EAA
European AnglersAlliance

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EAA Position Paper
Salmon farming – impacts on wild fish

Background

From tentative beginnings in the 1970s Atlantic salmon farming has evolved into a huge multinational business, and production worldwide topped one million tonnes in 2004. Atlantic salmon production is concentrated in three countries,Norway (600,000t), Chile (345,000t) and Scotland(150,000t).

In Norway, salmon farming accounts for over 38% of the value of the country's seafood exports. 3000 people are directly employed on salmon farms inNorway, and the official estimate of other jobs supported by the industry is a further 17 000. InScotland, salmon farming now directly employs around 1500 people in remote rural areas, and some 6500 more in associated processing industries.

However, over the same period, stocks of wild Atlantic salmon have declined by more than 50%, with a worldwide catch of less than 10,000t in 2004. In addition there have been more localised declines of sea trout (the migratory form of brown trout), particularly on the west coasts of Scotlandand Ireland.

Wild salmon and sea trout are widely regarded as the indicator of a healthy ecosystem throughout the North Atlantic and themselves support valuable rod fisheries and tourist attractions in remote rural areas, with a socio-economic value similar to salmon farming.

The huge imbalance between the numbers of farmed salmon penned in coastal areas compared to wild populations has caused problems when large numbers of farmed fish have escaped, and when parasite levels on farmed fish have provided a reservoir of infection for migrating smolts.

This briefing paper sets out what the EAA believes should be done to address these two problems and minimise their impact on wild fish..

However , we stress at the outset that ***EAA and other mainstream NGOs support a sustainable salmon farming industry, provided it is properly regulated and operated in a transparent way, accountable to all stakeholders and not just company shareholders.***

Pressures on the life cycle of wild salmon

It is important to emphasize that wild Atlantic salmon have a complicated life cycle and the decline in their numbers can be attributed to a variety of causes:

- pressures on their spawning habitat in freshwater from excessive water abstraction and intensive agriculture leading to siltationand eutrophication
- declines in freshwater survival due to acid rain and predation by fish eating birds
- prevention of upstream and downstream migration by hydro-electric schemes
- the impact of sea lice of fish farm origin on migrating smolts
- poor survival in the marine environment, probably due to climate change affecting sea surface temperatures and migration patterns
- mixed stock fishing by commercial fishermen in coastal waters and predation by seals

Impacts of salmon farming are thus just one pressure on wild salmon, but it clearly makes sense to address those impacts, like salmon farming, which can be managed. Similarly,

overfishing at sea has already been controlled by international agreement. Significant investment in habitat improvement coupled with reforms of agricultural and forestry practice are taking place, and anglers are playing their part to reduce exploitation with increasing adoption of catch and release.

Internationally, these programmes are co-ordinated by the North Atlantic Salmon Conservation Organisation (NASCO), an inter-governmental treaty organisation dedicated to the conservation of this iconic species. Among many other achievements NASCO has already implemented its Williamsburg Resolution (2002) which is aimed at minimising the impact of salmon farming on wild fish, and has an ongoing dialogue on progress with both member governments and the International Salmon Farming Association.

The EAA at NASCO

The EAA is an accredited non-governmental observer (NGO) at NASCO. The NASCO governments have been criticized for lack of action in implementing NASCO guidelines, and this briefing paper sets out the position of EAA on three key issues: sustainability of feed, the impact of farm escapes and the impact of parasites and disease.

Sustainability of feed

The farming of piscivorous fish accounts for the use of 53% of the global supply of fish meal and 87% of the global supply of marine fish oil. However, use in the future for this purpose is likely to fall - Tacon(2004) estimates use by 2010 to fall from an inclusion level of 25%-30% to only 8% inclusion in salmon feeds as a result of substitution with vegetable oils.

"Industrial fisheries" fulfil current aquaculture feed demand for these products, the principle ones being: Peruvian anchovy (6.2 million tonnes in 2003), followed by blue whiting (2.4 million tonnes) and Japanese anchovy (2.1 million tonnes). Total landings of industrial or feed fish have remained fairly stable at around 20 to 25 million tonnes per year since 1984 (IFFO 2004), except in El Niño years.

