

Salmonid situation in Estonian waters

Estonian Green Movement- FoE did in December 2007 for the third time organize a national roundtable on salmonid issues. One of the main goals for this seminar was to gather together all the stakeholders (officials, professional and recreational fishermen, dam owners, environmentalists, journalists, students, etc.), whose activities are influencing the condition of the Salmonid stocks in Estonian water bodies. The last seminar took place two years ago and the current one gave a good opportunity to analyse what had happened during this period with the living conditions for salmonids.

Speaking about the living conditions for salmon populations in Estonian rivers we have to admit that the 2007 salmon generation is weaker than previous years. Mostly it could be influenced by the fact that the summer of 2006 was a very dry one in Estonia and spawning conditions in autumn 2006 were poor. Natural spawning in Jägala, Pärnu and Selja rivers are still irregular and little. Most of the potential salmon spawning areas are still inaccessible.

In addition to this, regular water regime disturbances (in for example Kunda, Keila and Loobu rivers) disturb the spawning- and living conditions. During the last 10 years the regular natural salmon reproduction has recovered in river Pirita and Valgejõgi. At least partly the natural salmon reproduction has recovered in river Purtse and Vääna.

Estonian University of Life Sciences has carried out a couple of surveys on salmon adaptation. Rivers with native salmon populations together with

salmon rivers, where native population have gone extinct, give an unique opportunity for scientific research on adaptation, which is essential for successive population restoration and for working out protection strategies.



Picture 1. River Pirita near Tallinn

Salmonids are present altogether in 200 Estonian rivers, which have altogether 131 dams on them. The 112 most important river parts are protected by the Nature Protection Law.

From July 2005 until November 2007 the Phare project “Technical assistance for improvement of the ecological quality of watercourses” was carried out. The project goals were to open fish migration routes and to improve spawning and living conditions in rivers. 11 rivers and altogether 35 dams were selected for giving technical assistance. Different surveys were carried out and in most cases the best solution is to demolish the dam and to restore the rapid. Where there is need to preserve the dam, fish passways have to be constructed. Technical work has finished and results can be implemented 2010-2013, but the largest problem is incomplete legislation, which doesn't enable to find reasonable agreements with dam owners.

Dam owners don't feel responsibility for their real estate. Duties are inadequately small and disputable and the state doesn't control consistently the fulfilment of these duties. In fact lots of dam owners still haven't got special permits for using the water and it is still profitable to break the laws. The State isn't ready to compensate the owners for their real estate in case of demolition. Possible solutions will be to work out instructions on how to give special permits to water usage for hydropower purposes, detailed regulation on how to calculate the negative impacts from dams on fish populations, to stop buying energy from producer that do not fulfil the environmental standards.



Picture 2. Hydropower dam on river Purtse

Due to the high eutrophication in the rivers, spawning grounds need much care (removal of excessive vegetation, cleaning spawning grounds from plant roots, restoring spawning grounds and rapids, assistance to the recovery of hydro morphological diversity).

The art of stream restoration is to mimic the stream geometry. It is needed to recreate the fluvial forces. New substrate alone doesn't make a spawning bank: the right substrate (locally derived gravel and stones), shelters for the fry and upstream sediment control is needed. Keep it as natural and as simple as possible: no concrete or timber. The natural streams will always modify the manmade

spawning grounds and we don't have to be afraid of it.



Picture 3. Restored spawning ground in Vodja River, Central Estonia

Salmon and sea trout catches depend mostly on fishing area and are the largest in the Gulf of Finland, where fishing activity is primarily directed towards fish migrating to spawning areas in the autumn. Coastal commercial fishermen with nets and recreational fishermen with rods perform salmon and sea trout fishery. Local coastal fishery is part of coastal village culture and it is not easy to just prohibit them from fishing these migrating salmonids.

Artificial release of fry in Estonia and other countries influence salmon and sea trout catches. The big part of Estonian stocked salmon is caught in the southern part of the Baltic. According to this we can conclude that Estonian salmon reproduction balance is negative. At the same time sea trout balance seems to be positive due to small Estonian releases and large released in Finland of fry.

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