Scheme is Colin Gilks from Canada.
- 7.2 The tag was placed on a grilse returning to the Southwest Miramichi River (New Brunswick, Canada) in 2018. The fish was captured on 25 September 2018 at the estuary trap net in Millerton operated by Fisheries and Oceans Canada as part of the assessment programme for Atlantic salmon in the Miramichi River. The fish was sampled for length, sex identification, scale sampled and externally marked with a light blue Carlin tag prior to release back to the river. It measured 55.1 cm fork length and the salmon was identified as a wild male, based on external characteristics. It was recaptured during the black salmon (kelt) recreational fishery on 3 May 2019 in the Southwest Miramichi River at Blissfield. It was subsequently released by the angler as there were mandatory catch and release measures in place for Atlantic salmon in 2019.

## **8. Recommendations to the Council on the Request to ICES for Scientific Advice**

- 8.1 The Chair of the Standing Scientific Committee (SSC), which assists the Council and Commissions in formulating their questions to ICES, Paddy Gargan, presented the relevant sections of the Draft Request to ICES for Scientific Advice.
- 8.2 Noting that there may need to be adjustment to the questions depending on the outcome of discussions in another Commission, the North American Commission agreed in principle to accept the relevant section of the SSC's recommendation and referred it to the Council for adoption. The Commission agreed that adjustments could be made to the Draft Request in Council, if required. The final request to ICES, as agreed by the Council, is contained in document [CNL\(21\)14](#) (Annex 7).

## **9. Other Business**

- 9.1 There was no other business.

## **10. Date and Place of the Next Meeting**

- 10.1 The Commission agreed to hold its next Annual Meeting at the same time and place as the Thirty-Ninth Annual Meeting of NASCO.

## **11. Report of the Meeting**

- 11.1 The Commission agreed the Report of the Meeting.

## **12. Close of the Meeting**

- 12.1 The Chair thanked the members of the Commission and all participants for their constructive engagement in the work of the Commission during the Annual Meeting and thanked the Secretariat for their excellent support. She closed the meeting.



## NAC(21)11

### *Compte rendu de la trente-huitième session annuelle de la Commission Nord-Américaine de l'Organisation pour la Conservation du Saumon de l'Atlantique Nord*

#### *Par vidéoconférence*

*27 mai – 4 juin 2021*

#### **1. Ouverture de la session**

- 1.1 La Présidente, Kim Blankenbeker (États-Unis), a ouvert la session et accueilli les délégués à la vidéoconférence.
- 1.2 La Présidente a indiqué que pour la seconde fois, les activités de l'OCSAN seraient menées par correspondance inter-sessionnelle et vidéoconférence, et elle a fait part de sa déception qu'une session en présentiel ne soit pas possible. Elle a remercié les délégués pour leur flexibilité et leur patience étant donné les défis supplémentaires que créent des réunions virtuelles. Elle a aussi salué la nouvelle plate-forme de réunion utilisée cette année et a remercié le Secrétariat pour l'excellente organisation de la session.
- 1.3 La Présidente a rappelé aux participants qu'une période de correspondance inter-sessionnelle avait couru du 3 au 14 mai. Un Ordre du jour annoté, [NAC\(21\)07A](#), qui inclut la correspondance inter-sessionnelle, a été diffusé pour aider tous les délégués à s'organiser pour la session. Elle a indiqué que l'Ordre du jour, [NAC\(21\)07](#), (Annexe 1) avait été adopté par correspondance le 30 avril, préalablement à la période de correspondance inter-sessionnelle. La correspondance inter-sessionnelle complète se trouve en Annexe 2.
- 1.4 Les représentants du Canada et des États-Unis ont transmis des déclarations écrites d'ouverture (Annexe 3).
- 1.5 Il n'y a pas eu de déclaration formelle d'ouverture au nom des organisations non-gouvernementales (ONGs). Toutefois, le représentant des ONGs a soutenu la demande faite par les États-Unis dans leur déclaration d'ouverture d'une mise à jour par le Canada sur le projet d'aquaculture de baie Placentia. La Présidente a indiqué que ceci serait traité sous le point 6 de l'Ordre du jour.
- 1.6 Une liste des participants aux trente-huitièmes sessions du Conseil et des Commissions de l'OCSAN figure en Annexe 4.

#### **2. Examen de la pêcherie de 2020 et du rapport du Comité d'Avis du CIEM (ACOM) sur les stocks de saumons dans la zone de la Commission**

- 2.1 Un représentant du CIEM, Dennis Ensing, a présenté l'avis scientifique figurant dans le rapport du Comité d'Avis du CIEM (ACOM), [CNL\(21\)11](#), en webinaire le 28 mai. La présentation du Dr Ensing sur l'avis relatif à la Commission Nord-Américaine est disponible comme document [NAC\(21\)09](#) (Annexe 5). Les discussions qui ont suivi la présentation figurent dans le document [CNL\(21\)60](#) (Annexe 6).

### **3. Pêcheries de stocks mixtes menées par des Membres de la Commission**

- 3.1 La Commission a noté qu'en vertu du 'Plan d'Action pour mettre en oeuvre les conseils de l'étude externe des performances et la révision des 'Prochaines Etapes' pour l'OCSAN' du Conseil, [CNL\(13\)38](#), il a été convenu qu'il y aurait un point à l'Ordre du jour de chacune des Commissions permettant de se concentrer sur les pêcheries de stocks mixtes.
- 3.2 Le Canada a soumis le document 'Pêcheries de subsistance du Labrador en 2020: document de contexte des pêcheries de stocks mixtes', NAC(21)08, décrivant les pêcheries de subsistance du Labrador avec inclusion d'informations relatives à la gestion, aux captures annuelles déclarées, à l'échantillonnage des prises de la pêche et à l'origine et la composition des captures. La Commission a accueilli favorablement ce rapport.

### **4. Echantillonnage de la pêche du Labrador**

- 4.1 La Présidente a rappelé que des informations sur le programme d'échantillonnage avaient été fournies à la fois dans le rapport du CIEM, [CNL\(21\)11](#), et dans le document sur les pêcheries de subsistance du Labrador. La correspondance inter-sessionnelle pour ce point de l'Ordre du jour se trouve en Annexe 2.
- 4.2 En réponse à une question posée par la représentante des Etats-Unis lors de la période de correspondance inter-sessionnelle, concernant l'identification de la proportion de prélèvements venant des zones côtières par rapport aux zones estuariennes pour SFA 1A et SFA 2, une représentante du Canada (Martha Robertson) a fourni des informations sur ce sujet et a fait savoir que certaines difficultés avaient été rencontrées dans la collecte de ces informations en 2020. Elle a indiqué que cette question serait traitée à temps pour la campagne de pêche suivante. Le Dr Robertson a fait part de l'intention du Canada de réviser son document sur les pêcheries de subsistance du Labrador pour y inclure les informations demandées. La révision est présentée sous [NAC\(21\)08rev](#).
- 4.3 La représentante des États-Unis a remercié le Canada pour son rapport ainsi que ses efforts pour améliorer la mise en œuvre du programme d'échantillonnage au Labrador. Elle a rappelé le commentaire du Canada dans le cadre de la correspondance inter-sessionnelle selon lequel les préleveurs auraient pour instruction d'échantillonner 1 sur 10 (10 %) des petits saumons débarqués et 3 sur 10 (30 %) des gros saumons débarqués. Elle espérait que des ressources seraient disponibles pour cela et attendait les données ainsi obtenues.

### **5. Pêche de saumons à St Pierre and Miquelon**

- 5.1 La Présidente a remercié la France (pour St Pierre et Miquelon) d'avoir fourni le document [CNL\(21\)21](#), où figurent des informations sur la gestion et l'échantillonnage de la pêche au saumon de St Pierre et Miquelon.
- 5.2 La France (pour St Pierre et Miquelon) n'avait pas pu répondre aux questions pendant la période de correspondance inter-sessionnelle. La Présidente a invité leur représentante à répondre lors de la session.
- 5.3 Les États-Unis avaient demandé:

*'Nous remercions la France (pour St Pierre et Miquelon) pour leur rapport sur la gestion et l'échantillonnage de la pêche de saumon de St Pierre et Miquelon (CNL(21)21). Nous apprécions les meilleures statistiques de captures fournies, particulièrement par groupe de taille, et nous reconnaissons la*

*poursuite des efforts pour échantillonner une forte proportion des captures. Nous notons que les captures déclarées en 2020 ont été en augmentation par rapport aux niveaux de 2018 et 2019 et que l'augmentation porte principalement sur les captures de la pêche récréative. La France (pour St Pierre et Miquelon) peut-elle expliquer pourquoi le niveau de prises a augmenté (ex. augmentation de l'effort, augmentation de la CPUE, etc.) et s'il est prévu de fixer une limite totale de captures pour les pêcheurs de loisirs et les professionnels en 2021 ou peut-être de mettre en place une limite de prises pour les pêcheurs de loisir, afin d'empêcher une nouvelle augmentation des prises totales, étant donné l'avis scientifique de zéro captures. Nous exhortons la France (pour St Pierre et Miquelon) à envisager de mettre en place des mesures supplémentaires de gestion en ce sens.'*

5.4 La représentante de la France (pour St Pierre et Miquelon) a remercié les États-Unis pour leur question. Elle a répondu que l'augmentation des prises en 2020 par rapport à 2019 dans la pêcherie de saumon de St Pierre et Miquelon ne signifiait pas que la pression sur le saumon avait augmenté. 2020 est la quatrième année ayant le niveau le plus bas de captures, toutes pêcheries confondues. L'augmentation du niveau des prises récréatives s'explique par le contexte exceptionnel de la pandémie qui a provoqué un regain d'intérêt de la population pour les activités de plein air après la sortie du confinement, qui avait entraîné le report de l'ouverture de la campagne. La France (pour St Pierre et Miquelon) partage les préoccupations sur l'abondance des stocks nord-américains et travaillera à améliorer le suivi et la gestion de la pêcherie de saumon de St Pierre et Miquelon, en étroite collaboration avec les pêcheurs.

