

# **Twentieth Annual Meeting of NASCO**

**Balmoral Hotel, Edinburgh, Scotland  
2 - 6 June 2003**

**Standing Committee on the Precautionary Approach**

**SCPA(03)6**

*How does Icelandic Legislation conform to NASCO Resolutions?*

*(Tabled by Iceland)*

**Standing Committee on the Precautionary Approach**  
Meeting in Williamsburg, Virginia, USA 10-12 March 2003

Árni Ísaksson:

**How does Icelandic legislation conform to NASCO Resolutions**  
(CNL(94)53, NEA(97)12, CNL(97)48, CNL(01)53

Introduction

The Contracting Parties to NASCO have been asked to analyse how NASCO agreements concerning introductions and transfers, aquaculture and transgenics conform to the Precautionary Approach and are being incorporated into the legislation in each region. Any difficulties in implementing the measures should be pointed out as well as any amendments needed.

Iceland is only concerned with four of those resolutions, i.e. the Oslo resolution (CNL(94)53, the Resolution of the Northeast Atlantic Commission (NEA(97)12, the NASCO Guidelines on Transgenic salmon CNL(97)48 and the Guidelines on Containment of farmed salmon CNL(01)53.

When considering these issues it must be borne in mind that most European salmon countries, except Russia and Faroes, are bound by EU laws and regulations as they are passed. Countries outside the EU but inside the European economic area such as Iceland and Norway have accepted to take over and adapt EU Directives and Regulations as they emerge. This has certainly influenced newly passed Icelandic laws and will be even more prominent in the future. The same is true regarding laws, which are affected by the agreements of WTO, which Iceland is a party to.

Despite this there is a bulk of legislation passed by the Icelandic parliament, which has not been affected by outside legislation. This is certainly the case with the Salmonid Fisheries Act nr. 76/1970 with later amendments and regulatory measures based on the act. Many of these actions precede any resolutions passed by NASCO as Iceland has been very concerned with possible negative effects of aquaculture since the late 1980s.

I will now go through the clauses of the 4 NASCO resolutions and guidelines and point out how these agree with the current Icelandic legislation, starting with the Oslo resolution.

**The Oslo resolution CNL(94)53**

Article 1 through 3 describe the aims of the resolution in general terms, which are in good agreement with the general spirit of Icelandic laws and regulations on enhancement and aquaculture. It is thus more meaningful to go to the 4 parts of the annex, which cover the detail of any action.

**Part 1. General measures**

**§ 1-2 Sites and operations**

This section discusses siting and operations of aquaculture units as well as the need to control transfers. Although marine fish farms have only recently started operation in Iceland there are a number of provisions in Icelandic laws and regulations to deal with the issue, which has also been described in CNL(01)69, which discussed the special measures taken by

Iceland to minimise impacts of salmon aquaculture on wild salmon stocks. That paper can be consulted for greater detail.

The following 2 sections of the Salmonid Fisheries Act enacted in 2001 dealing with a fish farming application, show the concern of the Icelandic management authorities with respect to this issue:

*“2. The application for an Operating Licence for farming and ranching shall be in a written form, specifying the ownership of the farm as well as the qualifications of the applicant, size of the farm, quantity to be produced, species used, proposed rearing technique, information regarding the status of the project with respect to an Environmental Assessment according to law nr. 106/2000 and the Environmental Licence according to law nr. 7/1998 on Environmental and Food Control. The application shall be accompanied by documents of title for the use of land, water and seawater, a plan regarding the financing of the facility and equipment, operational plan, local building permit, other permits needed for the intended operation as well as any other documents deemed necessary by the Directorate of Freshwater Fisheries.*

*3. When considering an application for the operation of a fish farm or salmon ranch the Directorate of Freshwater Fisheries shall evaluate potential disease and ecological effects of the fish farm or salmon ranch. If documents provided with the application are unsatisfactory for such an evaluation the Directorate can impose on the applicant to provide further information prior to the issuing of an operating license. Such requirement may include research at the expense of the applicant into potential genetical and ecological threats posed by the proposed fish farm through tagging of fish, compiling of meteorological and oceanographic information. Also compilation of other freshwater fishing as well as farming interests in the area, evaluation of the status of riverine anadromous stocks in the vicinity and the migration of anadromous fish in the proposed farming area.”*

### § 3. Transfers

The following section in the Act (Sec. 75) has been devoted to the issue of transfers:

*“1. Selectively bred salmon can only be used for fish farming operations and the release of such stocks for enhancement or ranching is prohibited. The Directorate of Freshwater Fisheries can issue an exemption to a research organization for small scale release experiments after receiving comments from the Institute of Freshwater Fisheries.*