- This abstraction of vast quantities of fish from the marine food chain has an inevitable knock-on effect on a wide range of predatory fish species.
- Organic fish farming standards require a substantial proportion of the fish protein and oil used in the manufacture of organic feed to come from 'sustainable sources'. Since no industrial fisheries have yet received globally-recognised certification as sustainable, a proportion of the fish required for organic feed is currently supplied by the processing sector, as a by-product of preparation of commercial species for human consumption. At present around 4 million tonnes per year of such 'trimmings' are used as fishmeal
- While the salmon farming industry and feed companies are working to reduce the proportion of fish meal and fish oil in aquaculture feeds, the EAA calls on the EU, Member States and international organisations such as NASCO to continue to press for maximum possible reduction in dependence on the use of "industrial fish" in the manufacture of feeds.

Parasites - sea lice

- There is now ample evidence that the production of juvenile lice (*Lepeoptheiriussalmonis*) on farmed salmon impacts adversely on wild fish if infective pressure is allowed to rise above a level which would cause infection of 10 or more lice per fish on wild smolts.
- In relation to sea lice management, we believe that national regulation is necessary, to ensure that each fish farming company manages lice levels on farms in keeping with target levels which will minimise impact on wild salmonids.
- This should include a target level of zeroovigerous lice during the 'critical period' for salmon smolt runs, and minimal levels ofovigerous lice over the period during which wild sea trout are likely to be in coastal waters.
- The EAA calls for increasing transparency in the UK in relation to publication of information

on typical farm lice levels, on a seasonal and management area basis.

Management and control measures for parasites and diseases

- The EAA welcomes the progress towards establishment of Area and Bay management agreements as a means of improving the management and control of parasite levels. We will continue to support and encourage constructive dialogue between government, fish farming industry and wild fish interests.
    - The EAA supports the calls of the salmon farming sector for better management of the authorisation process for veterinary medicines within the EU, to improve the availability of medicines used in EEA countries and facilitate better control of lice levels on farms, with rotation of active agents to minimise the danger of development of resistance to medicines used for sea lice treatment.
    - EAA welcomes the fact that the salmon farming industry in the UKand Norway places high priority on control of disease. While there appears to be no evidence that incidence of disease on farms is indicative of the likelihood of spread of disease to wild fish, we urge the industry to continue its efforts to minimise spread of disease among farmed fish by rigorous control of fish movements, and by use of vaccination and other health care programmes.
    - The EAA calls on the EC to ensure that Member States are allowed to put in place the levels of fish health protection deemed necessary by individual governments, in relation to the international trade in livesalmonid genetic material (ova and live fish). This is especially important in relation to diseases such as ISA which are not endemic in EU countries, and to parasites such as*Gyrodactylus salaris* which would pose a significant threat to salmonidsstocks in the UK and Ireland if imported. It is crucial to note that all existing country-to-country transfer of*G. salaris* appears to have been via trade in live fish.

Escapes

- There is substantial evidence that escapes of farmed salmonids remain at unacceptably high levels. There is also a growing body of evidence pointing to the irreversible adverse effects of hybridisation between farmed and wild salmonids – up to and including potential extinction of wild stocks. The salmon farming industry is resistant to the idea of using sterile fish; in any case, sterile escapees would still compete with wild fish for food and habitat. Escapees have also been shown to be a significant vector for the spread of sea lice infestation. EAA accepts that the industry has made efforts to improve containment, and that events such as exceptionally severe storms and other acts of God are likely to continue to cause occasional, catastrophic escape events. However, the EAA urges the EU to put in place a Community-wide containment policy for aquaculture based on NASCO guidelines– both freshwater and marine – which will make it incumbent upon Member States to regulate for better containment.

- The EAA supports, in general, Norway's NYTEK initiative, which will see all fish farm cages brought up to a minimum standard based on NS9415 by 2012.
- The EAA also calls for Member States to introduce exemplary penalties for allowing fish farm escapes through negligence.
- The EAA also calls for further work on tagging techniques which cause the least possible stress to the fish, do not place an impossibly high financial burden on the industry, but will serve to establish the ownership of escaped fish, with a view to implementation of the policy that "the polluter pays" in relation to damage caused to wild stocks by escaped farmed fish.

Ends

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Notes for Editors:

1. The European Anglers Alliance (EAA) is an alliance of the national governing bodies for angling in 18 European Countries. Formed in 1994, the EAA represents Europe's 25 million anglers.
For further information: www.eaa-europe.org

2. The North Atlantic Salmon Conservation Organisation (NASCO) is an inter-governmental treaty organisation with headquarters in Edinburghformed in 1984. The signatories are: Canada,Denmark in respect of the Faroe Islands andGreenland, European Union, Iceland, Norway,Russia and USA.
For further information www.nasco.int