5.5 Le Canada avait demandé à la France (pour St Pierre et Miquelon):

*'Le Canada salue cette opportunité de poursuivre les discussions sur l'efficacité du suivi actuel et des mesures de contrôle en place aujourd'hui dans les pêcheries de stocks mixtes à St Pierre et Miquelon, où un pourcentage élevé des prises ont leur origine dans les réseaux de rivières canadiens dont les populations sont appauvries. Malgré la stabilisation des captures en 2018 et 2019, le Canada reste préoccupé par l'augmentation des prises récréatives, particulièrement vu l'emploi de filets maillants pour la pêche de loisir, et l'absence de limite de prises par licence individuelle. Nous apprécierons de la transparence sur ce que prévoit de faire la France pour intégrer des limites plus efficaces à cette pêcherie, telle que l'option d'imposer une limite de captures totales par licence loisir.'*

5.6 La représentante de la France (pour St Pierre et Miquelon) a remercié le Canada pour leur question. Elle a réaffirmé que l'augmentation des captures en 2020 par rapport à 2019 dans la pêcherie de St Pierre et Miquelon ne signifiait pas que la pression sur le saumon avait augmenté, soulignant de nouveau que 2020 est la quatrième année où le niveau de captures est le plus bas, toutes pêcheries confondues. L'augmentation du niveau des prises récréatives s'explique par le contexte exceptionnel de la pandémie. En outre, des efforts ont déjà été faits et doivent être soulignés, tels que la réorientation de l'effort de la pêche professionnelle vers d'autres espèces et le partenariat scientifique avec les pêcheurs de loisir, qui sont de plus en plus nombreux, à contribuer à l'échantillonnage. La France (pour St Pierre et Miquelon) est favorable à la mise en œuvre de nouvelles mesures de gestion et de limites de captures, et continue de travailler étroitement avec les pêcheurs de loisir sur ce sujet sensible, car la pêche au saumon est une tradition bien établie dans le territoire. A ce jour, la France (pour St

Pierre et Miquelon) travaille à une nouvelle réglementation limitant le nombre de licences de pêche récréative dans l'objectif d'empêcher une nouvelle augmentation des prises. En 2021 l'unité d'inspection aura son propre bateau de patrouille ce qui facilitera les inspections. Enfin, en ce qui concerne les préoccupations sur l'utilisation de filets maillants par la pêche de loisir, l'IFREMER, l'institut scientifique, travaille avec les pêcheurs de loisir à une expérimentation de pêche à la canne comme méthode alternative de pêche plus sélective.

- 5.7 Le représentant du Canada a remercié la France (pour St Pierre et Miquelon) pour sa coopération et pour la mise en place de limites sur les licences. Il a demandé quand ces limites prendraient effet. La représentante de la France (pour St Pierre et Miquelon) a répondu que la nouvelle réglementation avait été prévue pour 2020 mais qu'il n'avait pas été possible de la mettre en œuvre à cette période. La nouvelle réglementation sera adoptée pour 2021 et ne permettra pas plus de 80 licences de pêche.
- 5.8 La représentante des États-Unis a remercié la France (pour St Pierre et Miquelon) pour son rapport et a noté leur appréciation pour les statistiques de captures améliorées et les efforts pour que l'échantillonnage concerne une large proportion des captures. Elle a fait part de leur intérêt pour le travail en cours pour envisager d'abandonner les filets maillants dans la pêcherie récréative, au bénéfice de la canne, comme moyen d'améliorer la sélectivité. Elle a exhorté la France (pour St Pierre et Miquelon) à envisager de mettre en œuvre des mesures renforcées afin de réduire les captures, puisqu'il s'agit d'une pêcherie de stocks mixtes dont de nombreux stocks contributeurs sont en mauvais état, y compris des populations en danger critique des États-Unis.
- 5.9 Le représentant des ONGs a posé la question du plafond de licences réglementaires pour les pêcheurs de loisir. Il a indiqué que 81 licences avaient été allouées l'année passée et a demandé dans quelles conditions cela s'était fait. La représentante de la de la France (pour St Pierre et Miquelon) a dit que les licences étaient délivrées sur une base de premier arrivé, premier servi, mais que c'étaient principalement les mêmes personnes qui en recevaient une chaque année.

## **6. Introductions et transferts de salmonidés**

- 6.1 Rappelant la décision de 2010 selon laquelle les membres de la Commission fourniraient des rapports annuels centrés sur des sujets communs de préoccupation, incluant l'incidence des maladies des salmonidés, les ruptures de confinement, les introductions de l'extérieur de la zone de la Commission et les transgéniques (voir [NAC\(10\)6](#)), la Présidente a indiqué qu'aussi bien le Canada, [NAC\(21\)06rev2](#), que les États-Unis, [NAC\(21\)05](#), avaient déposé des rapports annuels.
- 6.2 La Présidente a indiqué qu'une discussion sur ce point avait été menée pendant la période de correspondance inter-sessionnelle (Annexe 2). Elle a ensuite invité le représentant du Canada à répondre aux questions sur le projet d'aquaculture proposé par Greig à baie Placentia, questions posées par les États-Unis dans leur déclaration d'ouverture et par le co-président des ONGs sous le point 1 de l'Ordre du jour.
- 6.3 Le représentant du Canada a dit que le projet de Grieg progressait, avec élevage de saumon de l'Atlantique triploïde, stérile, d'origine européenne, sur 11 sites basés en mer dans la baie Placentia, Terre-Neuve. Chaque site en mer comprendra de multiples cages, avec des filets s'étendant en profondeur à 43 mètres. Grieg a déposé la proposition de projet en février 2016 et l'a soumis à une série de passages en revue et évaluations provinciaux et fédéraux. Davantage d'information est accessible au public sur le site web du gouvernement provincial. Grieg a introduit ses premiers lots d'œufs de saumon

triploïde européen dans son éclosier basée en milieu terrestre de Marystown en 2020, et prévoit de peupler un site basé en mer à baie Placentia en 2021. Préalablement à l'approbation par MPO du transfert de saumoneaux dans les cages en mer, la compagnie échantillonnera les poissons (prélèvement sanguin) pour vérifier qu'ils sont stériles avant leur introduction dans les cages en mer. Le développement d'une méthodologie de vérification de la stérilité des triploïdes était une condition du relâchage dans leur évaluation environnementale provinciale et elle a été approuvée par les gouvernements provincial et fédéral.

- 6.4 La représentante des États-Unis a remercié le Canada pour ces informations, soulignant l'importance de la fourniture d'informations sur le projet d'aquaculture de baie Placentia et sur d'autres activités d'introductions et transferts qui sont prévues ou en cours dans leur rapport annuel à la Commission. Elle a pris note de la réponse selon laquelle la société vérifierait que les poissons étaient triploïdes avant qu'ils soient transférés dans l'océan et a demandé si chaque poisson serait testé, ou seulement un sous-échantillon. Le représentant du Canada a répondu que les oeufs étaient initialement testés deux fois pour la triploidie par le fournisseur en Islande. Comme troisième mesure supplémentaire de précaution, MPO et la Province exigent un autre cycle de testage pour la triploidie des saumoneaux de Grieg avant leur transfert dans les cages marines en filet. Une fraction adéquate de l'ensemble des poissons sera testée par un laboratoire tiers, afin d'atteindre une probabilité de 99 % de détection d'un éventuel échec de triploidie. Tant la Province que MPO ont passé en revue l'approche d'échantillonnage et les documents justificatifs fournis par la société et les ont approuvés.
- 6.5 Le représentant des ONGs a posé la question de deux évolutions récentes pouvant affecter le projet d'aquaculture de baie Placentia. Premièrement, il a indiqué que le gouvernement de la Norvège était en train d'abandonner les expérimentations triploïdes, car ces poissons sont davantage sensibles aux maladies, et aussi pour des questions de bien-être animal. Il a demandé ce qui se passerait si les mêmes difficultés apparaissaient à Terre-Neuve. Serait-il possible d'utiliser des diploïdes, et serait-il exigé que le projet soit soumis à une nouvelle évaluation d'impact avant de pouvoir se poursuivre? Le représentant du Canada a dit qu'ils étaient au courant de la récente décision prise par la Norvège et qu'ils continuaient de suivre la recherche mondiale et la science émergente sur les triploïdes. Il a indiqué que le ministère avait déjà créé un précédent en n'autorisant pas le saumon diploïde, viable, d'origine européenne, dans les eaux canadiennes. Il a été déterminé au moment de l'évaluation environnementale de Grieg que le stock de diploïdes d'origine nord-américaine était insuffisant pour assurer les objectifs de production de la société. A supposer qu'il y ait un stock suffisant de diploïde d'origine nord-américaine, tout en changeant le périmètre de l'évaluation environnementale d'origine, le projet continuerait d'être conforme aux réglementations provinciales et fédérales.
- 6.6 Deuxièmement, le représentant des ONGs a indiqué qu'à l'origine le projet avait prévu d'utiliser des gros (super) saumoneaux, en les élevant à terre jusqu'à 1,5 kg avant de les mettre dans l'océan. Ceci diminuerait la durée de séjour des poissons dans les cages en filet et, donc, réduirait les échappements et les maladies. Toutefois, il a noté que la société avait annoncé l'an dernier, pour raisons financières, que cette partie du projet était en suspens. Le représentant des ONGs a souligné que si cet aspect du projet était abandonné, cela changeait le niveau de risque estimé dans l'évaluation de l'impact environnemental. Il a demandé si le représentant du Canada était informé des intentions de la société à cet égard, et ce qui se passerait si le projet était abandonné. Le représentant du Canada a répondu que Grieg avait repoussé la construction du site des

super ou post-saumoneaux en 2020 en raison des difficultés liées au Covid-19, mais qu'on pouvait s'attendre à ce qu'il poursuive la production de plus gros saumoneaux à l'avenir. Cette année, des saumoneaux de taille normale seront transférés dans les cages en mer, ce qui a pour effet un allongement de la durée de séjour des saumoneaux en cages marines comme c'est la pratique actuelle des autres sociétés. Ceci étant en ligne avec le statu quo de pratiques et ne changeant pas le périmètre des opérations, cela ne requiert pas une réévaluation par la Province et le MPO.

