

Promoting Restoration of a Trout Stream – Case Report

Intellectually Driven Management of Natural Resources of the Green Belt of Fennoscandia

Background

Hundreds of rivers in Finland have been dammed and cleared for different reasons. These have included for example building of power plants, clearing of river beds for timber floating and straightening of rivers to speed up water flow. As environmental awareness has increased, concern for fish species such as trout has become more vocal. In many localities, natural trout populations have been lost as rivers have been modified.

In the recent years there have been various restoration efforts to improve the situation. Restoration of the rapids has become more common since the 2000's as its benefits have become more known. Recently acquired results implicate that restoration is useful even at small sites. Appropriately realized restoration works benefits not only salmonids but the whole ecosystem in the area including people.

Saarijoki

Saarijoki is a small, approximately six kilometers long, stream located in the municipality of Lieksa. The catchment area of the stream covers approximately 30 km² and its average discharge is approximately 0,24 cubic meters per second. Saarijoki is blocked from its downstream by an old submerged dam which prevents the fish from moving upstream the river (picture 1). The rapids upstream from the dam have been partially modified in the past but could easily be restored for reproduction of trout (picture 2).

Saarijoki runs into Lieksanjoki river which plays an important role in the attempts to rescue critically endangered land-locked salmon (*Salmo salar m. Sebago*) and endangered fresh water brown trout (*Salmo trutta*) in Finland. Trout that have completed migration in lake Pielinen can reach Saarijoki easily because it is connected to Lieksanjoki river downstream from the hydroelectric power plants. This is what makes Saarijoki of special interest, yet the potential of the destination has been realized only recently during the project IntellGreenBelt.



Pictures 1 and 2.

Involvement of project IntellGreenBelt

IntellGreenBelt is a project that aims at contributing to socio-economic development of the Green Belt of Fennoscandia by creating a system of sustainable use and enhanced reproduction of natural resources. Among other things, the project aims at promoting sustainable use of fish resources and fisheries development in its operating area.

Future Missions Oy, as one of the project partners, got interested about the potential of Saarijoki and contacted a representative of local water area owners. The first discussion about the potential of Saarijoki took place in autumn 2013. Within one year from the first conversation a series of events had taken place and a number of important stakeholders were committed to Saarijoki.

Implementation

The following activities were carried out to promote restoration of Saarijoki in between autumn 2013 and autumn 2014. IntellGreenBelt (represented by Future Missions Oy) is referred as “the project”.

1. The project contacted the chairman of local water area owners and opened discussion about Saarijoki. During these discussions it was mutually agreed that the project and the water owners will co-operate in promoting restoration of Saarijoki.
2. The project, in co-operation with the local water area owners, carried out a field trip to the destination to evaluate the possibilities. As a result of this trip it was agreed that the dam needs to be by-passed and some restoration work needs to be carried out upstream the river.
3. The project contacted a local land owner who owns the land area in which the Saarijoki dam is located. The project explained the situation and arranged a first meeting of stakeholders (land owner and chairman of water area owners). As a result of this meeting, the land owner committed to case Saarijoki and agreed to co-operate in by-passing the dam with a fish way.
4. The project contacted authorities (ELY Centre of North Karelia) explaining the situation and the preliminary work that had been carried out so far. The project arranged a second meeting of stakeholders (authorities and chairman of water area owners). As a result of this meeting, the authorities took an active role in case Saarijoki and launched legal processes to by-pass the Saarijoki dam.
5. The project arranged an opportunity for a local enthusiast / active to work for case Saarijoki. The person conducted field research along the river. As a result of this work, the owners of water area got comprehensive understanding of the possibilities and realities of Saarijoki as a potential trout stream.
6. The authorities continued the on-going process of by-passing the Saarijoki dam. As a result, structural planning of Saarijoki fish way was purchase. The actual construction work is set to take place in 2015.

Conclusions

Within a time span of one year, Saarijoki was brought from state of being completely overlooked to the state of being one of the most discussed trout stream in the whole region. This was made possible due to high level of stakeholder commitment. As a partner of project IntellGreenBelt, Future Missions Oy worked as a catalyst in the process. No matter what will become of case Saarijoki in the future, it already is an encouraging example of results of stakeholder cooperation in the field of fisheries management.

Future Missions Oy, 2014