

The [ECOSPHERE research group](#) aims to study aquatic and valley ecosystems that are continuously challenged by natural and anthropogenic stressors. The research focuses on acquiring fundamental and applied knowledge at different levels of structural and functional organisation in order to underpin environmental management decisions.

## MASTER THESIS SUBJECT 2023

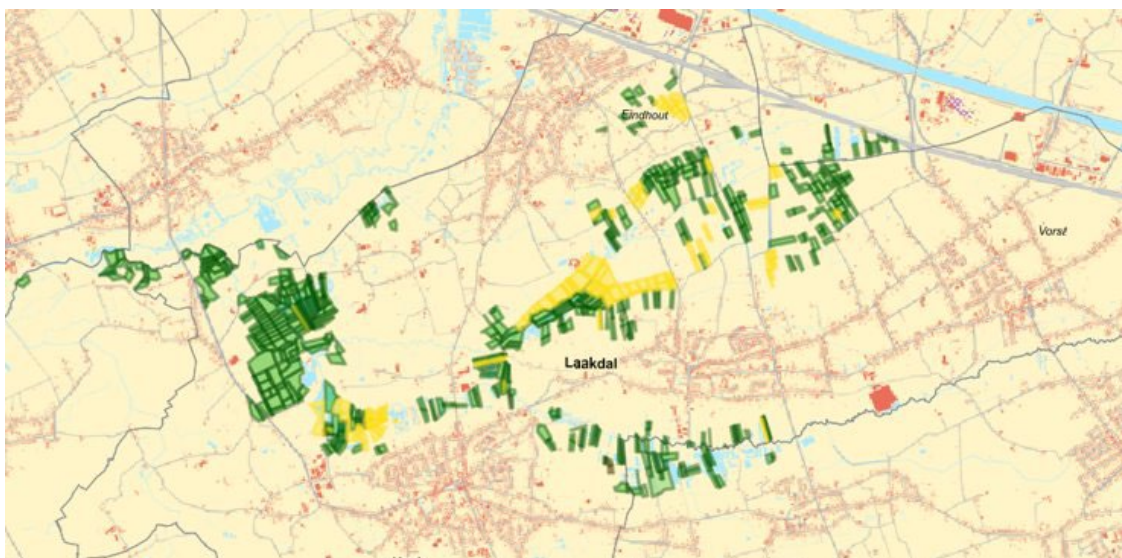
### Assessing the potential for peatland restoration of the Laakvallei

Research group: ECOSPHERE

Hosting laboratory: CDE – Building C

Promotor(s): Jan Staes [jan.staes@uantwerpen.be](mailto:jan.staes@uantwerpen.be)

Daily supervision: Jeroen Krols [jeroen.krols@uantwerpen.be](mailto:jeroen.krols@uantwerpen.be)



Map of the Laakvallei (green: territories of Natuurpunt). We will analyse the area to find effective measures to restore peatland.

- This topic mostly contains  literature study,  lab work,  field work,  experimental work,  GIS,  numerical modelling,  other: .....
- Possession of driver's license B is  needed,  recommended,  not needed
- Possession of certificates needed:  FELASA C,  other: .....



**Summary**

Peatlands are important habitats that provide many ecosystem services. They are key in climate change mitigation and water retention and provide unique habitats for biodiversity. However for a long time these types of nature have been under threat in Flanders resulting in the degradation of this ecosystems. Many of the benefits of peatlands are lost this way and can even have adverse effects.

In the Interreg project “ADMIRE” a number of degraded peatlands in the Campine region in Flanders and the Netherlands will be restored. In order to do this restoration correctly, these sites need to be investigated in detail to find the most effective measures that need to be undertaken. For this an ecohydrological analysis needs to be undertaken.

This thesis will focus on the Laakvalleien, an area of 320 ha near Laakdal. First the current condition of the peatland needs to be investigated. For this peat samples will be collected and peat thickness in the area will be measured. A next step consists of a geographical analysis of the site, which will include making an inventory of drainage elements and the area they affect. Various existing datasets collected over the years in the site will be analysed to provide extra information. In the final step potential restoration of peatland can be calculated under different scenarios such as the removal of drainage elements, changes in land cover...

This can include an assessment of ecosystem services supply. How does the restoration affect the supply and demand for ecosystem services.

This thesis is suited for someone wanting to work with analysing and/or modelling in GIS. A number of field work days will be included in order to get to know the site and take peat samples.

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