- 6.7 Enfin, le représentant des ONGs a indiqué qu'il y avait eu 25 foyers d'anémie infectieuse du saumon (AIS) dans des exploitations d'aquaculture dans les provinces de l'Île du Prince Édouard, du Nouveau-Brunswick et de Terre-Neuve et Labrador. Il a demandé si le Canada enquêtait sur cette situation et prévoyait d'étudier l'impact de ces cas sur le saumon sauvage. Le représentant des ONGs a aussi demandé si le Canada recherchait les cas, et étudiait l'impact, d'orthoreovirus pisciaire (RVP) du saumon atlantique sauvage détectés en présence d'exploitations d'aquaculture. En ce qui concerne l'AIS, le représentant du Canada a répondu que c'était une maladie à déclaration obligatoire au Canada. Toute personne qui possède ou travaille avec des animaux aquatiques et a connaissance de, ou suspecte, une maladie à déclaration obligatoire doit légalement notifier l'Agence canadienne d'inspection des aliments (ACIA). Si une maladie à déclaration obligatoire était détectée, l'ACIA commencerait une investigation. Pêche et Océans Canada ont entrepris et poursuivent la recherche sur l'AIS et son impact sur le saumon sauvage. En outre, MPO prévoit pour l'an prochain une évaluation du risque pour le saumon sauvage lié à la diffusion d'AIS à partir des fermes salmonicoles. En ce qui concerne le RVP, le représentant du Canada a répondu qu'il n'y avait pas eu de 'foyers de virus' au RVP sur la côte est du Canada. Le RVP a été détecté chez des saumons de l'Atlantique d'élevage mais sa présence chez le saumon sauvage sur la côte est n'a pas été confirmée, et il n'y a pas eu d'épisodes de maladie associés. MPO continue d'enquêter sur son occurrence chez le saumon de l'est du Canada.
- 6.8 Le représentant des ONGs a noté que le Canada avait signalé l'échappement d'un saumoneau en 2020 / 2021, ce qui ne reflète pas l'ensemble des fuites qui se produisent. Il a demandé si le Canada et les États-Unis pourraient fournir dans leurs rapports annuels à la Commission des informations sur les saumons échappés confirmés qui parviennent aux installations de surveillance. Ceci est cohérent avec les 'Lignes directrices sur les Meilleures pratiques de gestion pour traiter les impacts du pou du poisson et des fuites de saumon d'élevage sur les stocks de saumon sauvage' de l'OCSAN, [SLG\(09\)5](#). Les représentants des États-Unis et du Canada ont accepté d'examiner cette question et, si possible, de fournir toute information qui serait disponible.

## **7. Annonce du gagnant du prix du Programme incitatif au renvoi des marques**

- 7.1 Le gagnant du prix de £1,000 de la Commission Nord-Américaine du Programme incitatif au renvoi des marques de l'OCSAN est Colin Gilks du Canada.
- 7.2 La marque a été apposée à un madeleineau remontant vers la rivière Miramichi Sud-Ouest (Nouveau-Brunswick, Canada) en 2018. Le poisson a été capturé le 25 septembre 2018 au filet trappe d'estuaire de Millerton opéré par Pêches et Océans Canada dans le cadre du programme d'évaluation du saumon de l'Atlantique dans la rivière Miramichi. Le poisson a été échantillonné (longueur, identification du sexe, prélèvement d'écaillés) et marqué extérieurement avec une étiquette Carlin bleu clair avant d'être remis à l'eau dans la rivière. Il mesurait 55,1 cm de longueur à la fourche et, sur la base de ses

caractéristiques externes, le saumon a été identifié comme un mâle sauvage. Il a été recapturé dans la pêcherie récréative du charognard (bécard) le 3 mai 2019 dans la rivière Miramichi Sud-Ouest à Blissfield. Il a ensuite été relâché par le pêcheur à la ligne puisque des mesures de pêche avec remise à l'eau obligatoire étaient en place pour le saumon de l'Atlantique en 2019.

## **8. Recommandations au Conseil concernant la demande de conseils scientifiques auprès du CIEM**

- 8.1 Le Président du Comité scientifique permanent (CSP), qui aide le Conseil et les Commissions à formuler leurs questions au CIEM, Paddy Gargan, a présenté les sections relatives à la Commission du projet de demande de conseils scientifiques auprès du CIEM.
- 8.2 Prenant note qu'il pourrait y avoir des ajustements aux questions en fonction de l'issue des débats dans une autre Commission, la Commission Nord-Américaine a décidé d'accepter sur le principe la section correspondante des recommandations du CSP et l'a référée au Conseil pour adoption. La Commission a accepté que des ajustements puissent être faits au projet de demande au Conseil, le cas échéant. La demande finale auprès du CIEM, telle qu'adoptée par le Conseil, figure dans le document [CNL\(21\)14](#) (Annexe 7).

## **9. Divers**

- 9.1 Il n'y a pas eu de point divers.

## **10. Date et lieu de la prochaine session**

- 10.1 La Commission a décidé de tenir sa prochaine session annuelle aux mêmes dates et lieu que la trente-neuvième session annuelle de l'OCSAN.

## **11. Compte rendu de la session**

- 11.1 La Commission a accepté le compte rendu de la session.

## **12. Clôture de la session**

- 12.1 La Présidente a remercié les membres de la Commission et tous les participants pour leur engagement constructif dans le travail de la Commission pendant la session annuelle et a remercié le Secrétariat pour leur excellent soutien. Elle a clos la session.

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NAC(21)07

*Thirty-Eighth Annual Meeting of the North American Commission*

*By Video Conference*

*31 May – 4 June 2021*

*Agenda*

1. Opening of the Meeting
2. Review of the 2020 Fishery and ACOM Report from ICES on Salmon Stocks in the Commission Area
3. Mixed-Stock Fisheries Conducted by Members of the Commission
4. Sampling in the Labrador Fishery
5. The St Pierre and Miquelon Salmon Fishery
6. Salmonid Introductions and Transfers
7. Announcement of the Tag Return Incentive Scheme Prize
8. Recommendations to the Council on the Request to ICES for Scientific Advice
9. Other Business
10. Date and Place of the Next Meeting
11. Report of the Meeting
12. Close of the Meeting

### *North American Commission Inter-Sessional Correspondence*

The North American Commission's inter-sessional correspondence took place from 3 – 14 May. It is set out below, under the relevant Agenda item. If an Agenda item is not listed, no inter-sessional correspondence took place.

#### **4. Sampling in the Labrador Fishery**

##### *Q1. NASCO NGOs asked Canada (11 May):*

The recently released ICES advice states that (pg 11 General Advice): “A sampling rate of at least 10% of catches in Labrador would be required to achieve a relatively unbiased estimate.” And this advice is repeated in Canada's document NAC(21)08: “The performance of fisheries sampling programs to estimate catches of low proportions of non-local origin salmon in mixed stock fisheries indicated that a sampling rate of at least 10% of the fishery catches in Labrador would be required to achieve a relatively unbiased estimate of the catch of USA origin salmon.”

Yet when we look at Table 9 of that document, we see that overall 7.3 % of the catch was sampled.

The distribution of this sampling does not however seem to be unbiased, for example, only 0.7 % of large salmon in SFA 1A (Northern Labrador) were sampled, 2.9 % of large salmon in SFA 1B (Lake Melville), and 6.4 % of SFA 2 (Southern Labrador). Salmon far from their origins such as the USA and southern Gulf of St Lawrence harvested during these food fisheries in summer are quite likely not returning to their river of origin within that year and will likely be similar in size to those taken during the Greenland salmon fishery (1SW non-maturing). This would accordingly place them in the large salmon category in the fishery. So adequate sampling is definitely required of the large salmon group particularly outside of Lake Melville such as SFAs 1A and 2 and also particularly in the northern part of SFA 1 (Nain) where US origin fish have previously been identified.

To infer that the sampling has been biased towards small salmon (and thus missing the non-local origin salmon), one can look at the ratio of sampling of small vs large salmon in each area as below; unbiased sampling would have shown a ratio of 1.0 so it would seem that there is a strong tendency for small salmon to be sampled in the fishery and this tendency is most prevalent in SFA 1A. It is not possible to say whether this tendency is accidental or on purpose:

	% Small Sampled	% Large Sampled	Ratio % Small Sampled/%Large Sampled
SFA 1A	4.5	0.7	6.4
SFA 1B	6.0	2.9	2.1
SFA 2	13.4	6.4	2.1

What will Canada do to ensure that future sampling at Labrador is not selective by size or week of the catch, is unbiased and is of at least 10% of the catch in each size category, particularly outside of Lake Melville?

○ ***A1. Canada Response (17 May):***

- For NASCO purposes, the Labrador mixed-stock fishery sampling program and associated genetic origin analyses are conducted annually to monitor the prevalence and location of non-Labrador origin salmon catch.
- As the interception of non-Labrador origin salmon are most likely along the coast of Labrador, the 2020 genetic analyses focused on these samples.
- Large salmon are also more likely to be of non-Labrador origin.
- In 2021, Canada will focus on collecting large salmon samples while continuing its effort to achieve a minimum 10% sample of both the small and large salmon catch from all coastal communities.
- To ensure a consistent sampling effort, samplers will be instructed to sample landed catch on a daily basis, keep records of daily samples collected, and sample 1 of every 10 (10%) small salmon landed and 3 of every 10 (30%) large salmon landed.
- As the purpose of this analyses is to ensure the capture of non-Labrador origin salmon is minimized, the 2021 genetic analyses will focus on large salmon harvested along the coast and the remaining capacity for analyses would include small salmon.
- The smolt age of the salmon samples is not known prior to the genetic analyses in a given sampling year. However, it would be possible to analyse small salmon with younger smolt ages (< 2 years) in the following year.

***Q2. NASCO NGOs asked Canada (11 May):***

Figure 4.1 5.3 of the WGNAS report showed 3 large salmon sampled at Hopedale, 3 large at Postville and 1 at Makkovik; these would be the 7 noted as sampled at SFA 1 in Canada's document NAC(21)08 (table 9). We note that there was no salmon (neither small nor large) sampled at Nain, usually a large fishery, and the location of previous detection of USA salmon via genetic sampling.

What was the catch at Nain of small and large salmon in 2020 and why was there no sampling there?

○ ***A2. Canada Response (17 May):***

No USA fish have been detected in Nain. Six USA fish have been detected (2 in Makkovik in 2008, 1 in Hopedale in 2011, 1 in Makkovik in 2011 and two in Pinsents Arm near Charlottetown in 2017). The catch of Atlantic salmon in Nain is generally very low as this community focusses on harvesting Arctic Charr in both commercial and Indigenous FSC fisheries. The total catch of salmon in 2020 was 20 small salmon and 48 large salmon. This represents 4.4% of the small salmon catch and 4.8% of the large salmon catch (by number) on the north coast of Labrador (SFA 1A).

***Q3. NASCO NGOs asked Canada (11 May):***

What is Canada planning to do to assure that the fishery at Nain is adequately sampled

in 2021 and future years?

○ **A3. Canada Response (17 May):**

Canada will communicate directly with the Nunatsiavut Government to ensure that in Nain at least 1 in 10 small and large salmon are sampled. In 2020 this would have been 2 small salmon samples and 5 large salmon samples.

**Q4. United States asked Canada (13 May):**

During the 2020 meeting of the Commission, Canada stated that there were “additional analyses that could be conducted to further understand how effective the sampling program is in identifying rare events such as harvest of U.S.-origin salmon (these were the power analyses as well as identifying the proportion of samples coming from coastal versus estuarine regions for SFA 1A and SFA 2).” We would like to thank Canada for the efforts put into conducting the power analyses as reported in their “North American Commission Paper: Labrador Subsistence Fisheries in 2020: Mixed-Stock Fisheries Context” as well as the more detailed presentation provided to ICES, and we look forward to following up in due course with regard to the implications of this important work. As discussed last year, we were also expecting Canada to provide information “identifying the proportion of samples coming from coastal versus estuarine regions for SFA 1A and SFA 2.” Would it be possible to receive this information?

