

2018-06-18 Neman Environment Group / Ecohome, Belarus.

Location: Belarus, Vilia river basin (part of the Neman/Nemunas basin), Grodno Oblast, Ostrovets District

Project Title: Restoration of Baltic salmon populations and habitats in the transboundary Vilia river basin,

Project duration: 3 years

Project Concept:

(A) Rationale

Some very small numbers of Baltic salmon and Sea trout still (Baltic salmonids) spawn in the Vilia river basin in Belarus. They migrate from the Baltic Sea upstream Neman and Vilia (called Neris in Lithuania) rivers to reach spawning grounds in Vilia tributaries. This is the longest salmon migration route (about 500-600 km) in the whole Baltic Sea basin. Only the “genetically” strongest fish is able to complete the journey.

The Baltic salmonids nearly disappeared in Belarus in the 1960s-1980s as the result of the wide spread poaching, massive drainage for land reclamation and dams building on rivers.

Neman Environment Group (PO Ecohome) has been actively involved in Baltic salmonids protection for the last 12 years. With support from CCB (and recently from SIDA) we have been doing public awareness raising, organising and running salmon monitoring, doing field surveys of river hydrology, river ecology and morphology, doing practical work on restoration of salmon habitats, and every year organising regular salmon patrol to protect rivers from poachers during salmon spawning season (November-December). As the result of our efforts the population of Baltic trout in several rivers grew significantly in the last 8 years (see table below)

Table: Sea Trout/Trout density in Vilia river’s tributaries – numbers per 100m²

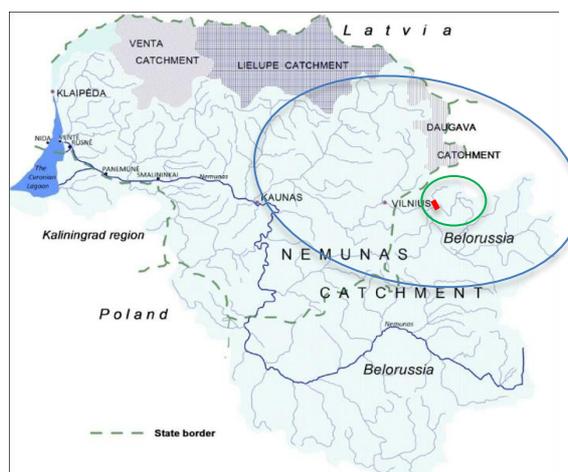
	2009	2010	2011	2013	2016	2017
Kemelina	0,48	0,028	1,1	1,58	24,2	2,8
Dudka	0,08	0,020	0,3	3,2	20,0	5,0
Senkanka	----	0,004	0,2	1,75	2,95	3,6
Tartak	0,24	0,28	6,6	19,3	117,7	61,9

Although the above results are encouraging, these are only for the 4 fairly small rivers. To make this sustainable it is of paramount importance to restore populations in the larger rivers, which have much better habitat potential. The river [Stracha](#) (Vilia’s tributary) is a very good example. This river by its nature (hydrology, morphology, gravel river bed, ecology) is a very promising salmon spawning and breeding ground. Actually, it was a good salmon habitat until the dam was built in the 1970s near Olkhovka village (about 3 km upstream the confluence with the Vilia river) to create water supply reservoir for the local cardboard factory (see attached pictures). The dam was built without any fish pass and blocked the way to about 18 km of salmon spawning grounds in the river Stracha itself and about 15 km of spawning grounds in the Stracha’s tributaries, rivers Lyntupka, Svirtsya, Struna and Pelyaka.

Salmonid rivers in Nemunas catchment



Nemunas – Neris – Vilija – Stracha catchments



(B) Objectives

- **To build a fishway to open up river Stracha and its tributaries to salmon migration and spawning.** The fish way could either be retrofitted in the dam body or built just next to it. The dam is made of reinforced concrete. It is about 5.5 m high. The dam does not have any electricity generators installed. The dam owner is the Card Board Factory, but the permission to build must be approved by the Administration of the Ostrovets District. Generally, the Administration have positive views about the fish way and can help to obtain the necessary permissions, but they are not able to provide any financial support. Belarus has no history of fish ways design and construction. The necessary expertise does not exist in Belarus. There is relevant experience and technical expertise in the neighbouring Lithuania, which shares the Vilia/Neris basin with Belarus. We have already identified Lithuanian specialists with relevant experience and expertise. And we a planning their first preliminary site visit to the dam in the end of June 2018.
- **To restore Baltic salmon populations using the technique of incubation of eggs in the river Stracha.** The field incubators were designed and successfully tested in the North of Russia by the fish scientists based in Petrozavodsk (Russia). Last year we tested these incubators for incubation of Sea trout eggs for the first time in the small rivers Tartak and Senkanka, these are the Vilia's tributaries. The results exceeded our expectations. All eggs successfully incubated and hatched. Incubation ideally should be done at least for 5 years, because the salmon will come back in the rivers for spawning only in 2-3 years' time.

