

Agenda item 7.3(a)  
For decision

**Council**

**CNL(06)18**

*Amendments to the 'Williamsburg Resolution'*

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### *Amendments to the 'Williamsburg Resolution'*

1. The Resolution by the Parties to the Convention for the Conservation of Salmon in the North Atlantic Ocean to Minimise Impacts from Aquaculture, Introductions and Transfers and Transgenics on the Wild Salmon Stocks, 'the Williamsburg Resolution' (CNL(03)57), was adopted by the Council in 2003. In adopting the Williamsburg Resolution the Council had recognised that it was a 'living document' that would evolve in future in the light of experience with its implementation, consultations, improved scientific understanding of the impacts of aquaculture, introductions and transfers and transgenics, and developments in measures to minimise them. In 2004, the Council adopted a new definition of 'transgenic' and amended the Guidelines for Action on Transgenic Salmon. The Council had also adopted Guidelines for Stocking Atlantic Salmon. The amended Resolution is contained in CNL(04)54.
2. Last year the Council agreed that the Memorandum of Understanding between the US and Canada, which is intended to reconcile differences between the methods used by these countries to authorise introductions and transfers, should be appended to the Williamsburg Resolution. Furthermore, prior to the Twenty-Second Annual Meeting, the International Salmon Farmers' Association (ISFA) provided comments on the Williamsburg Resolution in accordance with an agreement made at the Liaison Group meeting in 2005. No comments were received from the salmon farming industry in Scotland or Russia (which are not members of ISFA). The Council asked that the Secretary develop a response to these comments in consultation with the Parties and transmit it to the President of ISFA. Our response is contained in Annex 1 of CNL(06)19. These responses were sent to the President of ISFA on 8 November and were discussed at the meeting between ISFA and the NASCO Secretariat on 9 May (see document CNL(06)19). ISFA is able to accept NASCO's proposals for addressing their comments, with a few minor exceptions (see document CNL(06)19). Annex 1 contains those sections of the Williamsburg Resolution where changes are proposed (shown as tracked changes) in the light of the comments from ISFA, the responses proposed by NASCO, and the discussions at the meeting on 9 May.
3. The Council is asked to consider these proposed changes and decide if it can accept them or take other action as appropriate. It is hoped that the differences between NASCO and the salmon farming industry on the Williamsburg Resolution are now resolved and it will be possible to make further progress through the Liaison Group on issues of mutual interest.
4. Once the Council has agreed the changes to the Williamsburg Resolution we will issue it as a brochure.

Secretary  
Edinburgh  
19 May, 2006



### PREAMBLE

RECOGNISING that in order to protect wild salmon stocks from adverse impacts that can or might be caused by aquaculture, introductions and transfers, and transgenics, there is a need to take into account local conditions in determining appropriate management measures;

### **ARTICLE 3**

#### Burden of Proof

Each Party, in accordance with the Precautionary Approach, should require the proponent of an activity covered by this Resolution to provide all information necessary to demonstrate that the proposed activity will not have an-a significant adverse impact on wild salmon stocks or lead to irreversible change.

### **ARTICLE 5**

#### Measures to Minimise Impacts of Aquaculture and Introductions and Transfers

Each Party shall take measures, in accordance with Annexes 2, 3 and 4 to this Resolution, to:

- Minimise escapes of farmed salmon to a level that is as close as practicable to zero through the development and implementation of action plans as envisaged under the Guidelines on Containment of Farm Salmon (CNL(01)53);
- Minimise impacts of farmed salmon by utilizing local stocks and developing and applying appropriate release and harvest strategies;
- Minimise the adverse genetic and other biological interactions from salmon enhancement activities, including introductions and transfers;
- Minimise the risk of ~~transmission to wild salmon stocks of diseases and parasites from~~ disease and parasite transmission between all aquaculture activities, ~~and from~~ introductions and transfers, and wild salmon stocks.

Movements into a Commission area of reproductively viable Atlantic salmon or their gametes that have originated from outside that Commission area should not be permitted.

### **ARTICLE 9**

#### Mitigation and Corrective Measures

Where significant adverse impacts on wild salmon stocks are identified, the Parties should initiate corrective measures without delay and these should be designed to achieve their purpose promptly.

Mitigation measures can include activities to safeguard against potential future impacts (e.g. contingency planning, gene banks).

## ARTICLE 10

### Implementation

In order to have confidence that the wild stocks are protected from irreversible genetic change, from significant ecological impacts and from significant impacts of diseases and parasites, full implementation of the measures in this Resolution and its Annexes is essential. Local conditions may warrant consideration of stronger measures. All measures should be regarded as adaptable to improved salmon aquaculture technologies and methodologies (e.g. use of sterile fish, lice vaccines, etc.)

