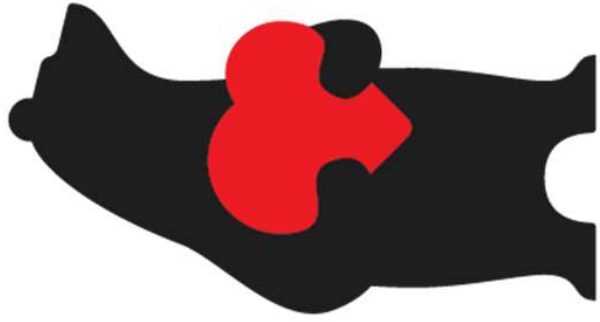


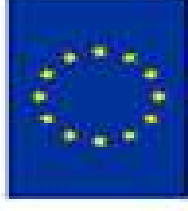


PORI

**MUSTBE
FINLAND**

WETLAND PILOT SITE

Interreg

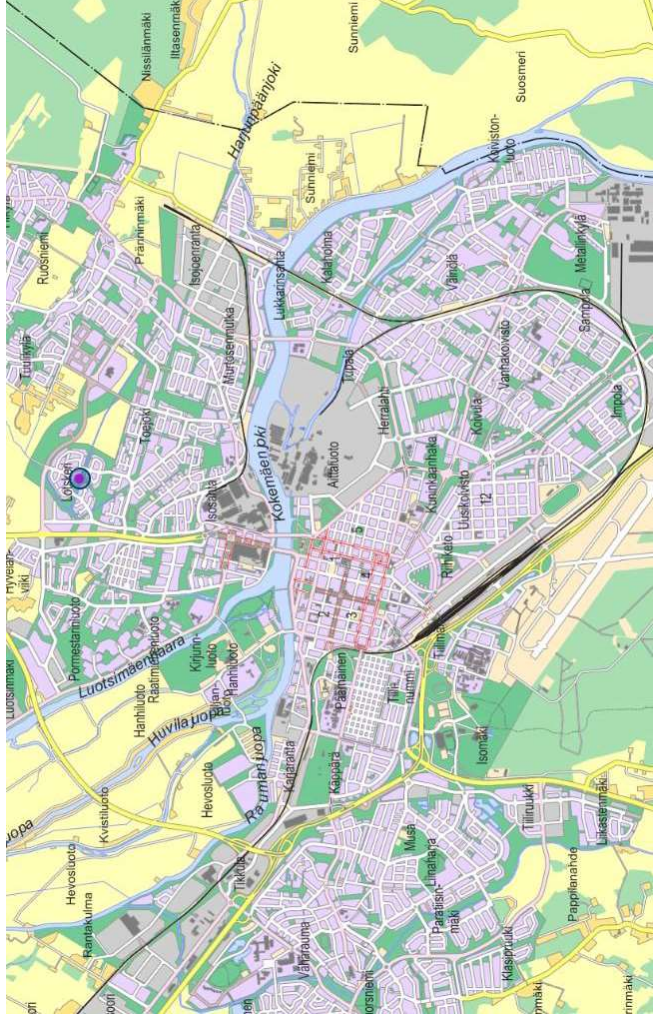


Co-funded by
the European Union

Central Baltic Programme

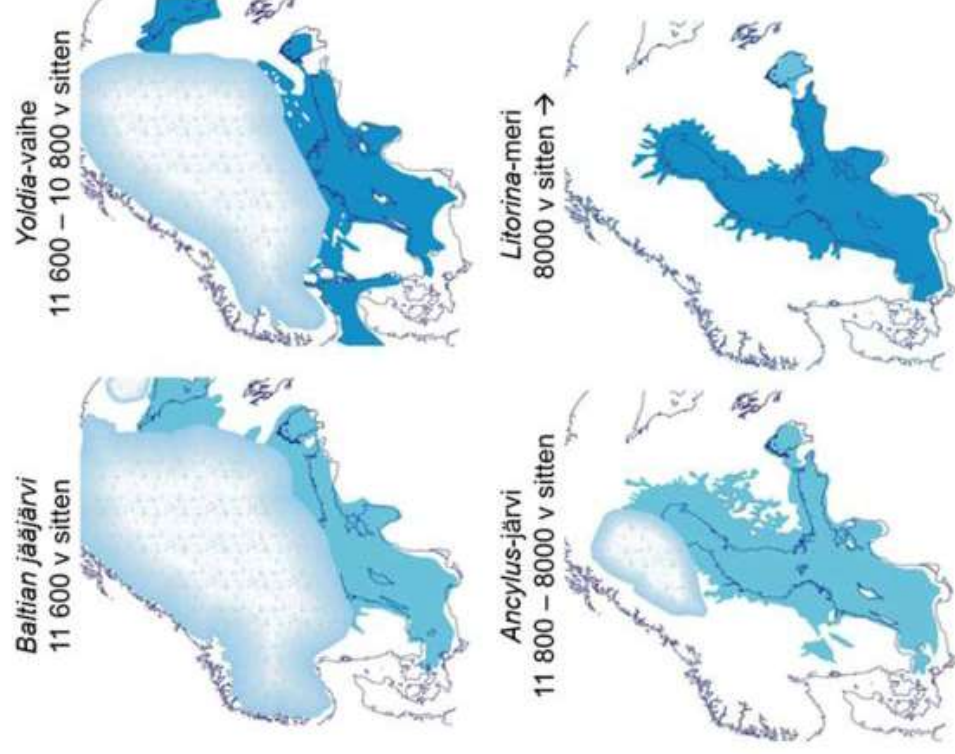
Pori is located
in the west coast of Finland,
next to Baltic sea