Additionally, we would like to thank Canada for their report on the Labrador fishery (“North American Commission Paper: Labrador Subsistence Fisheries in 2020: Mixed-Stock Fisheries Context”). The report is extremely informative and provides helpful details on the fishery and sampling program. We appreciate the challenges associated with implementing the Labrador sampling program and the efforts required to carry out this important program. We note that overall, 10% of the small salmon harvested were sampled and 3.9% of the large salmon were sampled. We also note that the 2020 harvest was lower in the northern area compared to the southern area, but that a higher proportion of the harvest in the northern area is of large salmon and that a lower overall proportion of the harvest in the northern area is sampled. Since the data indicate that the majority of the U.S. fish captured off Labrador have historically come from the northern area and that U.S. female spawners are almost exclusively large salmon, we are wondering if Canada has any plans for increasing the sampling rate in the northern area as well as for large salmon in general?

○ **A4. Canada Response (20 May):**

With apologies for the delay and partial response. Our expert is still in the field and not in a position to respond to your first question at the moment. We are still working to provide you with a response as soon as possible. In the meantime, please find our response to your second question below.

In the past 13 years, six USA fish have been detected in the Labrador Subsistence fishery (2 in Makkovik in 2008, 1 in Hopedale in 2011, 1 in Makkovik in 2011 and two in Pinsents Arm near Charlottetown in 2017). Four in SFA 1A (2 in 2008 and 2 in 2011) and two in SFA 2 (2017).

- In 2021, Canada will focus on collecting large salmon samples while continuing its effort to achieve a minimum 10% sample of both the small and large salmon catch from all coastal communities (SFA 1A north coast and SFA 2 south coast).
- To ensure a consistent sampling effort, samplers will be instructed to sample landed catch on a daily basis, keep records of daily samples collected, and

sample 1 of every 10 (10%) small salmon landed and 3 of every 10 (30%) large salmon landed.

- As the purpose of this analyses is to ensure the capture of non-Labrador origin salmon is minimized, the 2021 genetic analyses will focus on large salmon harvested along the coast and the remaining capacity for analyses would include small salmon.
- The smolt age of the salmon samples is not known prior to the genetic analyses in a given sampling year. However, it would be possible to analyse small salmon with younger smolt ages (< 2 years) in the following year.

## **5. The St Pierre and Miquelon Salmon Fishery**

### ***Q5. United States asked France (in respect of St Pierre and Miquelon) (13 May):***

We thank SPM for their report on the management and sampling of the St Pierre and Miquelon Salmon Fishery (CNL(21)21). We appreciate the improved catch statistics provided, especially by size group, and we acknowledge the continued effort to sample a large proportion of the catch. We note that the reported harvest in 2020 was an increase over the 2018 and 2019 levels and is primarily due to an increase in the recreational harvest. Can SPM explain why the harvest level increased (e.g. increased effort, increased catch per unit, etc.) and if there are any plans to set a total catch limit on recreational and professional fishers in 2021 or perhaps to establish a bag limit for recreational harvesters to prevent the total harvest from increasing again given the scientific advice of zero harvest. We urge France (SPM) to consider putting in place additional management measures along these lines.

- *France (in respect of St Pierre and Miquelon) provided a response during the meeting.*

### ***Q6. Canada asked France (in respect of St Pierre and Miquelon) (14 May):***

Canada welcomes this opportunity to continue discussions about the effectiveness of current monitoring and control measures in place at the mixed-stock fisheries in St. Pierre and Miquelon, where a high percentage of these harvests originate from Canadian river-systems with depleted populations. Despite the catch stabilization in 2018 and 2019, Canada remains concerned with the increase in recreational catch, particularly given the use of gillnets by the recreational fishery, and the absence of individual licence catch limits. We would appreciate clarity on France's plans to integrate more effective limits for this fishery, such as the option to impose limits on the total catch per recreational licence.

- *France (in respect of St Pierre and Miquelon) provided a response during the meeting.*

## **6. Salmonid Introductions and Transfers**

### ***Q7. Canada asked United States (14 May):***

Canada looks forward to working closely with United States to strengthen our aquaculture collaboration in the North American Commission region. In your 2020 NAC report, you mentioned one capture event of 221 Atlantic salmon that were subsequently tested for salmonid disease incidents. Canada would appreciate any additional information about other capture programs conducted in 2020 in the United States' NAC region and an overview of protocols and practices for testing salmonid

diseases, such as frequency of testing, location of capture, diseases tested for? Additionally, Canada would appreciate any updates on the timeline or development of the two land-based facilities proposed in Maine?

o *A7. United States response (15 May):*

Due to the proximity of aquaculture installations to Maine rivers, sea-run adults returning to the Penobscot River are monitored for pathogens of concern, specifically ISA<sub>v</sub>. The Milford Dam fish lift routinely captures returning adult salmon for use as broodstock, these fish are temporarily held at the Craig Brook National Fish Hatchery (CBNFH) until spawning as part of the Atlantic salmon recovery program. In 2020, a total of 221 adults were collected over a period of approximately 5 months, fish are collected daily if possible during the late spring and summer into the fall. All Atlantic salmon brought to CBNFH undergo pathogen screening as described below.

Sea-run adults are trapped and trucked to an isolated screening facility at the CBNFH to undergo sampling procedures and await the results of PCR testing. Blood samples are analyzed by the US Fish and Wildlife Service Lamar Fish Health Unit (LFHU) using Polymerase Chain Reaction (PCR) testing. Adults passing the PCR test are transferred from the screening facility into the main sea-run broodstock area for future spawning.

In the event of a positive ISA result additional tests are conducted on the affected individual. Should the individual be affected by the non-pathogenic strain of ISA (HPR0) that individual is released into the Penobscot at an upriver location above the Milford dam. The adults initially isolated with the HPR0 individual (cohort) were allowed to join the general hatchery population. In cases where a positive result detects a pathogenic strain of ISA, the affected individual is euthanized. The affected individual's cohort is isolated for an additional 28 days and resampled. The United States Department of Agriculture National Veterinary Services was engaged to provide further analysis. Additional samples of blood and tissues were collected and sent to both LFHU and APHIS; the individual was euthanized. No clinical signs of ISA were observed prior to euthanasia. The cohort of the affected individual was quarantined for 28 days and resampled. No additional positive results were found and the fish were allowed to join the general population to be used for broodstock.

In recent years the Maine DMR has conducted investigations into putative aquaculture origin fish which have entered a Maine river that does not have a barrier to migration. The captured fish were identified as commercial aquaculture origin through scale analysis and screened for pathogens of concern. These fish were also run through a genetic database to determine likely parents that would match any U.S. commercial growers. Any previous results (e.g., estimated numbers, origin, pathogen screening) from the investigation were reported in earlier U.S. NAC reports.

Regarding your question on the status of the land based aquaculture facilities, we refer you to our response to a similar question you posed to us during the Implementation Plan intersessional correspondence as documented in CNL(21)24. There is no additional information at this time.

***Opening Statements Submitted by Members of the Commission***

***Opening Statement to the North American Commission Submitted by Canada***

Madam Chair, Mr. Vice Chair, Fellow Delegates:

Canada would like to thank the Secretariat and all members of the North American Commission for a productive year, especially our recent exchanges in preparation for the Annual Meeting.

We expect this meeting to provide an opportunity to continue discussions about how to improve the effectiveness of the measures in place for the monitoring and control of the mixed-stock fisheries, particularly any options that could help mitigate the ongoing decline of Atlantic salmon stocks in eastern Canada. This decline has continued over the past 40 years, especially in southern portions of the range, in spite of continued conservation efforts and increasingly restrictive fisheries management by Canada's federal, provincial, and local governments. For instance, the sale of wild Atlantic salmon remains prohibited, as we strive to ensure these fish and their habitats are protected for future generations.

Canada recognizes the need to continue monitoring our mixed-stock subsistence fisheries in Labrador, conducted by Indigenous peoples and residents of Labrador. We will continue to work with the provincial government, Indigenous governments, and communities in Labrador to ensure that the fisheries management regime aligns with the guidelines agreed to at NASCO regarding reporting, managing the extent of mixed-stock fisheries, and fishing on stocks within conservation limits. For example, every year Canada works with the Nunatsiavut Government, the Innu Nation and the Nunatukavut Community Council in Labrador to determine appropriate harvest limits and other controls. Additionally, total retention of salmon per recreational angler has been reduced from three fish in 2020, to two fish in 2021.

Canada would like to thank France (in respect of Saint Pierre and Miquelon) for ongoing cooperation on sampling work, and for continuing to implement monitoring and control measures in its mixed-stock fisheries, particularly in light of the increasing recreational catch. We look forward to hearing more at the NAC meeting about France's plans to implement effective limits for this fishery.

Despite the potential ongoing constraints posed by the pandemic, we look forward to NAC's continued efforts to move our work forward in 2021, and looking toward a more normal way of working together into 2022.

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***Opening Statement to the North American Commission Submitted by the United States***

Madam Chair, Madam Secretary, Distinguished Delegates, Observers, Ladies, and Gentlemen:

The United States is pleased to be participating in the 2021 meeting of the North American Commission (NAC). While we regret that we cannot yet meet in person due to the pandemic, we, nevertheless, look forward to fruitful discussions this week. Toward that end, we appreciate

the helpful information on the Labrador and St. Pierre and Miquelon fisheries provided by Canada and France (in respect of St. Pierre and Miquelon), respectively, in their various reports as well as in response to issues raised during the correspondence period. We look forward to continuing discussions on ways to enhance the monitoring and control of these mixed-stock fisheries both to improve our collective understanding of the impacts they may have on Atlantic salmon populations, including endangered U.S. stocks, and to explore ways to minimize any such impacts. We note that 2020 catches in St. Pierre and Miquelon have increased slightly over 2017-2019 levels, and we would like to explore the reasons for this uptick as well as discuss the management actions France (in respect of St. Pierre and Miquelon) will be putting in place next year to control the fishery. We would also like to continue to collaborate with both Canada and France (in respect to St. Pierre and Miquelon) on ways to further strengthen their respective sampling programs. Robust sampling is essential to ensure NASCO and its Parties have information on the origin of the salmon harvested in these mixed stock fisheries, including salmon of U.S. origin and other stocks of low abundance.

