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**Answer to the notification in accordance with article 10 of the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context for the Norway's River Basin Management Plan for the Finnish-Norwegian River Basin District and the related Strategic Environmental Assessment**

The Ministry of the Environment received a notification from the Norwegian Environment Agency concerning the Norway's River Basin Management Plan for the Finnish-Norwegian-river basin district and the related Strategic Environmental Assessment (SEA) on 3 March 2021.

The Ministry of the Environment would like to inform Norway that Finland wishes to participate in the planning procedure for the River Basin Management Plan for the Finnish-Norwegian-river basin district and the related SEA, in accordance with Article 10 of the Protocol on SEA to the UN/ECE Convention on Environmental Impact Assessment in a Transboundary Context.

The Ministry of the Environment has, in accordance with the Protocol on SEA, informed the public and the authorities and given them an opportunity to provide statements and opinions on the documents sent by Norway. The documents have been made available on the lausuntopalvelu.fi website. The material has also been available on the Ministry of the Environment's website. The Ministry of the Environment has also requested comments and opinions from 33 authorities and other bodies.

During the consultation period from 14 April to 28 May 2021, statements were received from the Finnish Environment Institute, Metsähallitus and the Regional Council of Lapland. The statements received are enclosed in their entirety and the summary of the statements is presented below in English.

In addition to the previous the Geological Survey of Finland, the Reindeer Herders' Association and the Federation of Finnish Water Protection Associations specifically notified that they have no comments on the River Basin Management Plan and the related Strategic Environmental Assessment.



**Finnish Environment Institute.** The Finnish Environment Institute notes that, as a whole, Norway's river basin management plan for the Finnish-Norwegian river basin district takes broad account of the diverse characteristics of the area. Due to the fragile natural environment of the area, the effects of human activity place special challenges for water management in the area, with the result that impact assessments and measures against the harmful effects must be strictly and systematically implemented.

The local impact of hydropower and other construction can be far more significant in the northern regions and, therefore, hydropower production should focus less on the sensitive areas. There are 43 regulated waterbodies in the area, 37 of which are heavily modified. The plan for the coming period should also include proposals for measures to establish an ecological flow (or environmental flow) in these waterbodies. Limiting the short-term regulation of hydroelectric power plants on the Norwegian side would also reduce water level variability and increase the well-being of an exceptionally diverse and species-rich aquatic ecosystem in the Paatsjoki river (Hellsten et al. 2002<sup>1</sup>). In terms of their impact, barriers (dams) are the most significant factor on which measures should be focused. Some of the power plants and dams in the area are old structures that are not subject to any obligations and whose condition and potential for improvement should be surveyed separately. The plan mentions the disadvantages of reducing hydropower production for the entire energy sector. However, in the sensitive areas of the north, such disadvantages should be assessed locally, and the benefits of hydropower should be generated in locations where it causes less harm. Designing and implementing effective solutions to enable migration and environmental flow for Paatsjoki hydroelectric power plants would create a large number of breeding habitats for migratory fish and bring the ecological potential of the area closer to the target level.

As an alien species in the Arctic Ocean region, the life cycle, spawning run, spawning and the brief first juvenile fresh-water stage of the pink salmon is relatively well known, whereas its potential ecological effects in river systems (e.g., fish diseases and parasites or the fertilising effect of spawned or dying fish) and, on the other hand, behaviour, and effects during the salt-water stage in the Arctic Ocean ecosystem is poorly known. The behaviour, ecology and effects of the species on the natural local species of the area should be investigated in freshwater as well as in the Arctic Ocean ecosystems.

When present in the Arctic Ocean and the waterways that drain into it, the pink salmon represents an alien species that does not belong to the ecosystem. Therefore, adequate resources should be directed at removing the species from

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<sup>1</sup> Hellsten, S. Marttunen, M., Visuri, M., Keto, A., Partanen, S. & E. A. Järvinen (2002) Indicators of sustainable water level regulation in Northern River Basins: a case study from the River Paatsjoki water system in Northern Lapland. Arch. Hydro-biol. Suppl. 141/3-4: 353-370.



the waterbodies and suitable methods that do not put the natural fish stocks at risk should be developed. For example, Vest-Finnmark Jeger- og Fiskerforening (the Hunting and Fishing Association of Western Finnmark) has been culling the pink salmon in Repparfjordelva. The method the association has adopted seems well suited to small or medium-sized rivers.

When planning the culling of the pink salmon, it should be noted that in the rivers within the natural range of occurrence of the species, two genetically differentiated pink salmon stocks spawn in alternate years (more information, see e.g. Irvine et al. 2014<sup>2</sup>). Due to the regular two-year life cycle of the pink salmon, the species is currently found in the rivers of the Arctic Ocean region in large numbers only in odd years, while the numbers spawning in even-numbered years are low (www.ssb.no). Therefore, culling the pink salmon is likely to be profitable and effective only in odd years, when the species is abundant in the rivers of the Arctic Ocean region. Consequently, resources would probably need to be allocated to the culling only every two years at the moment.

