# “The River Enningdalselven”

## A cross-border project between Norway and Sweden to achieve a plan for a common management for the river system

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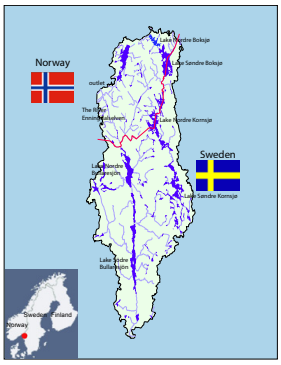
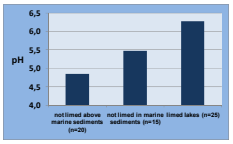
**The River Enningdalselven drainage basin of about 600 km² is shared between Norway (⅓) and Sweden (⅔), and contains totally 180 lakes > 1.5 ha.**




**This area has suffered from severe acidification since the early 1900 century. The first assessment of the water quality was carried out in the 1950s, which showed highly acid water with pH of < 5.0 in the main stem. At that time, several lake-dwelling fish populations had already been wiped out.**




**To restore aquatic biota, a large-scale liming project was initiated in a border lake in 1980, and > 90 % of total lake area within the drainage basin is now limed. The liming has highly improved the water quality in formerly acidic lakes as pH generally stay > 6.0. However, liming of the catchment has so far been carried out independently from the Norwegian and the Swedish side of the border.**

### Species recovered in Lake Nordre Boksjø

*Daphnia cristata*

*Limnosida frontosa*

*Betis rhodani*
*Caenis luctuosa*
*Cloeon dipterum*

*Asellus asellus*

*Lymnaea pelegra*

### “The River Enningdalselven”

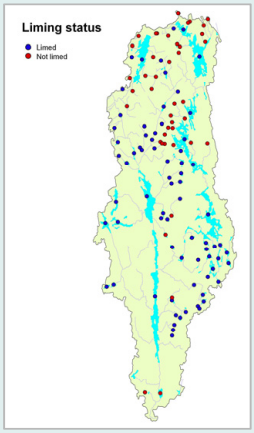
**“The River Enningdalselven” project was approved by the European Commission as an INTERREG-project during the period 2008 to 2012. The project has received 12 million NOK with the main goal to achieve a plan for a common management for the river system.**

INTERREG
www.interreg-sverige-norge.com

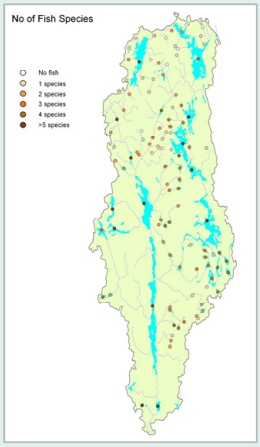
EUROPEAN UNION
European Regional Development Fund

### The main objectives of the project are:

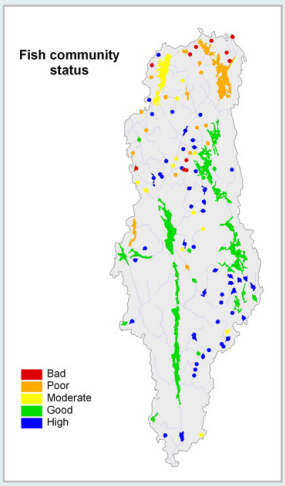
**i) present a plan to achieve a good water quality through liming and necessary actions to reduce harmful effects from forestry and agriculture within the catchment.**




**(ii) present a plan to improve fish populations, including re-introduction of lost populations, identify and elimate obstacles for fish passages and restore the original river course. 119 lakes within the catchment have been test fished (see below) and through questionnaires we know that about 50 fish populations have been lost.**




**iii) To compare Swedish and Norwegian monitoring and assessment methods for ecological classification of lakes, cf. the WFD. Studies of chemical and biological quality elements (phytoplankton, microcrustaceans, macroinvertebrates and fish) were conducted in eight lakes (3 references, 2 acidified, 3 eutrophied). In addition, the acidification status of 119 lakes were assessed based on fish communities (see example below) and microcrustaceans.**




**(iv) prepare a web-based program for teaching purposes in secondary school.**