We also thank Canada for its report to the NAC on introductions and transfers. Similar to last year, however, we are disappointed that the report does not include an update on Greig's proposed Placentia Bay aquaculture project, particularly in light of the intended use of non-North American salmon. The NAC, through adoption of the NAC Protocols, and NASCO more generally, through adoption of the Williamsburg Resolution, have long recognized the risks to wild Atlantic salmon posed by introductions and transfers if not effectively managed. NASCO has also recognized the utility of sharing information on these activities and discussing potential risks with those whose stocks might be affected. In that regard, timely and open communication through the NAC about both approved and proposed introduction and transfer activities, particularly those that could impact endangered and threatened wild Atlantic salmon populations, is essential. Each year, we welcome the opportunity to discuss and consider all relevant aspects of introduction and transfer activities. Such communication has been a hallmark of effective U.S.-Canada cooperation on these matters over the years, and we hope it will continue.

In closing, the United States looks forward to continuing to work with its North American partners to broaden our knowledge about the Atlantic salmon stocks and fisheries in the NAC area and to strengthen the conservation and management of this magnificent species.



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Presentation of the ICES Advice on Atlantic Salmon from North America to  
the North American Commission

NAC(21)09

*sal.nac.all*

# Atlantic salmon in the North American Commission Area in 2020



# Terms of Reference



## 3. With respect to Atlantic salmon in the North American Commission area:

- 3.1 describe the key events of the 2020 fisheries (including the fishery at St Pierre and Miquelon);
- 3.2 update age-specific stock conservation limits based on new information as available, including updating the time-series of the number of river stocks with established CLs by jurisdiction;
- 3.3 describe the status of the stocks, including updating the time-series of trends in the number of river stocks meeting CLs by jurisdiction;
- 3.4 provide catch options or alternative management advice for 2021 – 2024 with an assessment of risks relative to the objective of exceeding stock conservation limits, or pre-defined NASCO Management Objectives, and advise on the implications of these options for stock rebuilding ; and
- 3.5 update the Framework of Indicators used to identify any significant change in the previously provided multi-annual management advice.

## 3.1 Key Events 2020 Fisheries: Catch



- North America: 106 t
  - 104 t Canada
  - 2 t Saint Pierre and Miquelon (France)
  - 0 t USA

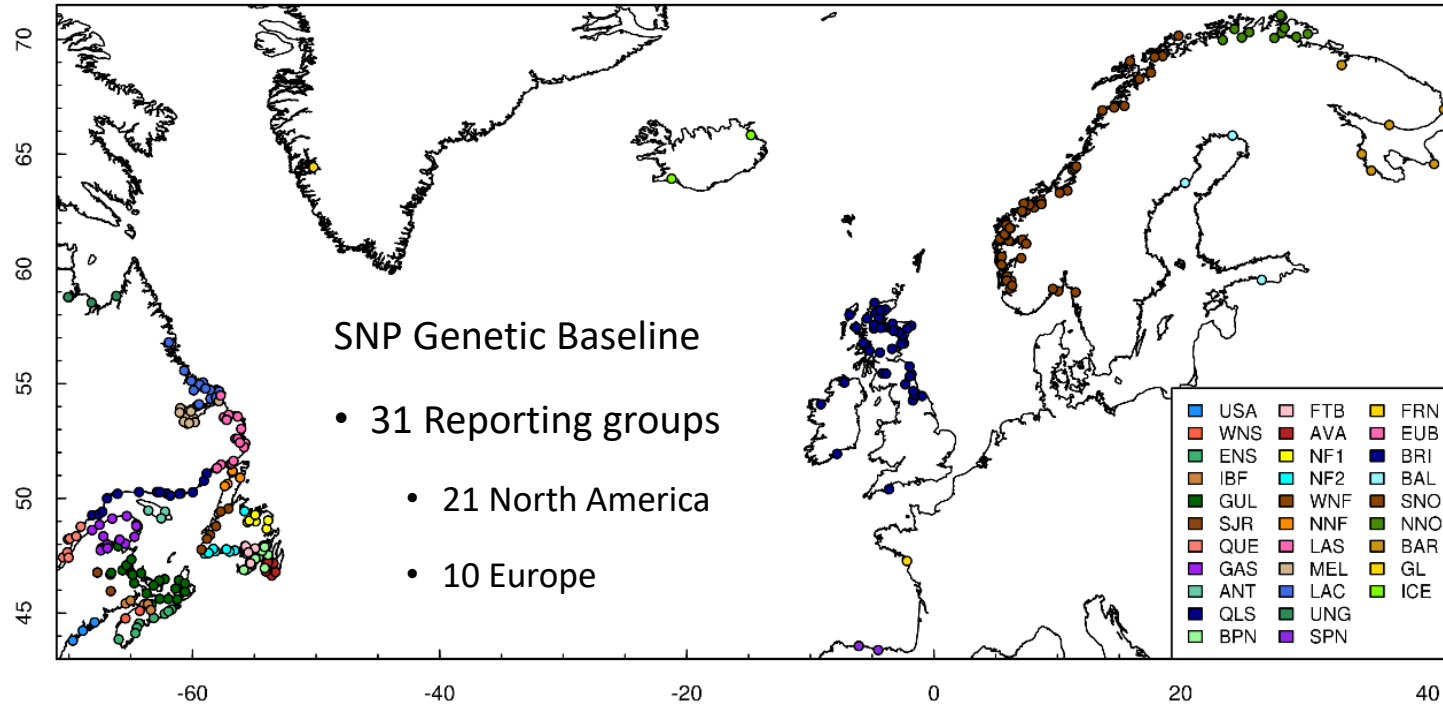
Table 1: sal.nac.all

2020	Canada					St Pierre & Miquelon (SPM)	USA	North America
	Commercial	Indigenous (FSC)	Labrador Resident	Recreational	Total			
Reported* catch	0 t	59 t	2 t	44 t	104 t	2 t	0 t	106 t
% of NAC total	0%	56%	2%	42%	98%	2%	0%	100%
Unreported catch	27 t					na	0 t	27 t
Location of catches								
% in-river	51%					0%		50%
% in estuaries	42%					0%		42%
% coastal	7%					100%		8%

\* = provisional until 2022

# 3.1 Origin and Composition of Catches

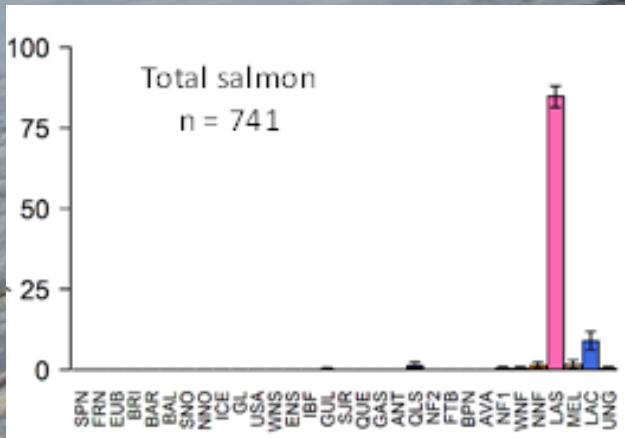
Figure 4: sal.nac.all



# 3.1 Origin and Composition of Catches: Labrador



Figure 5: sal.nac.all



2020:

- 741 scale and tissue samples collected
- 9% of harvest by number
- emphasis on samples from coastal areas where interception of non-local stocks more prevalent
- > 98% assigned to Labrador genetic groups
- no USA origin salmon detected in 2019 and 2020

## 3.1 Origin and Composition of Catches: Saint Pierre and Miquelon



2020:

- 116 scale and tissue samples
- 19% of harvest by number
- Received too late for genetic analysis
- Reported on in 2022



## 3.2 Stock Conservation Limits (CLs)

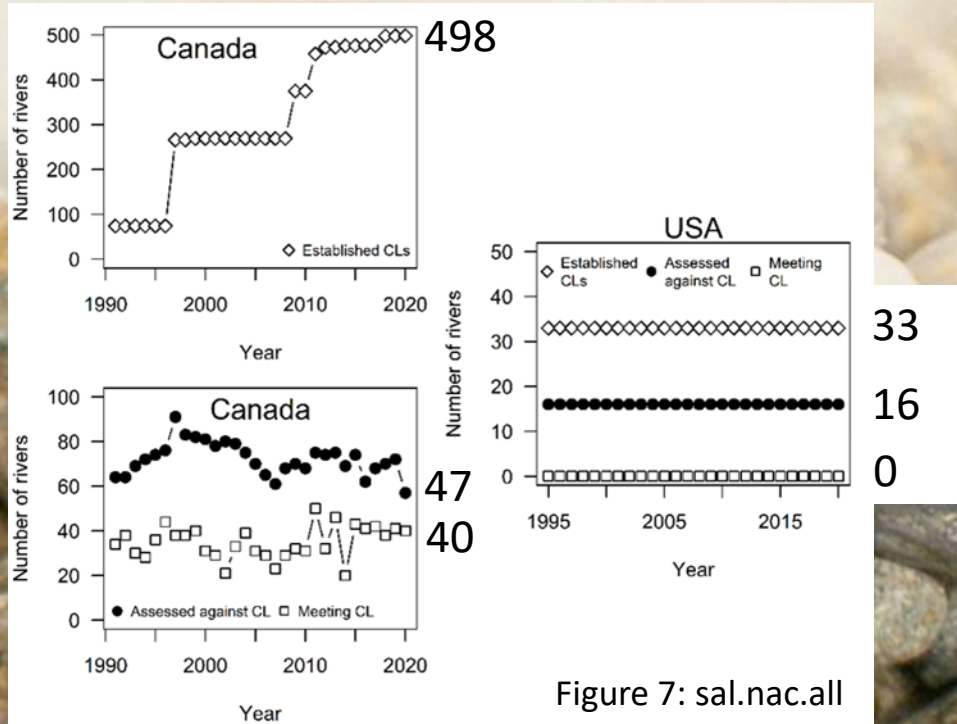


Figure 7: sal.nac.all

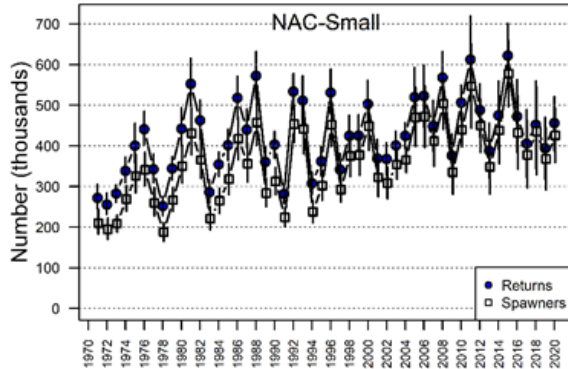
# 3.3 Salmon Returns



## Small Salmon (1SW)

- 456,100
- 37% increase on 2019
- three of six geographical regions declined from 2019
- 88% to Newfoundland and Labrador