Where detailed agreements are developed by a regional Commission of NASCO in support of this Resolution, they will be appended. Appendix 1 indicates the current situation within the North American Commission. Appendix 2 contains a Memorandum of Understanding between Canada and the USA intended to reconcile the differences between the methods used to authorise introductions and transfers in the two countries. Any further guidelines to assist in implementing this Resolution will be annexed.

Each Party shall report annually to the Organization on the measures adopted and actions taken under Articles 5, 6, 7 and 9.

## Annex 1

### Definitions relating to Salmon Aquaculture, Introductions and Transfers and Transgenics

Term	Definition
Containment	<u>Physical containment</u> : Prevention of escapes of farmed salmon into the freshwater and marine environments. <u>Containment of diseases and parasites</u> : Implementation of measures to prevent the <u>transfer (spread)</u> of diseases and parasites <u>from-between</u> aquaculture facilities <u>and wild fish</u> .
Epidemiological zones	Zones defined by lack or presence of specific pathogens.
Introduction	The intentional or accidental release of a species into an environment outside its native or natural range.
Mitigation stocking	Stocking conducted as a voluntary action or statutory requirement to mitigate lost production due to an activity that cannot be removed.
Non-indigenous	Not originating or occurring naturally in a particular environment; introduced outside its native or natural range.
Population	A group of organisms of a species occupying a specific geographical area.
Rehabilitation	The rebuilding of a diminished population of a finfish species, using a remnant-reproducing nucleus, toward the level that its environment is now capable of supporting.
Restoration	The re-establishment of a finfish species in waters occupied in historical times.
Risk assessment	The process of identifying and describing the risks of activities having an impact on fisheries resources, habitat or aquaculture before such activities take place; the process of identifying a hazard and estimating the risk presented by the hazard, in either qualitative or quantitative terms.
River classification	Designation of a river or watershed according to the degree of human impact.
Salmon aquaculture*	The culture or husbandry of Atlantic salmon and includes salmon farming, salmon ranching and salmon enhancement activities.
Salmon enhancement	The augmentation of wild stocks in individual river systems by the release of Atlantic salmon at different stages in their life-cycles.
Salmon farming	Production system which involves the rearing of Atlantic salmon in captivity for the duration of their life-cycle until harvested.
Salmon ranching*	The release of reared Atlantic salmon smolts with the intention of harvesting all that return.
Salmonid*	All species and hybrids of the family salmonidae.

## Annex 2

### General Measures To Minimise Impacts

This Annex is designed to provide guidance to NASCO's Parties on minimising impacts of salmon aquaculture and introductions and transfers on wild salmon stocks. The guidelines will be regularly reviewed and updated as appropriate in the light of new scientific information and changing technologies and methodologies.

#### 1. Siting and Operation of Aquaculture Activities

- 1.1 Salmon aquaculture facilities should only be located where hydrographical, epidemiological, biological and ecological standards can be met. Factors which may be taken into consideration include: availability of water supply and receiving waters for discharge; water quality and exchange; water depth; site protection; separation distances between aquaculture facilities; and distance from salmon rivers. Further guidance on containment is provided in Annex 3.
- 1.2 Consideration should be given to the establishment of “wild salmon protection areas” where salmon aquaculture is restricted or prohibited. Such protection areas may minimise genetic, disease, parasite and environmental impacts.
- 1.3 The designation of “aquaculture regions”, where all the steps in the production process are carried out and which are separated from similar regions by areas without aquaculture, ~~should~~ could also be considered. Such regions could provide a framework for management of the aquaculture industry and could assist in controlling the spread of fish diseases and parasites.
- 1.4 The separation distance between aquaculture facilities at marine sites should be based on a general assessment of local conditions. Wherever possible, different generations of salmon should be reared in separate locations. As local conditions permit, a fallowing regime should be practised as a means of minimising outbreaks of disease and parasites. Aquaculture production should be adapted to the holding capacity of an individual site and should not exceed density levels based on science and good husbandry practices.
- 1.5 Dead and dying fish should be removed immediately from aquaculture production facilities, taking into account worker safety, and weather and sea state conditions. Mortalities should be ~~and~~ disposed of, along with waste materials, in an approved manner. Procedures should be established to address the effective removal and disposal of infectious material. Contingency plans should be established for the disposal of mortalities from emergency situations.
- 1.6 ~~Tagging~~ Depending on local regulations and protocols, tagging or marking or inventory tracking systems ~~could~~ will be used in order to facilitate the identification of farmed salmon in the wild and their separation from wild fish, to determine the source of escapes and to assess the interactions of escaped farmed salmon with the wild stocks. These systems could be coupled with river monitoring and recapture systems that allow holding and close examination of returning fish in the rivers.

