

## MSc internship call

### Greenhouse gas emissions and carbon cycling in Dutch peat ditches

Ditches form a large part of the Dutch agricultural landscape, yet remain understudied systems. Greenhouse gas emissions from ditches are disproportionately high compared to emissions from surrounding lands. In order to mitigate these emissions it is imperative to study their underlying drivers.

Management practices of agricultural lands can directly impact conditions in the surrounding ditches. Measures like drainage and addition of fertilizer can increase leaching of organic material and nutrients from soils to nearby waters, which can enhance their potential for greenhouse gas emissions. More extensively managed lands might therefore mitigate ditch emissions.

Within the context of the national [NOBV](#) project, we are researching emissions from two peat ditches. Within one location, we will measure emissions with a high-frequency automatic chamber system, and in the other with manual hand measurements. Comparing this to the total emissions from land and ditch, we will be able to estimate the relative contribution of these systems to the total emissions. This project will also focus on the export and import of dissolved and particulate organic carbon in the ditches, to investigate their potential as drivers of carbon emissions.



### What you will do

You will take part in monthly field visits to measure CH<sub>4</sub>, CO<sub>2</sub> and N<sub>2</sub>O emissions from two ditch systems. You will gain hands-on experience with (amongst others) gas flux measurements in the field, lab analyses of carbon concentrations in water and soil, and handling of gas flux data.

### What you bring

We are looking for a master student with enthusiasm for ecological research, who enjoys frequent field work as well as data analysis, or is motivated to gain experience with this. Some previous experience with R is preferable.

**Interested?  
Contact Isa Martin**

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