**Metsähallitus** (State-owned enterprise responsible for the management of state-owned forests and water areas). Metsähallitus manages more than 90% of the areas located on the Finnish side of the Finnish-Norwegian river basin district (a total of 20,511 km<sup>2</sup>). Metsähallitus is a major contributor to projects carried out in areas such as biotope adjustments of watercourses and catchment areas and the conservation of species.

Metsähallitus notes that the river basin management plan for the Finnish-Norwegian river basin district and the accompanying environmental report are thorough and clearly drafted. Metsähallitus finds it particularly positive that the preparedness for climate change and the challenges posed by plastic pollution have been given the attention they require. The state of the environment and species are also affected by global airborne microplastics, so their impact on fell waters should also be considered when addressing the challenges posed by plastic pollution. (See the statement of the Metsähallitus enclosed.)

According to the management plan, the greatest challenges identified for the main water districts within the Finnish-Norwegian river basin are transboundary pollution (heavy metals), alien species and diseases, as well as power plants. Alien species are likely to pose an even more significant problem in aquatic ecosystems owing to, for example, the changing climate. In addition to combating invasive species, it is therefore important to take a position in the river basin district management plan on the preventive control of invasive species and to cooperate across borders in this area. (See also

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<sup>2</sup> Irvine, J.R., Michielsens, C.J.G., O'Brien, M., White, B.A. & Folkes, M. (2014) Increasing dominance of odd-year returning Pink salmon. *Transactions of the American Fisheries Society* 143: 939-956.



All tables in the Finnish translation of the regional river basin management plan and the regional action plan illustrating the major and medium impacts on the waterbodies within the Finnish-Norwegian river basin district by catchment area, are missing the third item marked with red for Paatsjoki. Moreover, the Finnish table does not correspond to the table in the Norwegian version of the management plan.

*Protected areas, natural environment.* Metsähallitus considers it important that the objectives for and the measures of Norway's water management should support the diversity of aquatic habitats and the protection of endangered species. On the Finnish side, most of the areas referred to are designated Natura 2000 sites and, therefore, subject to stricter requirements than those laid down in the river basin district management plan.

*Climate change.* It is essential to identify and take account of the risks posed by climate change in the river basin district as a factor affecting the various impacts on the waterbodies in all measures adopted, as the effects of climate change (e.g. increased precipitation, reduced soil frost time, warming of waterbodies) potentially increase the number of factors exacerbating the impact (e.g. alien species, nutrient and humus run-off, fish diseases) and increase the challenges for maintaining the good status of the waters.

The prolonged open-water season and the warming of the waters can have both a positive and negative impact on the structure of the fish populations. The river basin district management plan mentions the arctic char as a cold-water species that tolerates high temperatures and other fish species poorly. The prevalence of the arctic char in fell lakes could potentially serve as an indicator for assessing the effects of climate change and also for changes in the ecological status of fell lakes.

*Mining effluents, industry.* Metsähallitus considers it important that the Finnish and Norwegian authorities cooperate and issue mutual statements on, for example, mining projects that have an impact on transboundary main water districts and that information on the projects is openly communicated in both directions between the two countries.

*Fishing industry and aquaculture.* Achieving a good water status is also a precondition for fisheries. From a fisheries point of view, the river basin district is home to particularly important waterbodies and fish populations. The status and monitoring of salmon populations are well covered in the management plan and the related annexes. Increasing the volume of aquaculture production fivefold from its current level requires that the environmental impacts of aquaculture and the current problems associated with the method will have been fully resolved. The impact should not only be assessed for the planning area but also for the entire production chain, extending from feed procurement to transport.



**Regional Council of Lapland.** The Finnish-Norwegian river basin district includes many coastal areas and waterbodies where the impact of alien species has been registered to a large extent. It is pointed out in the river basin district management plan currently under consultation that considerable financial resources are needed for research and control measures related to the pink salmon in the coming planning period. It is also proposed that control measures against the salmon louse continues under the decree on controlling the salmon louse in aquaculture industry. The Regional Council of Lapland emphasises the importance of close cooperation between Norway, Finland and Russia in the prevention of the spread of alien species and fish diseases.

Norway has been consulted in the Regional Plan for Northern Lapland 2040 currently under preparation on transboundary environmental impacts. The main impacts of the regional plan for Northern Lapland on neighbouring countries are related to development corridors. In the regional plan, a number of development policy and area reservation entries have been indicated with the aim that these would extend to the Norwegian side. Teno (Tana) is a border river between Finland and Norway. The Teno and Näätämöjoki (Tana and Neiden) rivers have been designated as a “significant river basin district”. The designation is awarded to river basin districts of particular importance for nationally endangered species, biodiversity conservation and fishing. The designation comes with certain planning restrictions: 'In the planning and use of the river basin district, special care must be taken to preserve the specific natural and fishing values of the river basin district when taking measures affecting its state'. The purpose of designation is to protect the natural and fishing values of river basin districts.

Yours sincerely,

Permanent Secretary

Juhani Damski

Ministerial Adviser

Lasse Tallskog

**Enclosures**

Statements received from the Finnish Environment Institute, Metsähallitus and the Regional Council of Lapland

**For information**

The Ministry for Foreign Affairs of Finland  
Centre for Economic Development, Transport and the Environment for Lapland