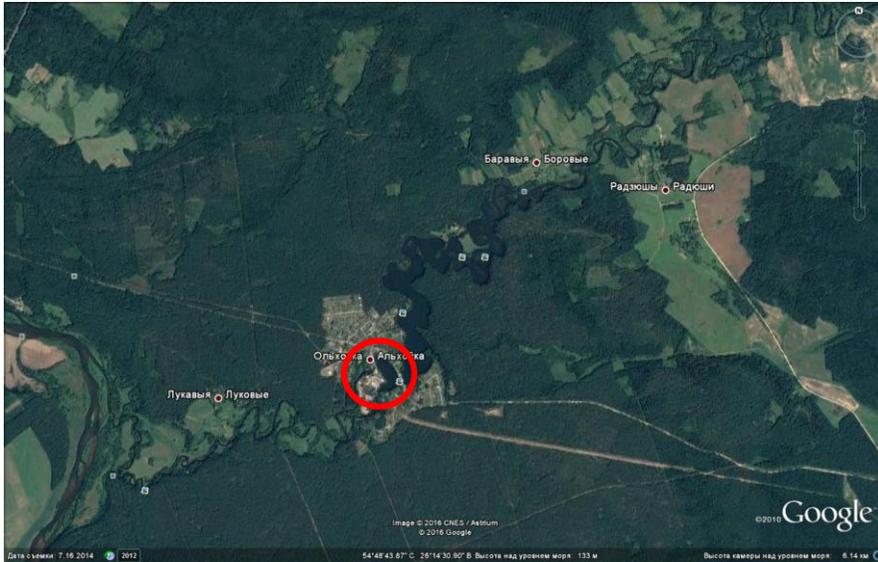
(C) Expected results of the project.

- the Baltic salmon population in the Vilia basin in Belarus will be increased and become sustainable.
- the river Stracha will be open for salmon migration and spawning providing good Baltic salmon habitat
- it will open opportunities for the salmon fishing tourism in the Vilia basin on Belarus which will create employment for members of local rural communities.

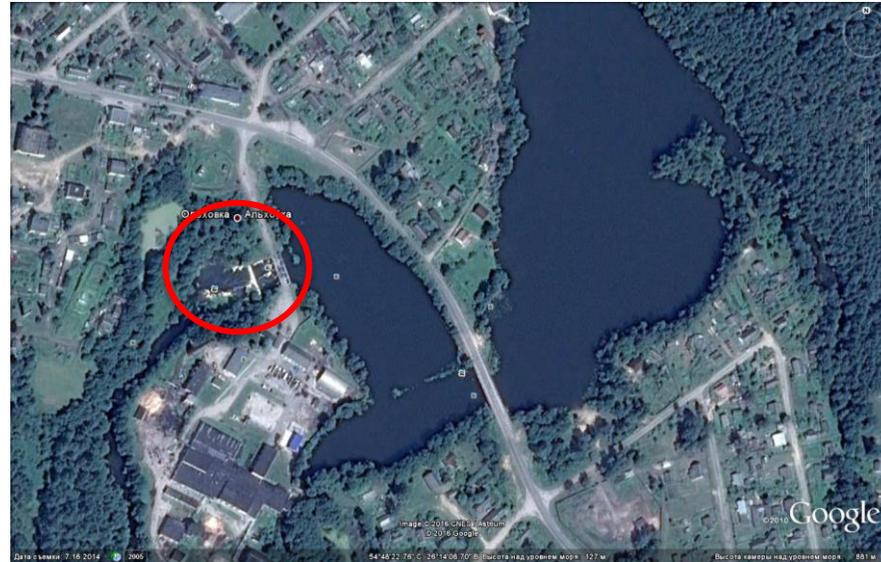
(D) Approximate budget for 3 years (estimate)

Activities	Budget estimate (EUR)			Notes
	Unit cost	Units	Total	
Stracha's river surveys (hydrology, morphology, ecology)	1 500	1	1 500	Neman Environment Group jointly with specialists from Academy of Sciences of Belarus
Incubation of eggs (purchase, installation, field visits)	ca. 4 200/yr	2 yrs	8 000	Incubation boxes purchase Purchase of salmon eggs in Lithuania, Transportation to Belarus, Specialist advisory
Feasibility study, conceptual design and detailed design of the fishway	15000		15 000	Contractor to be selected, e.g. firma "Kumponas" Vilnius, Lithuania
Construction works for the fishway	50 000-100 000	1	50 000-100 000	The more precise estimate will depend on the feasibility study and design
Travel costs	ca. 700/yr	3 yrs	2 100	Neman Environment Group staff
Accountant	2400/yr	3 yrs	7 200	
Coordination and project management	6000/yr	3 yrs	18 000	
TOTAL			101 800 – 151 800	

Location of the dam on the map



Dam in Olkhovka village



View of the Olkhovka dam



Potential locations of the fish-way