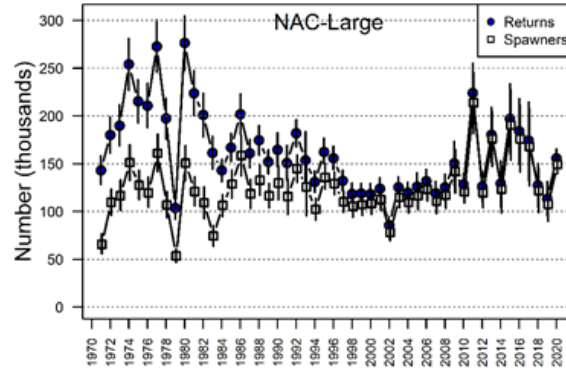
Figure 7: sal.nac.all



## Large Salmon (MSW and repeats)

- 155,600
- 50% increase on 2019
- one of six geographical regions (NF) declined from 2019
- 82% to Labrador, Quebec and Gulf

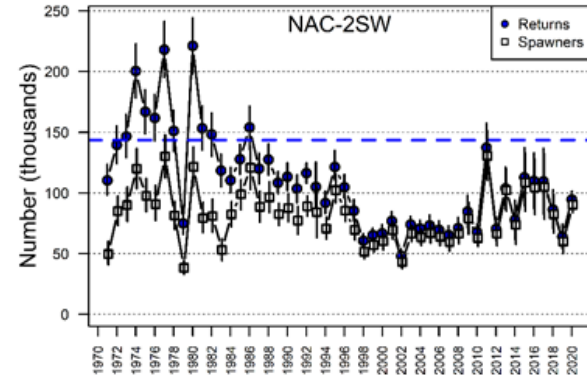
Figure 8: sal.nac.all



## 2SW Salmon (subset of Large)

- 94,700
- 58% increase on 2019
- one of six geographical regions (NF) declined from 2019
- 94% to Labrador, Quebec and Gulf

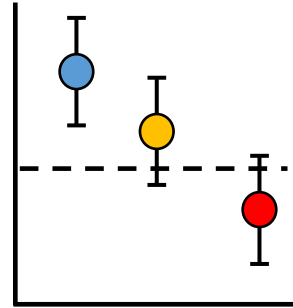
Figure 9: sal.nac.all



## 3.3 Status of Stocks: Reference Points

### Risk Assessment Framework

- Full Reproductive Capacity :
  - lower bound of the 90% confidence interval of the estimate above reference point
  - equivalent to a probability of at least 95% of meeting reference point
- At Risk of Suffering Reduced Reproductive Capacity:
  - lower bound of the confidence interval is below reference point, but the midpoint is above
- Suffering Reduced Reproductive Capacity:
  - midpoint is below reference point

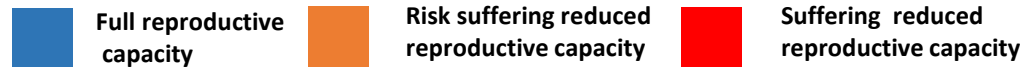
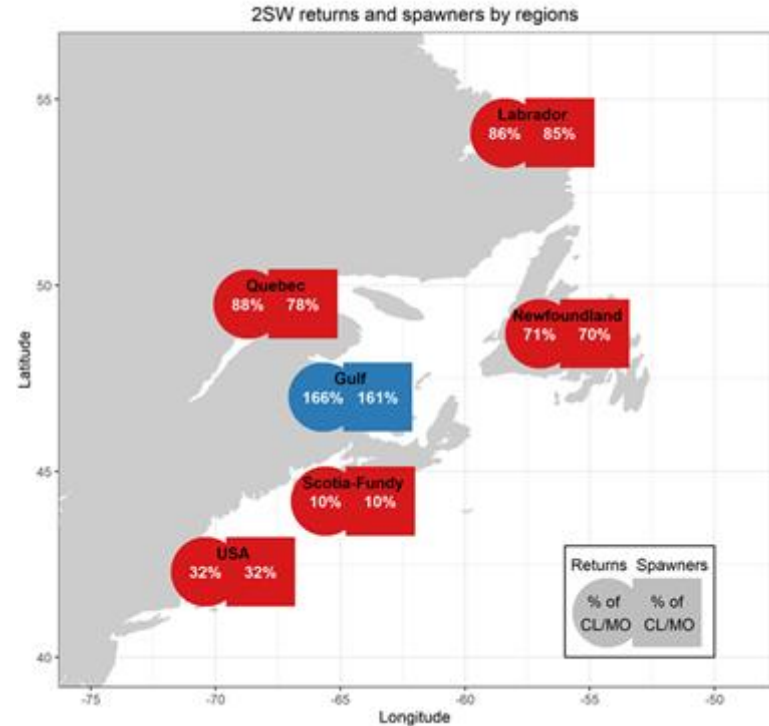


### 3.3 Status of Stocks: By Region

2020:

- 2SW returns and spawners suffering reduced reproductive capacity in five out of six assessment regions
- Particularly large deficits are noted for Scotia-Fundy (10%) and USA regions (32%)

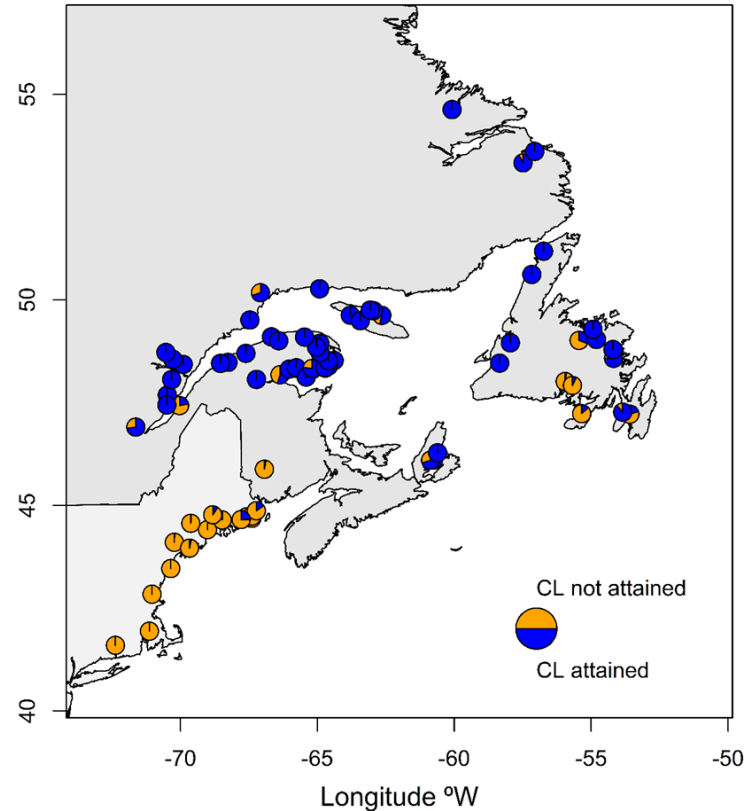
Figure 10: sal.nac.all



### 3.3 Degree of CL Attainment

- Proportion CL Attained = egg deposition / CL
  - 40 of 73 (55%) achieved or exceeded CLs
  - 23 of 79 (32%) were at, or less, than 50% CL
- Canada
  - 1991-2020 CL time-series
    - Number of rivers assessed ranged from 61 to 91
    - percentage rivers achieving CL ranged from 26% to 67%
- USA
  - None of the assessed rivers have achieved CLs

Figure 11: sal.nac.all

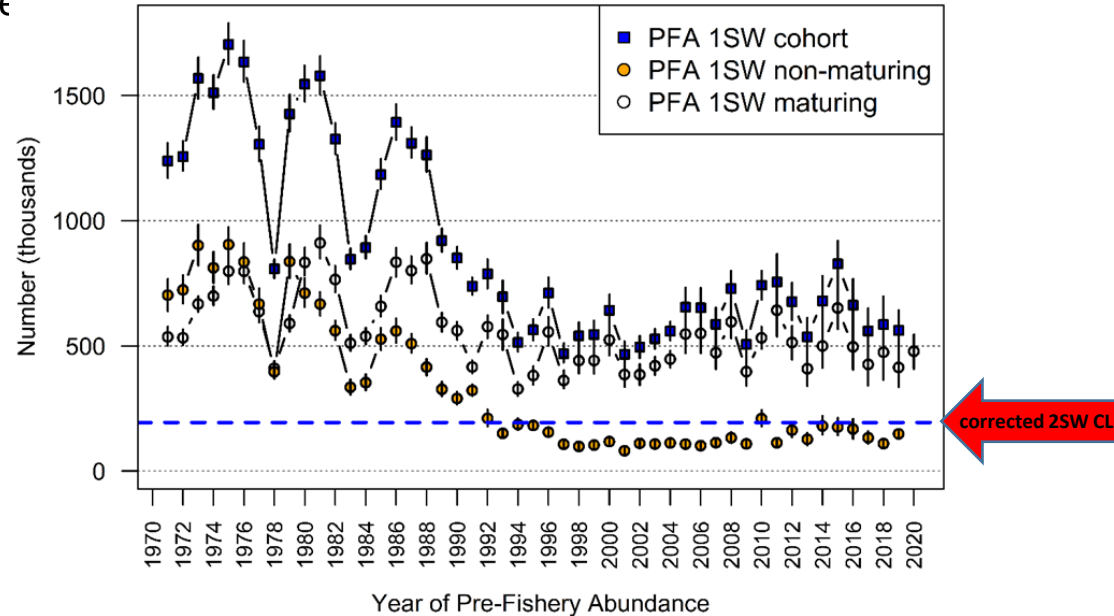


# 3.3 Pre-Fishery Abundance (PFA)



Figure 12: sal.nac.all

- PFA: salmon at sea prior to all marine fishes (1 August second summer at sea)
  - Two components:
    - 1SW maturing (return as 1SW)
    - 1SW non-maturing (return as MSW)
- 2019 PFA year was 562 400 fish
  - declined 66% over the time-series
  - suffering reduced reproductive capacity



## 3.4 Catch options or alternative management advice

- Catch options for mixed-stock fisheries are only provided for the non-maturing 1SW and maturing 2SW components as the maturing 1SW component is not fished outside home waters

Region	Region specific 2SW objective	Probability of meeting the 2SW objectives in the absence of fisheries for the 2SW return year			
		2021	2022	2023	2024
Labrador	34 746	0.645	0.632	0.573	<b>0.671</b>
Newfoundland	4 022	0.465	0.401	0.268	<b>0.300</b>
Quebec	32 085	0.534	0.413	0.419	<b>0.464</b>
Gulf	18 737	0.890	0.870	0.799	<b>0.831</b>
Scotia-Fundy	10 976	0.013	0.030	0.026	<b>0.029</b>
USA	4 549	0.094	0.144	0.213	<b>0.226</b>
Simultaneous to North America		<b>0.004</b>	<b>0.006</b>	<b>0.006</b>	<b>0.007</b>

