



CNL(16)12

*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 2016<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 a review of examples of successes and failures in wild salmon restoration and rehabilitation and develop a classification of activities which could be recommended under various conditions or threats to the persistence of populations<sup>3</sup>;
  - 1.4 **provide a summary of the available diet data for marine life stages of Atlantic salmon and identify key prey species at different life stages (e.g. herring at postsmolt stages, capelin in West Greenland waters and the Barents Sea)<sup>4</sup>**
  - 1.5 **quantify possible future impacts of climate change on salmon stock dynamics**
  - 1.6 provide a compilation of tag releases by country in 2016; and
  - 1.7 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 2016 fisheries<sup>5</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 CL's by jurisdiction;**
  - 2.3 describe the status of the stocks **including updating the time series of trends in the number of river stocks meeting CL's by jurisdiction;**
  - 2.4 **provide information on the size, distribution and timing of the blue whiting fishery in the North East Atlantic area and any official observer information relating to bycatch which may indicate possible impact of this fishery on wild salmon.**

*In the event that NASCO informs ICES that the Framework of Indicators (FWI) indicates that reassessment is required:\**

  - 2.5 provide catch options or alternative management advice for 2017/18 – 2019/20 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>6</sup>; and
  - 2.6 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 2016 fisheries (including the fishery at St Pierre and Miquelon)<sup>5</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 CL's by jurisdiction**
- 3.3 describe the status of the stocks **including updating the time series of trends in the number of river stocks meeting CL's by jurisdiction**

*In the event that NASCO informs ICES that the Framework of Indicators (FWI) indicates that reassessment is required:\**

- 3.4 provide catch options or alternative management advice for 2017-2020 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>6</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 2016 fisheries<sup>5</sup>;
- 4.2 describe the status of the stocks<sup>7</sup>;

*In the event that NASCO informs ICES that the Framework of Indicators (FWI) indicates that reassessment is required:\**

- 4.3 provide catch options or alternative management advice for 2017 - 2020 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>6</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, including information on any new research into the migration and distribution of salmon at sea and the potential implications of climate change for salmon management.*
- 3. *With regards to question 1.3, NASCO is particularly interested in case studies highlighting successes and failures of various restoration efforts employed across the North Atlantic by all Parties/jurisdictions and the metrics used for evaluating success or failure.*

4. *In response to question 1.4, ICES is requested to comment on any significant changes in population dynamics (i.e. abundance, distribution, size structure, and energy density) of key prey species which may be associated with changes in salmon abundance, distribution, and marine ecology (e.g. the recently identified decreases in capelin energy density and the consequences on marine productivity of Atlantic salmon while also providing information related to fisheries which catch significant numbers of the identified key prey species (i.e. direct harvest or bycatch).*
5. *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 ICES should review the results of the recent phone surveys and advise on the appropriateness for incorporating resulting estimates of unreported catch into the assessment process.*
6. *In response to questions 2.5, 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.*
7. *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.*

**\* The aim should be for NASCO to inform ICES by 31 January of the outcome of utilising the FWI**

**Attendees:**

Konstantin Drevetnyak, (NEAC, manager representative)

Peder Fiske (NEAC, scientist representative)

Tony Blanchard (NAC, manager representative)

Tim Sheehan, (NAC, scientist representative)

Esben Ehlers (WGC, manager representative)

Ted Potter (WGC, scientist representative)

Jonathan White (ICES representative, Observer)

Patrick Gargan Coordinator

**New questions, originator:**

- **1.4 USA**
- **1.5 Norway**
- **2.2, 2.3, 3.2, 3.3 European Union**
- **2.4 NGO's**