*2. The transport of fish species, which are not specified in an operating licence, between unrelated fish farms and ranching stations as well as the transport and release of live fish or eggs between unrelated watersheds is prohibited.*

*3. The Directorate of Freshwater Fisheries can grant an exemption for the transport of fish species, which are not specified in an operating licence, between unrelated fish farms and ranching stations as well as the transport and release of live fish or eggs between unrelated watersheds after receiving comments from the Veterinary Officer for Fish Diseases and the Fish Disease Committee. The Directorate of Freshwater Fisheries shall consult the Institute of Freshwater Fisheries on the issue, whether the proposed rearing or ranching activity is located in an area, where it could pose negative genetic and/or ecological threats to wild salmonid stocks”.*

The issue is also covered in the Regulatory Measure nr. 105/2000 regarding transport and release of salmonids and protection against fish diseases and genetic mixing of stocks. The

measure has not been updated in English but the provisions regarding transfers are the following:

a) Transfer and Release of Salmon of Wild Origin

- Transfer of wild salmonids and their eggs between watersheds is subject to approval by the Directorate of Freshwater Fisheries. Wild broodfish must be slaughtered and monitored for disease according to specifications from the Fish Disease Committee.
- The Directorate can grant a permission for the use of non-local stocks in rivers with none or small stocks of salmon provided that the effects on nearby rivers are considered negligible.
- The Directorate can also permit transfer of wild salmonids into sea cages and land-based rearing stations with the approval of the Fish Disease Committee.

b) Transfer and Release of Salmon of Reared and Ranched Origin

- Ranching stations can use ranching stocks from approved facilities.
- Reared brood fish, disinfected eggs and juveniles of reared origin can be transferred freely between rearing facilities as long as it conforms to disease regulations.
- Transfer to stations with runoff into rivers must, however, be confined to the species found in the watershed and the approval of the Directorate is needed for the introduction of other species.
- The release of salmonids of foreign origin for enhancement or ranching is prohibited. The Directorate can, however, grant an exemption to a research organization for a period of two years with the approval of the Fish Disease Committee and subject to the tagging of all fish released.

## **Part 2. Measures to minimise genetic and other biological interactions**

### § 4. Design standards for aquaculture units

Although no official standards have yet been set for aquaculture units, work is underway to set such standards. Provisions for setting standards first appeared in the Icelandic laws in mid 2001 and there is as yet no agreement between the authorities and fish farmers on such criteria. The regulations on this issue are closely linked to provisions regarding internal and external inspection of such facilities.

### § 5 and 6 Enhancement and ranching

The issues regarding enhancement and ranching are covered in of the Salmonid Fisheries Act. Section 23 of the Act has the following provisions:

*“(1) It is obligatory to make a fish cultivation plan reaching over a five years period in every fishing water, where enhancement is planned with fry and smolt-releases, sustenance of angling or through other aspects of enhancement mentioned in 44 (2).*

*(2) Fish cultivation plan cf. (1) depends upon the consent of the Directorate of Freshwater Fisheries, insofar as a Fishing Association or the majority of fishing right owners have decided upon such an undertaking. The permit shall contain provisions which the*

*Directorate considers necessary to protect the fish stock in question against diseases and genetic mixing and will be further specified in a Regulation by the Minister.*

- (3) In the case of a Fishing Association or the majority of fishing right owners in a fishing water wanting to take fish for hatching purposes, it is subject to a permit issued by the Directorate of Freshwater Fisheries. The permit will be valid for a specified period and it shall contain the necessary provisions for the protection of fish stock cf (1) Section 22.*
- (4) The Directorate of Freshwater Fisheries is cf.(1) and (2) enabled to permit the use of ocean ranching stock from the same area of the country for sustenance of angling in a river, subject to the consent of the fishing right owners in said river, as mentioned in (2).*
- (5) Enhancement of rivers and lakes shall be carried out by using the fish stocks from the same fishing waters.*
- (6) Transport of salmonids from natural fishing waters, salmon ranching stations or fish farms into natural fishing waters for angling is prohibited.*
- (7) The Directorate of Freshwater Fisheries can grant an exemption from provisions in (5) and (6) after obtaining an evaluation of the effects of the proposed activity on the aquatic ecosystem of the fishing water in question and nearby watersheds.”*

#### § 7 Salmon farming

The provisions on the genetic interaction of salmon farming are found in sections 72, 75 and 77 of the Salmonid Fisheries Act and are as follows:

