

## Featured case: Restoration of Ingarskilanjoki River, Southern Finland

The aim of the restoration was to restore habitats for indigenous sea trout population during and after dredging works.

The Ingarskilanjoki River is 50 km long and runs into the Gulf of Finland. The Ingarskilanjoki River is the only river in Finland where the population of extremely endangered migrating sea trout (*Salmo trutta*) is natural, not from stocking. The mean current velocity in the river is 1.6 m<sup>3</sup>/s. The surface area of the drainage area is 160 km<sup>2</sup> and 33 per cent of it are cultivated fields.

Due to flooding of the fields the river was straightened and dredged in 1988 although there has been a vivid trout population in the river. The trout population is genetically valuable as it is adapted to local surroundings and varies from the populations used to sea trout stocking.

Before the dredging of the river, natural trout were caught and raised for further farming. After the dredging, caught trout from the natural population were stocked back to the river. However, because of the clearing and lost habitats, the reproduction of the trout had been weakened.

The river was restored in 2002-2007 to recreate habitats for trout and its reproduction for the whole river length. The goal of the restoration was increasing the morphological diversity of the river by e.g. creating more variation of depths and meanders and adding gravel for fish spawning. The goal was also to take care of that the trout were able to migrate between river and sea. In addition buffer strips were created to the catchment to decrease the nutrient loading and turbidity of the river water.

The local land owners and river side inhabitants were interviewed in order to take into account their opinions due to restoration. To ensure the recovery of the natural sea trout population, the trout fishing was prohibited in the river after the restoration. The key success factor was that the decision of the preservation was made by the local fishing society. This is most likely the reason for that the fishing restriction has been obeyed which again is has been crucial for the balancing the sea trout reproduction and population. Since strict fishing restrictions and additional fish stockings the local trout population has grown which tells that the restoration as a whole was succeeded.