pilot site is situated in
northern part of Pori,

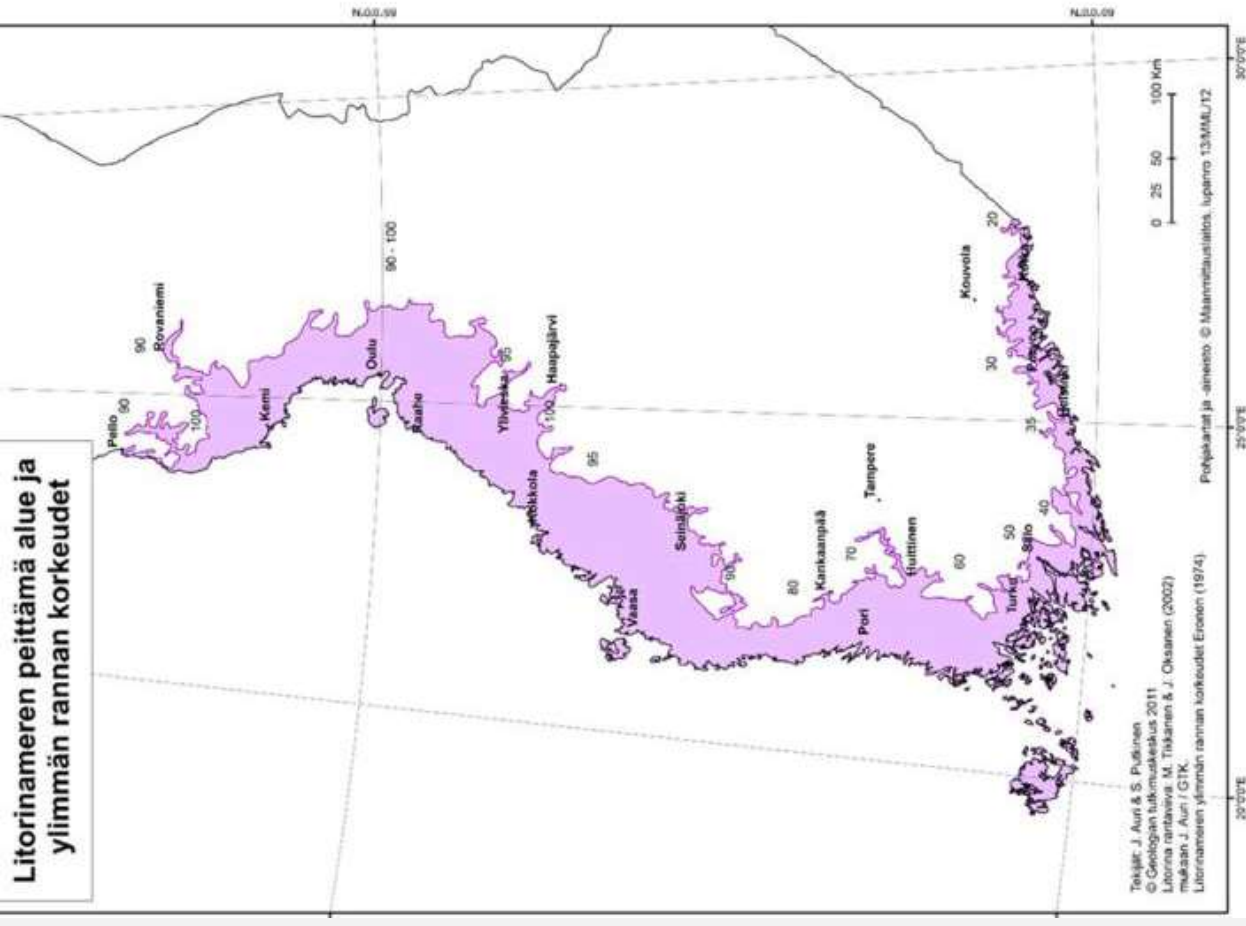


Acid sulphate soils

- under anoxic conditions in the sea or lake bottom , the organic matter is broken down into sulphide by the bacteria
- Acid sulphate soils can be found uplift coasts worldwide in Finland, sulphide sediments are mainly formed during the Ice age and mostly at Ancylus-lake and Litorina-sea phases