(section 72)

*“(1) In cases of fish escaping from a certified cage rearing station, it is permitted, notwithstanding the protection of wild fish in the area, to harvest fish at sea within 200 metres of the station, provided it is in common waters outside the netting zone and the Director of Freshwater Fisheries has been notified. Should this happen during the migration period for salmon, the permit is only valid for a period of three days and nights (72 hours) after the escape of the fish, and shall be executed in collaboration with a representative of the Directorate of Freshwater Fisheries.*

*(2) If a licensed fish farm does not start fishing in accordance with (1) within 12 hours of the notified escape, it is right for the Directorate of Freshwater Fisheries to issue a general fishing permit in the area subject to the terms specified in (1).*

*(1) The holder of an Operating Licence is obliged to notify the Directorate of Freshwater Fisheries in the event of accidental escapes from cages.”*

(section 75) See § 3 Transfers.

(section 77)

*“The Minister of Agriculture further defines the execution of this chapter through rules and regulatory measures e.g. on issuance of an operating licence, total or partial*

*microtagging of smolts put into sea-cages, use of fish feed, maintenance and renewal of rearing equipment, appraisal of rearing and ranching stations, official inspection of fish farming and ranching activity, movement of fish species between unrelated fish farms and ranching stations, movement of live fish and eggs between unrelated watersheds etc. The Minister of Agriculture can also, after consulting the Veterinary Officer for Fish Diseases, Freshwater Fisheries Committee, the Directorate of Freshwater Fisheries and Institute of Freshwater Fisheries, restrict or prohibit fish farming, ranching or certain type of rearing methods in specific fjords, bays or coastal areas, which are considered exceptionally vulnerable with respect to environmental impact of such activity. Such a decision shall take into account, that the aim of the provision is to protect wild salmonid stocks against negative genetical changes, fish diseases and ecological effects. The decision shall consider the location of the fish farms, their size, distance from salmonid rivers and the value of the angling activity within the area. Also must be considered, whether migrating salmon or trout are likely to migrate close to the fish farms and whether oceanic currents may carry escapees into salmon rivers. The Minister of Agriculture shall also designate certain coastal areas, outside the netting zone, specifically for fish farming and set a production quota in each area.”*

### **Part 3. Measures to minimise disease and parasite interactions**

#### § 8 Control and prevention of diseases and parasites

The Icelandic laws on fish diseases are not available in English but they are to a large extent guided by EU Council Directives. The following could be emphasized:

- In 1985 a new law (no. 61/1985) about a “Veterinary Officer for Fish Diseases”, was brought into force in response to changing fish disease risks, as fish farming was expanding and knowledge of such disease increasing. This law was followed by a new regulation in 1986 ( no. 403/1986) concerning measures to prevent and control fish diseases and provide health inspection at fish farms.
- In 1986 a new law was enacted establishing the Fish Disease Laboratory as a separate department of the Institute for Experimental Pathology.
- Since 1985 all fish farms in Iceland have been under obligatory and regular fish health surveillance.
- From 1993 Iceland has followed the European Union (EU) regulations and used the requirements laid down in Council Directive 91/67/EEC and the disease control measures provided for in Directive 93/53/EEC as a guidelines in the national fish health monitoring system.
- The sampling and diagnostic procedures as given in Commission Decision 96/240/EEC were followed.
- The fish health status in Icelandic aquaculture in general is very promising. The main reasons for that is presumed to be the geographical isolation of the country, strict import policy, secure water supply for the farms and effective fish health surveillance.

#### § 9 – 15 Stocking density to list of diseases

All these items are covered in detail in CNL (01) 69 regarding measures to protect wild salmon stocks.



*tagging of fish and compilation of meteorological and oceanographic information. Also compiling of other freshwater fishing as well as farming interests in the area, evaluation of the status of riverine anadromous stocks in the vicinity and the migration of anadromous fish in the proposed farming area. Also investigations into the fate of escaped farmed salmon through systematic tagging and release from cages, monitoring of nearby rivers for tagged salmon and the monitoring of sexual maturation and health in the cages. Operating Licence can not be issued until a decree has been issued regarding the need of the project to undergo an Environmental Assessment according to law nr. 106/2000, if the facility is potentially subject to such an assessment. The Operating Licence is also subject to a positive outcome from such an assessment and must conform with such a ruling. The Operating Licence can further not be issued until after the issuance of an Environmental Licence according to law nr. 7/1998 on Environmental and Food Control.”*

#### Section 77

*“The Minister of Agriculture further defines the execution of this chapter through rules and regulatory measures e.g. on issuance of operation licences, total or partial microtagging of smolts put into sea-cages, use of fish feed, maintenance and renewal of rearing equipment, appraisal of rearing and ranching stations, official inspection of fish farming and ranching activity, movement of fish species between unrelated fish farms and ranching stations, movement of live fish and eggs between unrelated watersheds etc.”*

The remaining issues in § 16. have been encouraged and some research is ongoing.

