



ROYAL NORWEGIAN MINISTRY OF
CLIMATE AND ENVIRONMENT

NASCO
Mr. Serge Doucet

Your ref

Our ref

Date

18/1606-20

19 april 2021

Revision of the Implementation Plan

Thank you for the opportunity to comment on how Norway will demonstrate progress towards the attainment of NASCO's Resolutions, Agreements and Guidelines. Norway recognizes the importance of the work conducted by NASCO, as well as the value of joining efforts in protecting the wild stocks of Atlantic salmon through international co-operation. A large proportion of the remaining stocks home to Norwegian rivers, and this places an added responsibility in our hands. Our aim is to fulfil our national and international obligations in a manner that protects the genetic diversity and productivity, and ensures a harvestable surplus, of these stocks.

We will address the specific deficiencies as pointed out in your letter. The topics regarding aquaculture are under the jurisdiction of the Ministry of Trade, Industry and Fisheries. The topics regarding habitat protection and restoration are partly under the jurisdiction of the Ministry of Petroleum and Energy. Thus, this letter has been authored in co-operation with these ministries.

Following are revised answers to the specific points concerning habitat protection and restoration:

3.5. "What SMART actions are planned during the period covered by this Implementation Plan (2019 – 2024) to address each of the threats and challenges identified in section 3.4 to implement NASCO's Resolutions, Agreements and Guidelines and demonstrate progress towards achievement of its goals and objectives for the Protection, Restoration and Enhancement of Atlantic Salmon Habitat?"



H2-2: Revision of terms for hydropower production licenses and address of rules of operation, in several rivers.

"Revision of terms of hydropower production licence is a priority for the Government, and the Norwegian Energy and Water Resources Authority (NVE) has been instructed in the annual budget award letter since 2019 to prioritise the revision cases. The main priority cases for NVE are the rivers with increased environmental goals, approved by the government under the Water Framework Directive plans in 2016. Several of the prioritised rivers are salmon rivers. Each county has an approved plan, where the plan sets individual targets with a deadline for achievement for each prioritised river segment.

The main purpose for the revision of terms for hydropower licenses is to improve the environmental conditions in the regulated river, given that the licence allows continued operation of the hydro power plant. All revised licenses are given new and modernized terms. The revised terms grant relevant sector agencies authority to impose environmental measures, surveys, monitoring and control of the power plants. If deemed necessary, the licensee is obligated to implement mitigating measures such as weirs, habitat improvement measures, river course adjustments, clearing operations, etc. to reduce harmful effects of the hydropower operation on fish and other valuable species. Revision of terms may also include changes in environmental flows, increased water flow to trigger fish migration, enhanced migration measures (e.g. fish ladders), installation of bypass valves, and ramping restrictions. One example case is Surna - an important salmon river where the terms recently were revised through the Folla-Vindøla case. Concrete examples of how the revision of terms have led to changed environmental flows etc can be found on <https://www.nve.no/konsesjonssaker/?ref=mainmenu#>."

H3: Improving salmon habitat in rivers altered to improve security during flood

"Minimising environmental effects in flood protection is an integrated part of the flood protection work financed by the Norwegian Government, such as effects on the salmon habitat. The Norwegian Energy and Water Resources Authority (NVE) is coordinating a national fund for flood protection work as well as environmental measures that the municipalities can apply for. The municipalities need to describe potential effects on biodiversity in their application. Environmental adaptations are important both when it comes to new flood protection works and in the restoration of old measures. The volume of this work depends on the annual state budget and applications from local communities. Each year, the best measures on both flood protection and environmental improvement, based on an assessment of costs and benefits, are given priority. The regional programmes of measures under the Water Framework Directive include cost-effective measures to improve environmental conditions, including for salmon. The programmes represent a plan for further work based on assessment of the environmental conditions in the water bodies."

Following are answers to the points concerning management of aquaculture, introductions and transfers, and transgenics:

The answer below addresses points 4.1, 4.2 and 4.3:

The Norwegian authorities are now preparing an aquaculture strategy in which challenges related to salmon lice and escapees are addressed. As the strategy is still in the pipeline it is too early to conclude on any measures. According to the schedule, the strategy will be presented before the summer of 2021. An action plan to meet the Norwegian quality standard for wild salmon stocks is also pending. This plan will also contain measures related to sea lice and escapes. In addition, we currently have a public hearing regarding new requirements to reduce the level of risk for escapees.

As for point 4.9, concerning *Gyrodactylus salaris*, Norway would like to reinstate our answer as written in the original IP and with a minor addition:

"The Norwegian national surveillance program for *G. salaris* in Atlantic salmon includes inspections and sampling in all hatcheries for commercial fish farming as well as all hatcheries for restocking of rivers. There is a risk-based selection of rivers, including the following rivers in the program:

- Rivers declared free after treatment
- The 30 rivers with largest stocks of Atlantic salmon
- Rivers with high risk of being infected by migrating fish
- Rivers of other risk values with geographical proximity to infested rivers and/or rivers where there are activities that have the potential to spread the parasite, i.e. rafting

The surveillance programme includes an epidemiological surveillance to find out more about how the river could have been infected, and what to do with the situation. It also includes a post treatment program that monitor the rivers for about 5 years before they can be declared free from *G. salaris*. After the treatment, fish from the Norwegian gene bank will be used to re-establish the stock.

The National Food and Safety Authority (NFSA) has made a contingency plan for regional and central level in the NFSA that states who will do what, when and how. There is also an action plan that contain measures and collaboration between different institutions and government levels involved (the NFSA, The Norwegian Environmental Agency, the county governors, and the Norwegian Veterinary Institute (NVI)).

Posters, brochures and internet pages in different languages has been developed to inform about the risk of introducing *G. salaris* and how to avoid such introduction to the public. We collaborate with all our neighbour countries to avoid the parasite being spread from these countries.

Development of monitoring and methods:

Regarding monitoring, a method using e-DNA has been developed that can be more effective when screening a watercourse than traditional sampling and morphological methods. NVI has used this method for some years and they are gaining experience with it.

Traditionally, rotenone has been used when combatting *G. salaris* infection in a river. This chemical kills both parasites and hosts, and a lot of other aquatic animals. A new method, using aluminium phosphate in combination with rotenone enables the host to survive. One infected river has successfully been treated with this method so far."

We hope this answers your questions. Should there be points which are in need of further clarification, please feel free to ask for supplementary information. Norway will attend the scheduled IP-webinar in May, with representatives from all relevant ministries, and will be happy to answer questions there as well as through the preceding inter-sessional correspondence.

Yours sincerely

██████████
████████████████████

████████████████████
██████████