

River restoration for a free flowing Rönne å river

Challenges and lessons learned



LIFEConnects

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Länsstyrelserna

Rönne å river



Source

Catchment size: 1900 km²

Mean discharge: 23 m³ per second

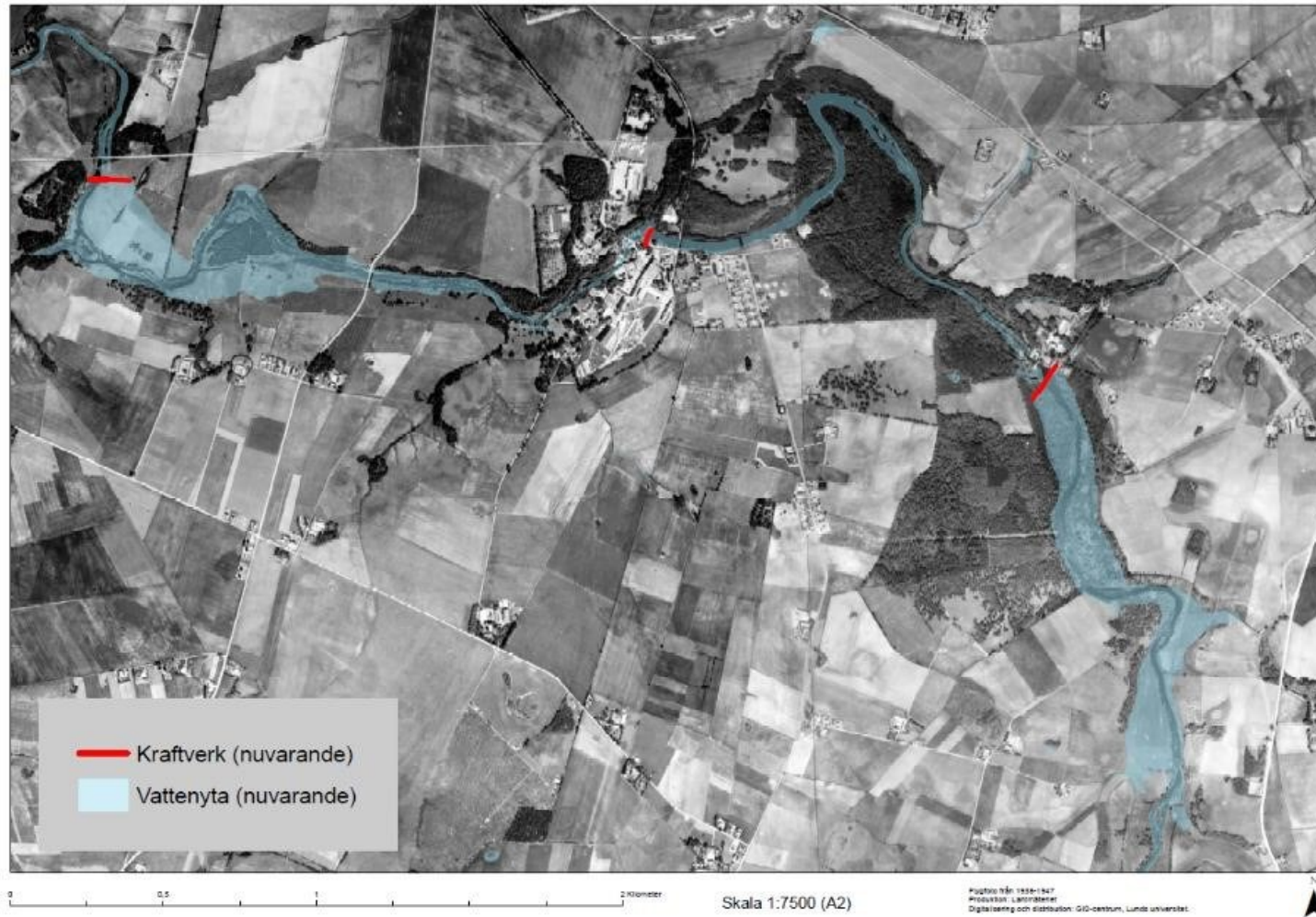
Production: 10 GWh/year (3 HPP)