### **Resolution by the Northeast Atlantic Commission to protect wild salmon stocks ,NEA(97)12**

#### **Article 1. Movements from outside the NEAC area**

- No such movements of Atlantic salmon or their eggs have been permitted in Iceland.

#### **Article 2. Transgenic Atlantic salmon**

- Issues regarding transgenic organisms are generally handled by the Ministry of the Environment in Iceland and it seems likely that the policy of the EU will in principle be adopted.
- There has been no attempt to bring transgenic salmon into Icelandic aquaculture and any such activity would be prohibited by the authorities.

#### **Article 3. Movements within the NEAC area.**

##### Specific diseases and parasites

- None of the specified diseases have been observed in Iceland and such zones have thus not been established.

#### Unknown diseases and parasites

- For information on Icelandic zoning and rules on importation see section 5 of CNL(01) 69.
- Importation of salmonids into Iceland even as eyed eggs has rarely been permitted but application for importation of other species is growing. There is always a rigorous inspection at donor facilities by Icelandic disease authorities.

#### **Article 4. Movement of non-indigenous fish**

- There have been no movements of non-indigenous fish into Icelandic salmon rivers.

#### **Article 5. Classification of rivers.**

- One Icelandic river “Rangá” would fall into group 1 (no sustaining salmon stock)
- All other salmon rivers would fall into group 2 (rivers with self-sustaining salmon stock)

#### **Article 6. Management measures**

- Rangá river (group 1) never had a sizeable salmon population and is thus dependent on annual releases of salmon smolts. Smolts from enhancement and ranching have been used.
- Enhancement in other rivers (group 2) is in line with the 4 items listed under group 2 rivers.

#### **Article 7. Unintentional introductions and releases**

- Releases in this category are not known to have happened in Iceland

#### **NASCO guidelines for action on transgenic salmon CNL (97) 48**

Icelandic authorities have limited information on this issue, which has not been brought up in Iceland. Iceland otherwise supports the statements in paragraphs a) through f).

#### **Guidelines on Containment of Farmed Salmon CNL (01) 53**

Icelandic salmon management authorities are in the process of adopting a standard for the strength and preventive maintenance of sea-cages. Such a standard will be more rigorous than the guidelines set forward by the NASCO Liaison Group. The NASCO guidelines must thus be considered a minimum standard and any regulation set in Iceland will impose a greater responsibility on the fish farming industry with respect to construction and maintenance of sea cages. This is in line with recent development in Norway and Canada, where authorities are raising the standard for cage constructions. It is hoped that such action plans for Iceland in the form of regulatory measures can be set before the end of 2003.

## **Conclusions**

If one considers the content of the 4 resolutions and guidelines discussed in this paper, it seems that we have come a long way and NASCO has done a good job in guiding salmon managers around the North Atlantic towards the same goal and focusing on the problems facing the Atlantic salmon. This work has also been much in line with the Precautionary Approach.

It will, however, be difficult to go much further in standardizing legislation and regulations within the NASCO forum. It is well known, that none of these resolutions and guidelines have been binding as various Contracting Parties have wanted the flexibility to go either to less severe or more stringent measures than those agreed. This is also influenced by the fact that national legislation in most European salmon producing countries, including the European Economic Area such as Iceland and Norway, is being molded to a greater extent by Council Directives and Regulatory Measures from the EU. Where EU Directives and national legislations are not in agreement, the latter usually has to be changed. With an ever increasing number of non-salmon producing countries within the EU one could possibly also expect less understanding and consideration for wild salmon issues.

It seems thus, that it might be useful for the Contracting Parties within the EU and EEA to coordinate their views and try to influence various EU legislations, which may affect the Northeast Atlantic salmon resource in the future. Since these Contracting Parties are all members of NEAC, it seems that NASCO could play a role in such consultations. There is a large deal of official consultation taking place between EU and the EEA on fish disease issues, which frequently relate to trade of fish and agricultural items. Such a platform on management and ecological issues has, however, been non-existent (with the exception of NASCO), which is surprising considering the importance of the Atlantic salmon to various stakeholders.