Litorina-sea phase



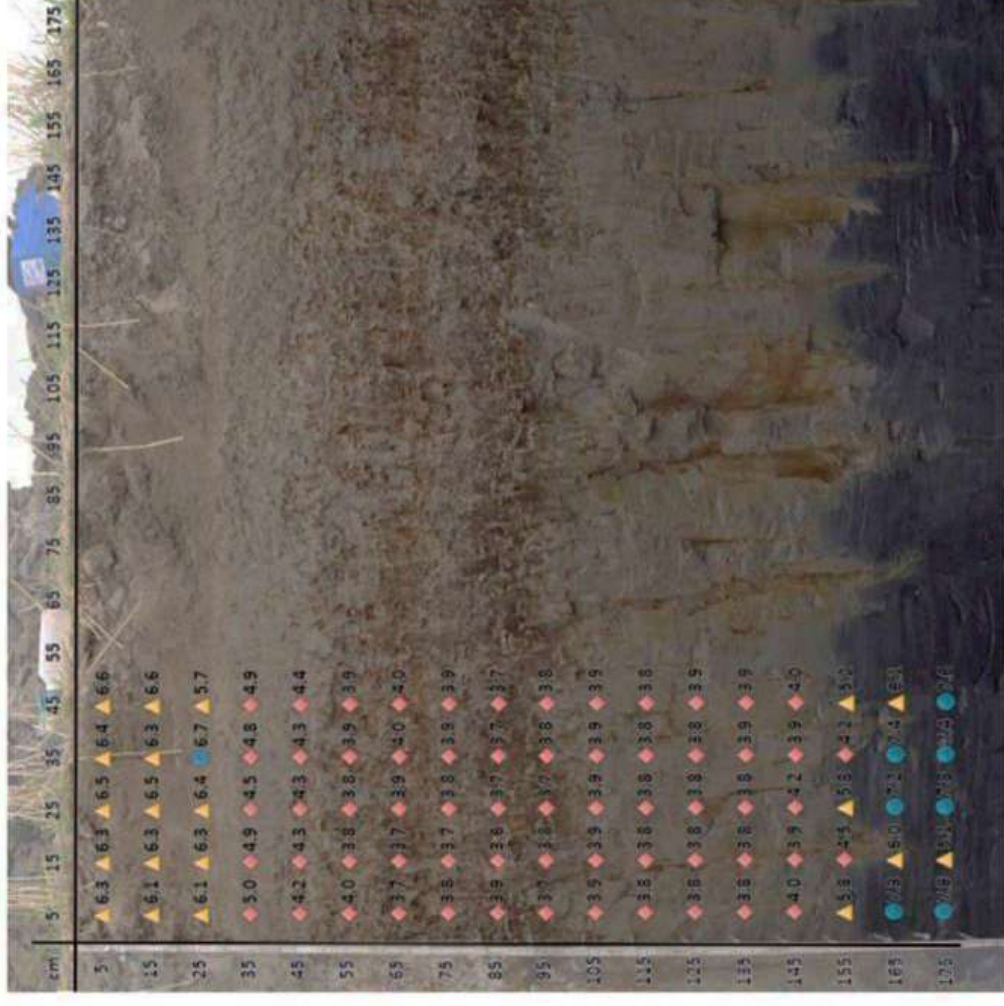
- non-oxidising sulphide soils below the water table remain neutral and do not harm the environment (Passive Acid Sulphate Soils)
- If the groundwater table drops due to land uplift or land use, the underlying layers become oxidised and become active acid sulphate soils.
- Sulphur in the soil forms sulphuric acid, which lowers the pH of run-off water, which in turn leaches metals from the soil