Most southerly salmon river in Sweden

River subjected to stocking by European eel

Sea

Three large barriers

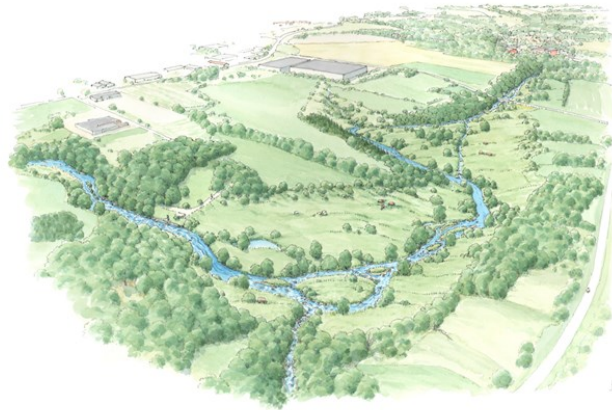


- 3 former hydropower plants in the main stem of the river
- Old photos show how the river looked like before the three hydropower plants was established.

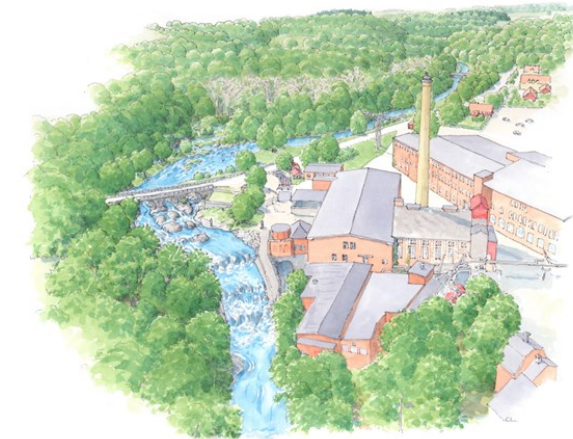
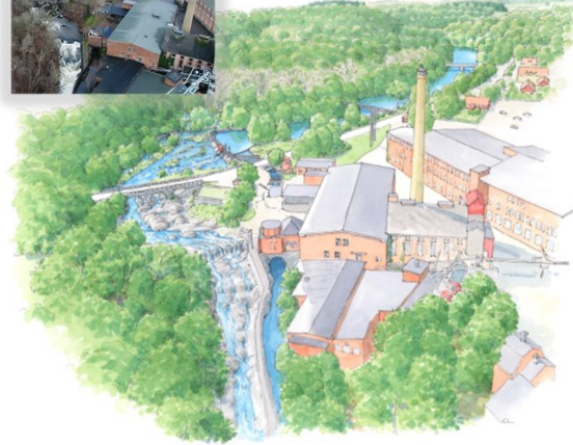
Becoming free flowing



