

Transboundary water

Enningvalley river basin sub-district



Do we forget the water as soon as it leaves our country? Might be, but what happens when it comes back again? This is the case for the transboundary river basin Enningvalley in the southeast of Norway and west of Sweden.

The Enningvalley river basin starts in Norway but has most of its area in Sweden with the very long and narrow Bullaren lake. Here the water system takes a turn and then returns to Norway and end up in the Iddefjord, a fjord shared between both countries. The Enningvalley salmon is cut off from Sweden by a large waterfall, but freshwater mussels and lamprey is found on both sides. What other values do we have that we might have forgotten to cooperate on?

In recent years there has been an increase in meeting points and shared events between water regions in Norway and Sweden. With the likely re-establishment of a sub-district for the water basin on Swedish side again since 2017 is also a driving force in more cooperation. Many topics concern both sides, such as acidification, biodiversity and pollution.

Different needs and focuses are also evident and becomes even more evident when we lack systems that supply us with known information from the other side. In both cases we have separate systems for achieving water quality data and systems for evaluating

measures set to ensure the goal of the water framework directive. On both sides the map of the river basin stops at the border.

An example that has brought the need for more and closer cooperation is the relatively new salmon disease Red Skin Disease (RSD), that has been found in the Enningvalley salmon, but not in the other close by salmon rivers. Working on finding the cause of the disease with different laboratories and with the local stakeholders, the disease and its cause stays unknown. The need to have a wider understanding and knowledge on what happens, and what measures are in place in the total of the river basin is now highly needed to possibly find the causality of a local spread of a highly deadly salmon disease.

With this work and the increase of cooperation it has become more and more visible the difference in how the work is organized different, with a high local focus on Norway and a more regional organization in Sweden. It is not always easy to find your counterpart, and it makes it difficult when state and local authorities don't have the same authority on the same topics cross the border or different policy for how measures are put in place. With this in mind the river basin sub-district can be an interesting case, where development of a new organization is coming to be, and soon two sides have a better way of working together.



Datasets

The Enningvalley river basin has been compared to the other river basins in the same regions been seen an area with low impact from both agriculture and wastewater. This is a conclusion that has been made slightly without too much information on the Swedish side, but has resulted in an area with low levels of data sampling. There was established sampling sites for bentic invertebrates and benitic algae and has now a data series of three rounds (every three years).

With the new red skin disease, it has provoked the need for more data and in a wider sense, in addition to information on what happens in the catchment on crossed the border. Laboratory infection tests has been done with bacterias found on salmon two years in a row on different stages of salmon. In addition, there is an initiative to get a fish counter station, to better get an overview of the different population of fish, the presence of pacific salmon that has been spotted, and the state of the salmon before it enters the stages of illness.

In working in funding gathering of data we have started looking to forestry, one of the largest area of influence to water in the river basin. An old plant nursery for example have shown some detectable levels of DDT in one of the lakes and its sediments. Other possible causes might be other environmental toxins, pH or invasive species in the brackish water sone. The brackish water sone is of especially high interest as the salmon caught in the fjord is seemingly well, and the RSD is not evident before the change from salt to freshwater.

Example of the RSD in salmon in the Enningvalley.



Stakeholders

The salmon in Enningvalley river basin is of course a highly sought after attraction and has a very eager base of volunteers. The area is not very highly populated, but the people who live there value their community, and are therefore very active in the preservation of the more evident natural value they have. Other species that attract some attention include sea trout, eel, lamprey and freshwater pearl mussel.

With the RSD the involvement of state institute for food and safety and animal welfare has been active in the region, in addition to research and development institutes such as the university of life sciences, veterinarian collage and the Norwegian institute for nature research. Stakeholder groups and lobbyist organization for salmon has also taken an active role in the work of reducing the risk from the RSD.

Moving forward the aim is to Include the Swedish counterparts more in the work of mapping needs and possible unknown influences, in addition to mapping more of the biodiversity and natural value in water and especially in forestry in the whole river basin. Small initiatives within forest gardens and more local engagement also Present in the area.



A river basin starts and ends in Norway, with most of the catchment in Sweden

Possible partnerships

Transboundary sister regions would be very interesting for this river basin to look to, on how to make sure data sharing is available, how policy can be adopted and made not to change entirely cross the border of a connected river system. The area also have a valuable biodiversity with several vulnerable species we need to start preserving in regard to climate change, increased pressure on the water quality and all the unknown parameters that comes with a transboundary river basin.

We are looking especially to forestry and possible influences from ditched peatlands and forest ground, and the increase of pressure to pH, colour and quicksilver emerging with industrialised forestry and climate change combined.