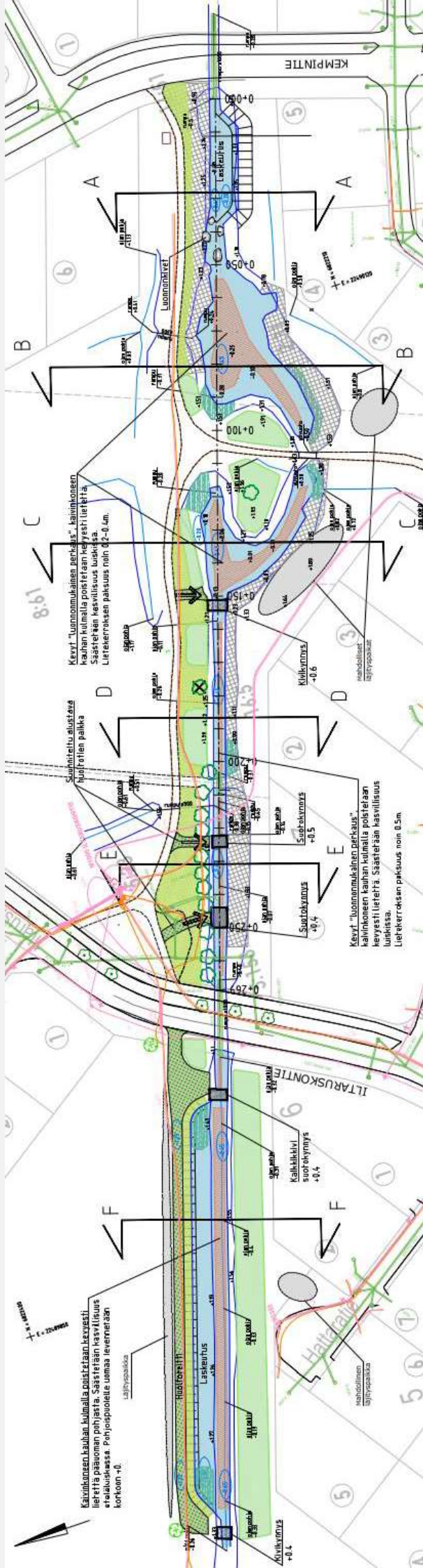
pH 6-7

pH 3,7-5

pH>7



- This run-off water has a low pH and it contains heavy metals
- Our aim is to neutralise the water before it reaches the ditches downstream of the wetland.
- When the water is neutralised, metals start to precipitate and metal-rich sludge is formed



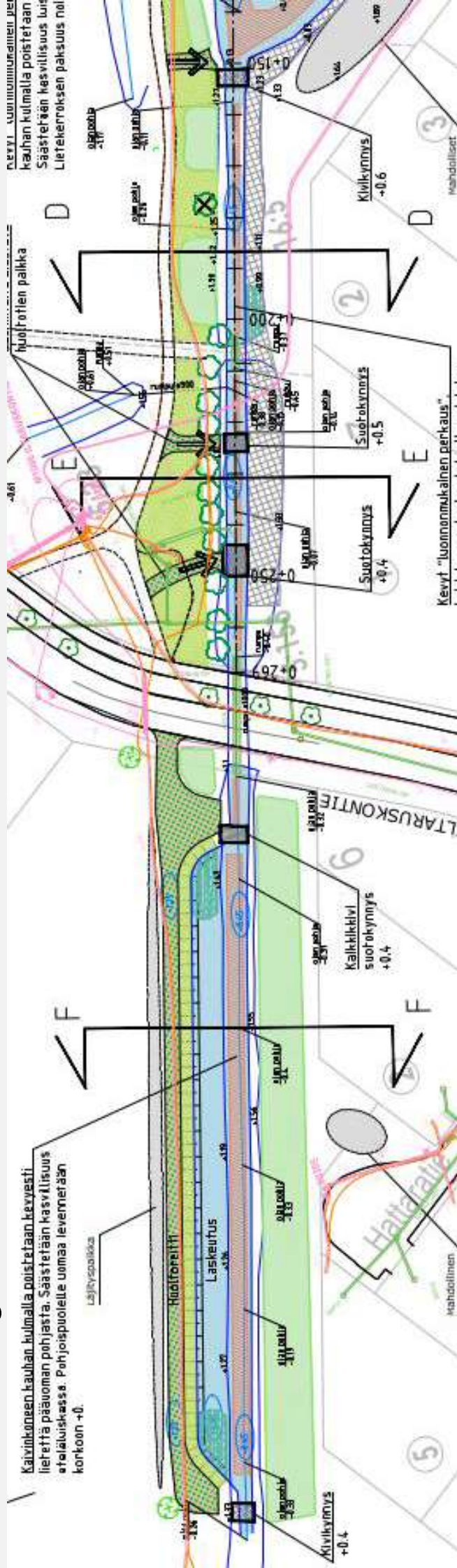
How to neutralize water and collect the sludge from ditch

Filltration dams of different materials

1. sand dam
2. Biocarbon
3. limestone
4. lecagravel

Sediment removal

- sedimentation basin
- service road for excavator
- sludge disposal area





THANK YOU!
ALEKSI SIIRTOLA PORI