Table 4: sal.nac.all

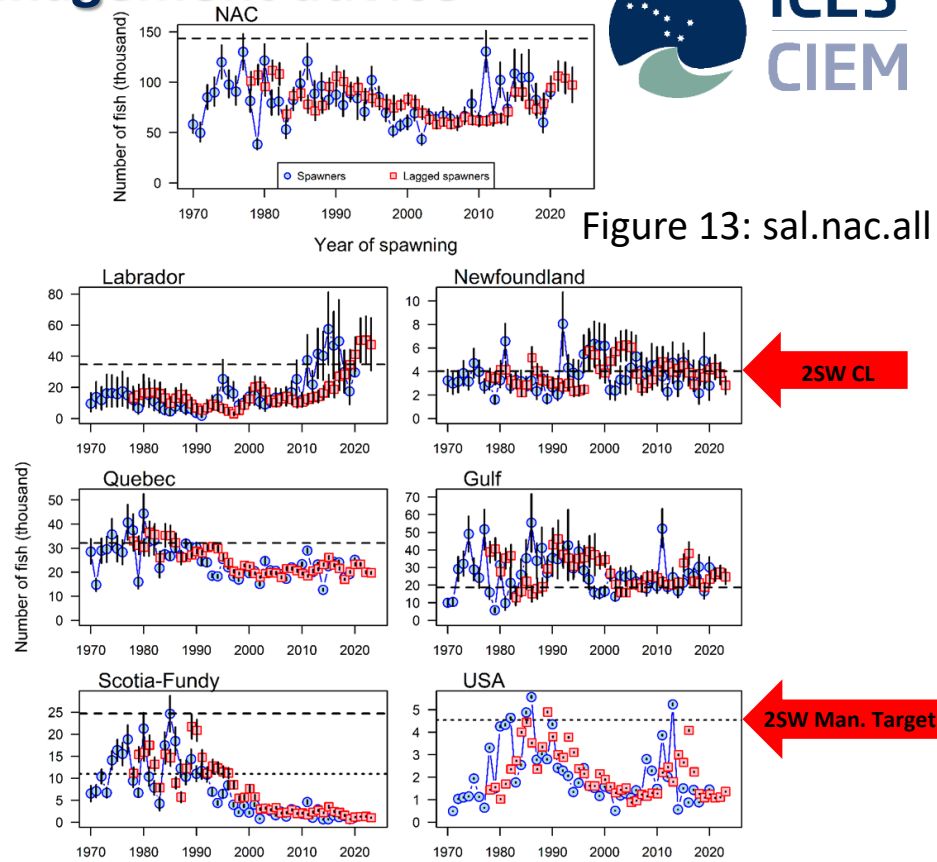
- No probabilities (close to 0) that the returns of 2SW salmon to the six regions of NAC will meet or exceed the 2SW objectives for the six regions in NAC and simultaneously for all regions
- No 2021-2024 catch options

# 3.4 Catch options or alternative management advice



## Region specific catch options

- Lagged 2SW spawners (1SW PFA – fisheries and natural mortality)
- Below CL for NAC, but improving 2020-2023
- Improvements regionally in Labrador and Gulf





# 3.4 Catch options or alternative management advice



## Forecast of productivity

- Estimated positive PFA/Lagged 2SW spawners ratio all regions
- PFA higher than LS that produced it
- Abundance expected to increase...
- ....if positive production and LS are maintained

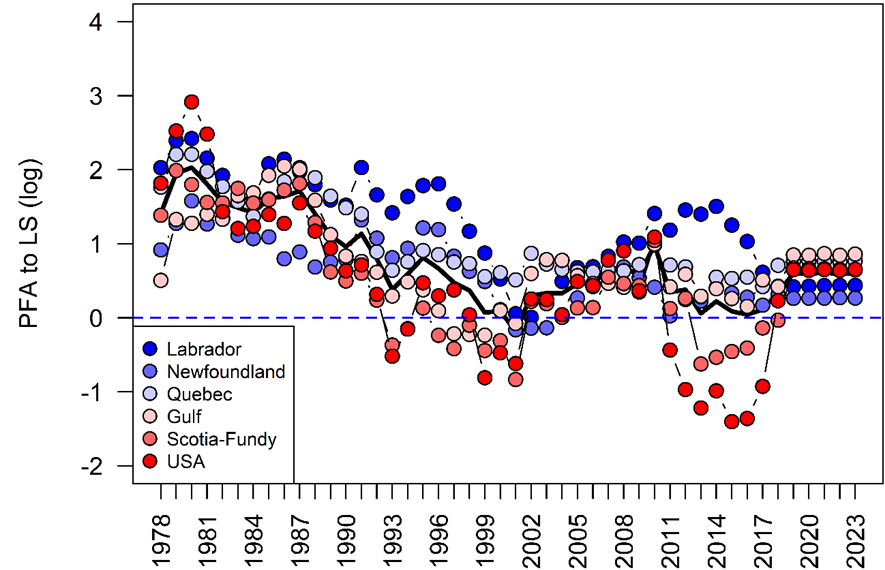


Figure 14: sal.nac.all

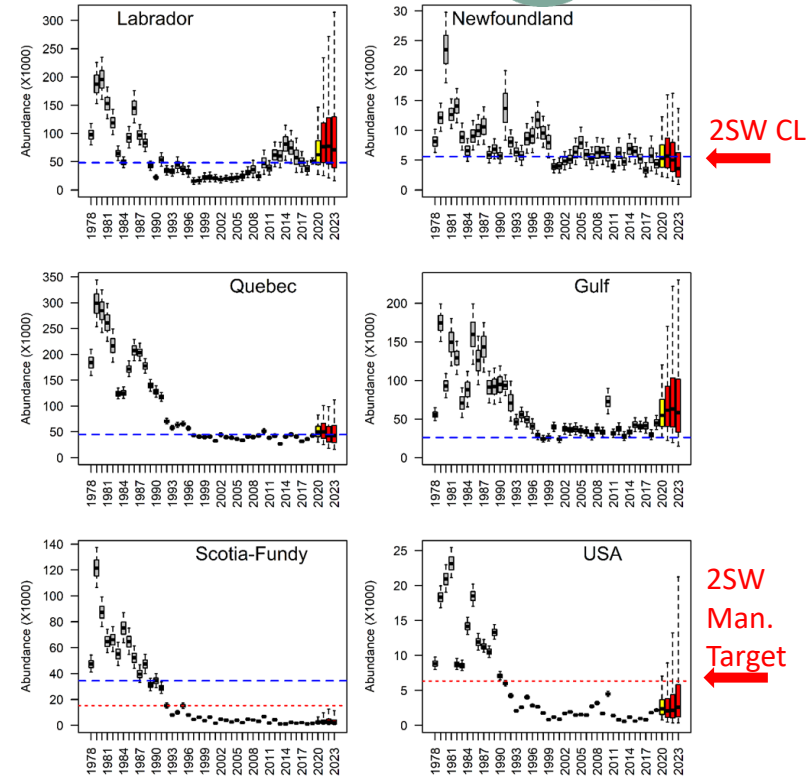
# 3.4 Catch options or alternative management advice



Figure 15: sal.nac.all

## Regional PFA 1978-2020 and PFA forecast 2021-2024

- 5<sup>th</sup> percentiles of the posterior distributions of the regional PFAs are less than the management objective reserves for all six regions
- No mixed-stock fishery options on 1SW non-maturing salmon in the period 2021 to 2023
- No mixed-stock fishery options on 2SW maturing salmon in the period 2021 to 2024



# 3.5 Update the Framework of Indicators



- Used to identify any significant change in the previously provided multi-annual management advice
- Used in NAC (only NAC indicators used) and WGC
- ✓ Updating indicator variables
- ✓ Running the objective function spreadsheet for each indicator variable and the variable of interest relative to the management objectives
- ✓ Quantifying the threshold values for the indicator variables
- ✓ Revising/adding the indicator variables
- ✓ Providing the spreadsheet for FWI assessment
- ✓ 19 variables, 13 rivers, none from NF or Lab

Catch advice: Catch option = 0 (Yes = 1, No = 0)

Overall Recommendation: No Significant Change Identified by Indicators

Geographic Area	River/ Indicator	2020 Value*	Ratio Value to Threshold	Threshold	True Low	True High	Indicator State	Probability of Correct Assignment	Indicator Score	Management Objective Met?	
USA	Penobscot 25W Returns	988	48%	2 167	100%	100%	-1	1.00	-1.00		
	Penobscot 25W Survival (%)	0.002	18%	0.011	100%	60%	-1	1.00	-1.00		
	possible range				-1.00	0.80					
	Average		32%						-1.68	No	
Scotia Fundy	Saint John Return Large	115	3%	3 329	97%	100%	-1	0.97	-0.97		
	Lahave Return Large	22	8%	285	82%	85%	-1	0.82	-0.82		
	North Return Large	226	38%	626	96%	79%	-1	0.96	-0.96		
	Saint John Return Small	241	11%	2 276	90%	80%	-1	0.90	-0.90		
	Lahave Return Small	278	17%	1 679	96%	67%	-1	0.96	-0.96		
	possible range				-0.02						
Average		15%						-0.32	No		
Gulf	Miramichi Return 25W	4748	57%	8 366	100%	98%	-1	1.00	-1.00		
	Miramichi Return 15W	6792	38%	24 287	58%	92%	-1	0.58	-0.58		
	possible range				-0.79	0.68					
	Average		48%						-0.79	No	
Quebec	Bonaventure Return Large	1531	68%	2 243	73%	100%	-1	0.73	-0.73		
	Grande Riviere Return Large	426	98%	442	100%	83%	-1	1.00	-1.00		
	Saint-Jean Return Large	814	80%	1013	79%	100%	-1	0.79	-0.79		
	Dartmouth Return Large	889	118%	756	86%	79%	1	0.75	0.75		
	Madeline Return Large	922	137%	672	94%	74%	1	0.74	0.74		
	Sainte-Anne Return Large	790	134%	584	82%	60%	1	0.60	0.60		
	Mitis Return Large	873	237%	368	89%	50%	1	0.50	0.50		
	De la Trinité Return Large	113	29%	385	88%	100%	-1	0.88	-0.88		
	De la Trinité Return Small	160	28%	578	90%	83%	-1	0.90	-0.90		
	De la Trinité 25W Survival	0.238	57%	0.49	100%	68%	-1	1.00	-1.00		
possible range				-0.88	0.80						
Average		98%						-0.27	No		
Newfoundland	possible range									NA	Unknown
Average										NA	Unknown
Labrador	possible range									NA	Unknown
Average										NA	Unknown
Southern NEAC	possible range									NA	Unknown
Average										NA	Unknown

\* 2020 value; or if not available, the latest value of the time-series.