## 2. Diseases and Parasites

2.6 Even with such procedures, it may not be possible to respond in time to prevent the spread of such a disease or parasitic infection. It is recommended that the Contracting Parties, when establishing or reviewing rules on transfers of fish, consider additional protective measures such as:

- **the establishment of zones:** the intention of such zones, between which the movement of live salmonid fish and their gametes should be restricted and which might be defined using geographical, climatic or biological criteria, is to limit the spread of parasites and diseases to wild stocks;
- **the movement of salmonids:** for disease prevention purposes, the trade in eggs is safer than the trade in live fish. It must, however, be recognised that some serious diseases, such as IPN, BKD and IHN, may be transferred with eggs and ovarian fluid;
- **diseases of wild fish:** there is a need to strengthen and amend disease controls to ensure adequate protection of wild fish, minimise disease transfer between aquaculture activities and wild fish.



## Annex 5

### CNL(04)41

#### *NASCO Guidelines for Action on Transgenic Salmonids*

THE PARTIES to NASCO are aware of the development of transgenic salmonids. While there may be benefits from the introduction of such salmonids if, for example, they could not interbreed with wild stocks the Council recognises that there are also risks which may lead to irreversible genetic changes and ecological interactions.

The Council considers that there is an urgent need to take steps to ensure the protection of the wild stocks and has therefore agreed to cooperate to develop means such that transgenic salmonids cannot impact upon wild salmon stocks. The following specific steps are agreed.

The Parties will:

- a) advise the NASCO Council of any proposal to permit the rearing of transgenic salmonids and provide details of the proposed method of containment and other measures to safeguard the wild salmon stocks;
- b) take all possible actions to ensure that the use of transgenic salmonids, in any part of the NASCO Convention Area, is confined to secure, self-contained, land-based facilities;
- c) inform their salmon producers of the potentially serious risks to wild stocks of this development and consult with the salmon farming industry on this matter through the Liaison Group established between NASCO and the international salmon farming industry;\*
- d) take steps, as appropriate, to improve knowledge on the potential impacts of transgenic salmonids on the wild salmon stocks and their habitat;
- e) examine the trade implications associated with transgenic salmonids in accordance with World Trade Organization Agreements and other instruments of international law.

Furthermore, those Parties to NASCO that are also Parties to the Cartagena Protocol on Biosafety to the Convention on Biological Diversity should take into account the provisions of that Protocol.

\*Note: At its Seventeenth General Meeting in Galway, Ireland, in September 1996, the International Salmon Farmers' Association (ISFA) adopted its Policy on Transgenic Salmon, which states that "In accordance with sound environmental practices, the ISFA firmly rejects transgenic salmon production".

## Annex 7

### Research and Development and Data Collection

Research and data collection should be carried out, as appropriate, in support of this Resolution. Recognising that research requirements are continually developing, a list of current research areas is identified in this Annex. Where appropriate, successful research results should be taken forward to pilot testing

Areas for research and pilot testing include:

#### Sterile fish

Methodology and techniques for sterilization are now well developed; research should now focus on developing strains of sterile fish which could perform at a level similar to current strains of fish used in farm production. Trials should be encouraged to evaluate the performance of strains of sterile fish under production conditions.

#### Tagging and marking

Tagging and marking is being used on a small scale in order to facilitate the identification of farmed salmon in the wild and their separation from wild fish, to determine the source of escapes and to assess the interactions of escaped farmed salmon with the wild stocks. Full evaluation of those trials should be conducted in order to assess effectiveness, the feasibility of large-scale marking, and associated costs. Consideration should also be given to food safety, product quality and animal welfare.

#### Alternative Evaluation of production methods

There should be an ongoing evaluation of current and new production methods and technology including land based production facilities, closed or contained floating facilities, water recirculation and other containment technologies to evaluate their potential to reduce the risk of disease and parasite transmission and escapes. —(e.g. improved containment techniques, development of suitable strains of sterile fish, development of sea lice vaccines, etc.).

#### Aquaculture broodstock

Research is recommended on broodstock selection methodology to minimise impacts on wild salmon stocks.

#### Genetics

Great advances have been made in genetic research in the past decade. These methods should be applied in investigating, in greater detail, interactions between wild salmon and salmon of aquaculture origin, including the extent of hybridization, composition of stocks, and identification of disease strains and appropriate treatment.

### Diseases and parasites

The transmission of diseases and parasites ~~from-between~~ salmon reared in aquaculture ~~to-and~~ the wild stocks is an area of considerable concern. Research on vectors for transmission, and methods to prevent and control disease and parasite outbreaks in wild salmon and in aquaculture, should be encouraged.

### Interactions

Information should be collected and analyzed on the extent of intermingling in rivers and at sea between wild salmon and salmon of aquaculture origin.

### Risk assessment frameworks

There has been considerable activity in the development of risk assessment frameworks. There remains a need to identify the appropriate factors to be included in a risk assessment in order to evaluate the potential impacts of aquaculture, introductions and transfers, and transgenics on wild salmon stocks.

### Biological impacts

Further work is recommended on biological interactions between wild salmon and salmon of aquaculture origin including competition and behavioural interactions that may affect the viability and success of the wild populations.

### Escape prevention

Research into escape detection technologies and improved containment systems should be encouraged.