



# Do gas bubbles affect the hydraulic conductivity of soils?



## Project Description

The hydraulic conductivity of an anaerobic soil is often assumed to be constant through time. Gas bubble formation may block soil pores and thereby result in considerable temporal variability of hydraulic conductivity. However, current methods to estimate hydraulic conductivity are unsuitable to test effects of bubble formation. Though operating at the pore scale, bubble formation likely has major consequences for water management and model calculations on water budgets.

## Methodology

- 1) Develop a novel apparatus to measure hydraulic conductivity without disturbing soil bubble content
- 2) Explore the relation between bubble content and hydraulic conductivity in laboratory and field experiments

**Host institute:** Wageningen University, B-WARE (Nijmegen), Radboud University (Nijmegen)

**Country:** The Netherlands

**Starting date:** any time

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