Figure 16: sal.nac.all

## CNL(21)60

*Question & Answer Session at the ICES Advice Presentation – Thursday 28  
May 2021*

**Katrine Kærgaard (Denmark (in respect of the Faroe Islands and Greenland)):** I was just wondering whether ICES has looked into other factors affecting the salmon stock. Because in your previous advice, you always said that considering the reduced fisheries, and there haven't been any changes in the stock, that there should be other factors affecting the salmon stock, and whether you can assess those other factors' impacts versus fisheries. Thank you.

**Dennis Ensing (WGNAS Chair):** It's a very pertinent question, and you're absolutely right, other factors are impacting on Atlantic salmon abundance. You would probably be talking about predation, climate change barriers. The thing is, it's quite difficult to model on a large scale, but what is interesting in this respect, is that we are moving into a new full-lifecycle model for Atlantic salmon, and we will be doing the exercise with that.

So, in time, we will have a completely new assessment framework, and that will allow us a lot more flexibility of what data we use. That would mean that if we have good data on things like predation, you can then bring it into that model, and you can build that model up and feed that in and use it.

As it stands, as you have seen, for instance, we assume a natural mortality value of 3% per month at sea. But that is a constant. It's based on something. It's not that we just decided to pull that out of a hat. It's based on research. But models do not allow us that flexibility yet, but they will shortly. So, I have created a few models because of their flexibility, and we can then really start to bring all those factors in. Of course, it depends on good data.

And of course, there is a lot of research happening. I know that a lot of Parties here spend a lot of money on looking into marine survival issues. What is it? What are the factors? Where do they happen? And the new model will allow us to put that into our advice in the future, hopefully.

**Maria Strandgård Rasmussen (Denmark (in respect of the Faroe Islands and Greenland)):** I just had a question regarding the PFA model. I'm looking at table seven for the Atlantic salmon at West Greenland. It's the output from the PFA model. I was just wondering about whether the input data is regionally summed. If it's based on regionally summed data, how can that account for variability within the region?

**Dennis Ensing (WGNAS Chair):** Yes, but this is from the PFA model. The input for that, it would be river returns, yes. Every jurisdiction will have its index rivers, and that's where that data comes from, and that is input in the model, and this is then what you get as an output.

**Maria Strandgård Rasmussen (Denmark (in respect of the Faroe Islands and Greenland)):** I can try to clarify a bit further. If the output is summed by region, then you bypass the variability that's within one region. For example, if the predation picture is higher for one area within the region than the other, then you cannot get the sum value for the output saying that it's way below the...

**Dennis Ensing (WGNAS Chair):** No, I see what you mean. We know that there is variability. Unfortunately, the model is not allowing us to account for that, and this is probably the reason

for wanting to move into this full-lifecycle model, because it will give us a lot of flexibility to bring those things in. So, yes, we know the constraints of the model. There are different things in the model as well that we have as constant, or questions, and this is just the evolution of modelling. We've been using this model for a couple of years now, and it's not ideal, and I absolutely agree with that. This is why we want to improve it. This is why we're very keen to move to a new model which allows us a lot of flexibility to look at those. There're so many things we can do in the new model, that we can't with this one, so I hope that answers your question. Even the new model will be suboptimal. That's the caveat with the model, it never truly reflects what is happening, it just tries to be as close as possible. And the new model should get us closer to that and allow us a lot more flexibility.

**Maria Strandgård Rasmussen (Denmark (in respect of the Faroe Islands and Greenland)):** Yes, thank you so much for your reply.

**Tim Sheehan (United States):** Thank you very much for the presentation. I just wanted to clarify, I was a little confused by the last question and the last answer. I was wondering if you could provide a little commentary on how the model works, where the model as I understand it, is a summation.

You have regional inputs that are the summation of river returns, spawning returns, that are lumped together for the U.S., and then that goes up and is added with the, say, rest of North America, and those are the primary inputs for the model. So, I didn't understand the question and the answer about individual rivers not really being averaged or summed across a region, where they're all contributing to the region totals.

I think that individual rivers, where we have information, it is informing the model, and it is providing a picture of what's going on for that region. So, I was wondering if you could talk about that, how individual rivers play into the model, and how the regional estimates of, say, spawning as an input are used within the modelling.

**Dennis Ensing (WGNAS Chair):** I think you've pretty much already given the answer here yourself. Different regions are represented. Every region will have multiple rivers, or hopefully at least one, of where the returners, where the spawners are. And we derive a lot of our information for the model from those rivers as well, so we know about smolt age, the migration, the average of that, the midpoint of that, spawners, marine survival we know for those rivers.

And they are then indicative of those regions that they represent. Now, that means that not every region is as well represented as we want. In an ideal world, you would have every river assessed, but that is just not feasible, that is impossible to do. The cost alone and the infrastructure alone would be prohibitive. But all that information is used in the data.

In terms of variability, there will be variability between years, but certainly if I look at our own river here, that is hard data. I know that's not the case on some rivers. Some rivers are estimates. There will be spawner estimates because it's done, for instance, using catch statistics, angling data. In Ireland, we have an index river which has a full trapping facility, so we literally get everything that ascends the river. So, we can be pretty happy with that input.

In some regions, it has to be a subset of the rivers in a region that are used in the model, and I think that when we move model, we're going to be dependent on rivers, but we can take other data as well, that has more of a regional signal.

**Serge Doucet (NASCO President):** I would like to thank Dennis for his presentations, and I thank you for the questions. And with that, I believe that I will bring this webinar to a close. Thank you, everyone.

## CNL(21)14

*Request for Scientific Advice from ICES*

- 1. With respect to Atlantic salmon in the North Atlantic area:**
  - 1.1 provide an overview of salmon catches and landings by country, including unreported catches and catch and release, and production of farmed and ranched Atlantic salmon in 2021<sup>1</sup>;
  - 1.2 report on significant new or emerging threats to, or opportunities for, salmon conservation and management<sup>2</sup>;
  - 1.3 provide an update on the distribution and abundance of pink salmon across the North Atlantic and advise on potential threats to wild Atlantic salmon;
  - 1.4 provide an overview of the East Greenland stock complex in terms of migration, stock composition, biological characteristics, historical landings, effort etc.;
  - 1.5 provide a compilation of tag releases by country in 2021; and
  - 1.6 identify relevant data deficiencies, monitoring needs and research requirements;
- 2. With respect to Atlantic salmon in the North-East Atlantic Commission area:**
  - 2.1 describe the key events of the 2021 fisheries<sup>3</sup>;
  - 2.2 review and report on the development of age-specific stock conservation limits, including updating the time-series of the number of river stocks with established CLs by jurisdiction;
  - 2.3 describe the status of the stocks, including updating the time-series of trends in the number of river stocks meeting CLs by jurisdiction;
  - 2.4 provide catch options or alternative management advice for the 2022/2023 - 2024/2025 fishing seasons, with an assessment of risks relative to the objective of exceeding stock conservation limits, or pre-defined NASCO Management Objectives, and advise on the implications of these options for stock rebuilding<sup>4</sup>; and
  - 2.5 update the Framework of Indicators used to identify any significant change in the previously provided multi-annual management advice.
- 3. With respect to Atlantic salmon in the North American Commission area:**
  - 3.1 describe the key events of the 2021 fisheries (including the fishery at St Pierre and Miquelon)<sup>3</sup>;
  - 3.2 update age-specific stock conservation limits based on new information as available, including updating the time-series of the number of river stocks with established CLs by jurisdiction;
  - 3.3 describe the status of the stocks, including updating the time-series of trends in the number of river stocks meeting CLs by jurisdiction;

- 3.4 provide catch options or alternative management advice for 2022-2025 with an assessment of risks relative to the objective of exceeding stock conservation limits, or pre-defined NASCO Management Objectives, and advise on the implications of these options for stock rebuilding<sup>4</sup>; and
- 3.5 update the Framework of Indicators used to identify any significant change in the previously provided multi-annual management advice.
- 4. With respect to Atlantic salmon in the West Greenland Commission area:**
- 4.1 describe the key events of the 2021 fisheries<sup>3</sup>;
- 4.2 describe the status of the stocks<sup>5</sup>;
- 4.3 provide catch options or alternative management advice for 2022-2024 with an assessment of risk relative to the objective of exceeding stock conservation limits, or pre-defined NASCO Management Objectives, and advise on the implications of these options for stock rebuilding<sup>4</sup>; and
- 4.4 update the Framework of Indicators used to identify any significant change in the previously provided multi-annual management advice.

**Notes:**

1. *With regard to question 1.1, for the estimates of unreported catch the information provided should, where possible, indicate the location of the unreported catch in the following categories: in-river; estuarine; and coastal. Numbers of salmon caught and released in recreational fisheries should be provided.*
2. *With regard to question 1.2, ICES is requested to include reports on any significant advances in understanding of the biology of Atlantic salmon that is pertinent to NASCO.*
3. *In the responses to questions 2.1, 3.1 and 4.1, ICES is asked to provide details of catch, gear, effort, composition and origin of the catch and rates of exploitation. For homewater fisheries, the information provided should indicate the location of the catch in the following categories: in-river; estuarine; and coastal. Information on any other sources of fishing mortality for salmon is also requested. For 4.1, if any new surveys are conducted and reported to ICES, ICES should review the results and advise on the appropriateness of incorporating resulting estimates into the assessment process.*
4. *In response to questions 2.4, 3.4 and 4.3, provide a detailed explanation and critical examination of any changes to the models used to provide catch advice and report on any developments in relation to incorporating environmental variables in these models. Also provide a detailed explanation and critical examination of any concerns with salmon data collected in 2021 which may affect the catch advice considering the restrictions on data collection programmes and fisheries due to the COVID 19 pandemic.*
5. *In response to question 4.2, ICES is requested to provide a brief summary of the status of North American and North-East Atlantic salmon stocks. The detailed information on the status of these stocks should be provided in response to questions 2.3 and 3.3.*

**Attendees:**

Sergey Prusov (NEAC, manager representative)

Peder Fiske (NEAC, scientist representative)

Tony Blanchard (NAC, manager representative)

Tim Sheehan (NAC, scientist representative)

Maria Strandgård Rasmussen (WGC, manager representative)

Niall Ó Maoiléidigh (WGC, scientist representative)

Dennis Ensing (ICES representative, Observer)

Patrick Gargan (Co-ordinator)

**New questions, originator:**

- 1.3 (EU)
- 1.4 (US)