Is the interaction between waterlogging and drought a worsening factor in oak (*Quercus petraea* and *Quercus robur*) decline?

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Context

Oak forests (Allier, Auvergne) → 60 000 ha

- **11 million m^3/year of wood stock**
- **10% of the annual French production of stavewood, a premium quality wood**

In the last decades, oak decline has been seen in this territory

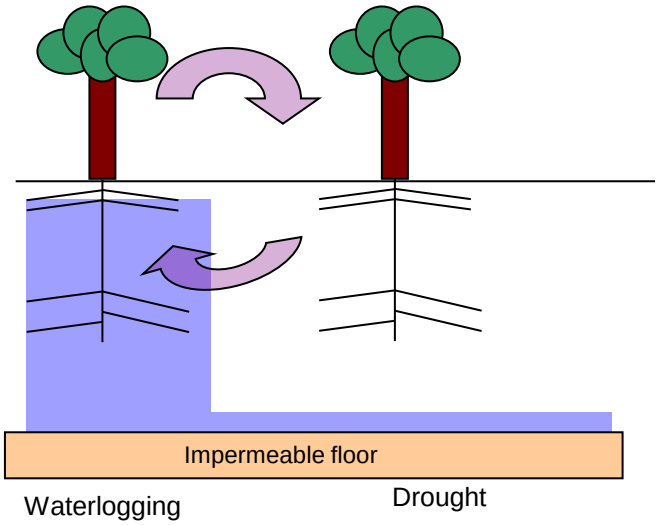
Climate change scenarios in Centre France

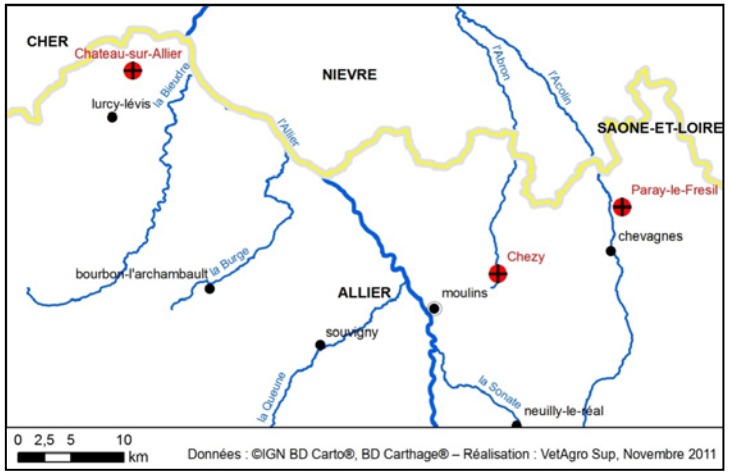
Increase in the heterogeneity of annual rainfall distribution → **Marked periods of winter-spring waterlogging and summer droughts**

Project

Hypothesis

The interactions and/or succession of waterlogging and drought periods in soil subjected to temporary ground water table in a one-year cycle. → **The health of both oak species**





3 sites were set up in Allier

Interests

i) **from a scientific point of view,**
to better understand the role of waterlogging, drought and their interactions on oak decline;

ii) **from a practical point of view,**
to provide tools to managers to better estimate oak decline risks according to site and climate