Pre restoration conditions, HPP1



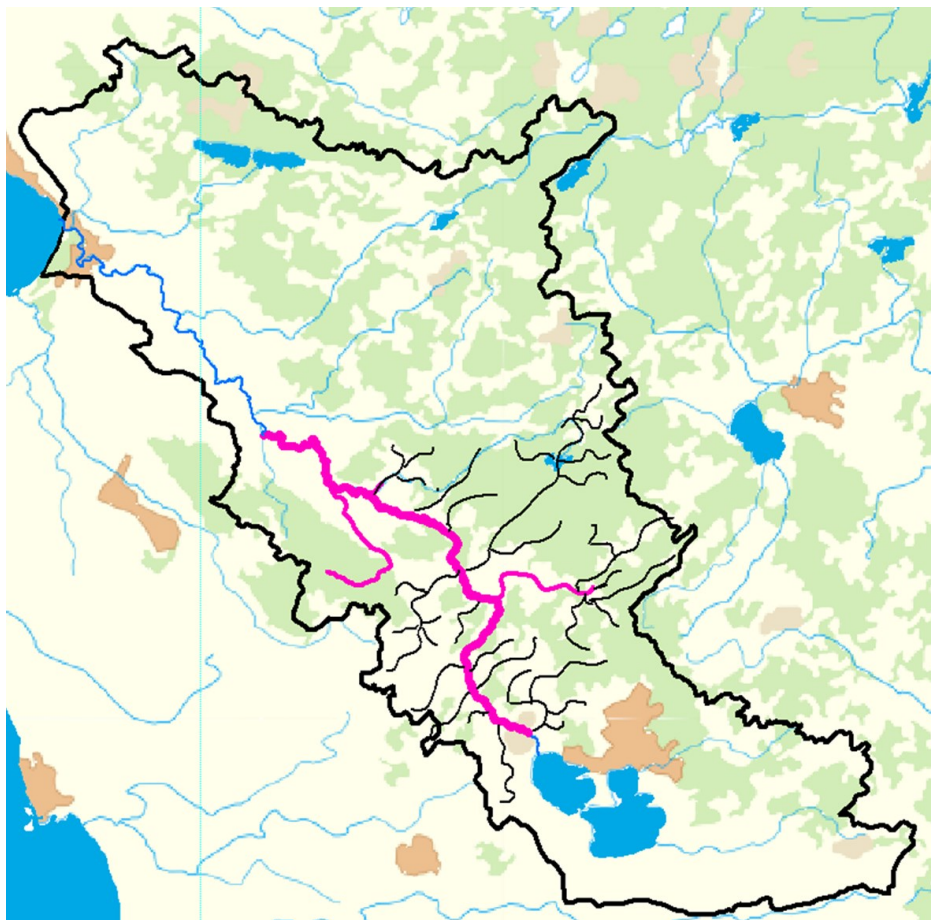
HPP2



HPP3



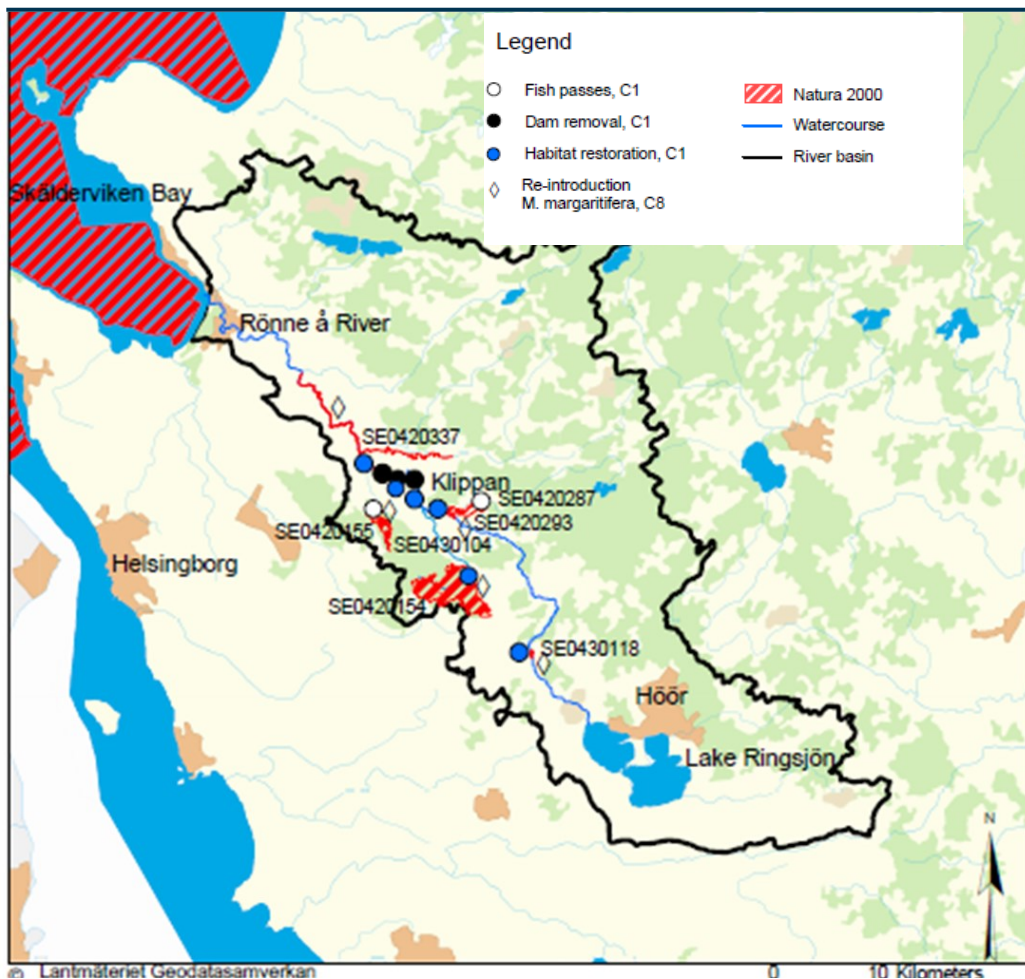
Predicted outcome



- Removal of the three dams will open more than 100 km of river habitats for migratory species.
- More than 40 ha transformed into riffel habitats.
- Positive impacts on species such as salmon, European eel, grayling, and sea trout.
- Positive impacts on fish species for mussels and services.

Important to do river restorations upstreams to secure viable spawning and nursery habitats!

LIFE Connects in Rönne å river



- 4 dam removals
- 1 constructed fish passages
- 6 km restored habitats
- Re-introduction of freshwater pearl mussel (*Margaritifera margaritifera*)



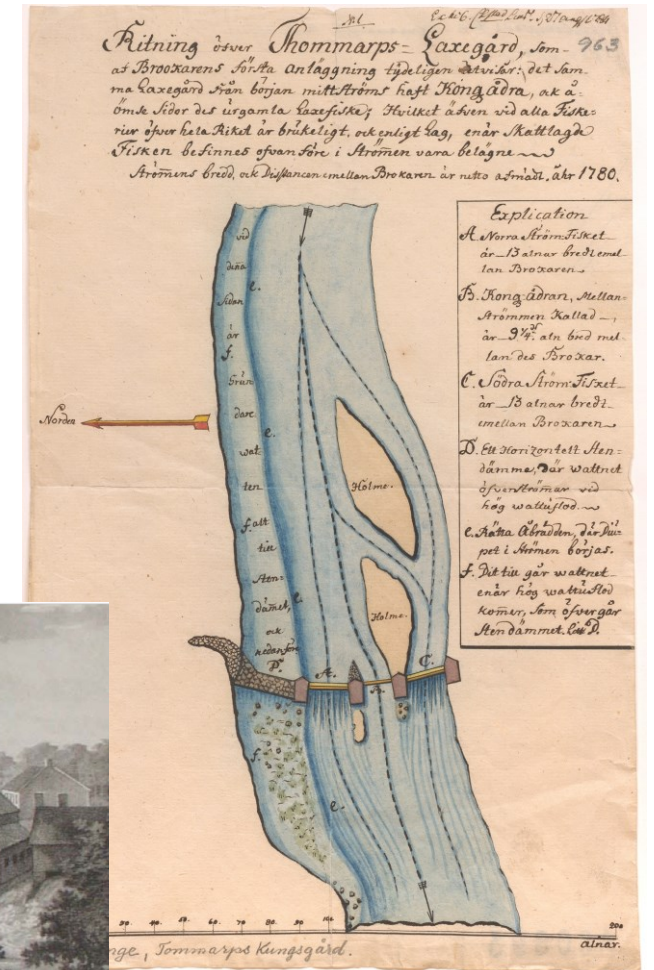
Photo: Jakob Bergengren

Challenges

- Sediments with pollutions
- Sediments with nutrient loads
- Turbidity during removal
- Water outtake for agriculture
- Cultural historical values
- Puplic opinion



Rönne å river, 1817



Lessons learned so far

- To get a permit for dam removal can be a very time consuming processes.
 - Conflicting legislations and directives. Nature vs cultural heritage.
 - Different parameters (in status classification) contradict each other. To fulfill one parameter another might decrease temporary which is not justified according to the prohibition of deterioration.
 - Investigations of sediment, nature- and cultural values a.s.o. can be time consuming and very costly.
 - It can take time to get political and public acceptance on the local scale.
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- Important to have an early dialog with stakeholders.
 - Secure financing for all stages in the process. From the early dialog with stakeholders, the permit process, the removal to the follow up.
 - Important to follow up the effects of dam removals for future projects and show good examples to get public opinion for dam removals and free flowing rivers.



Thank you!

For your attention!



Partners



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