

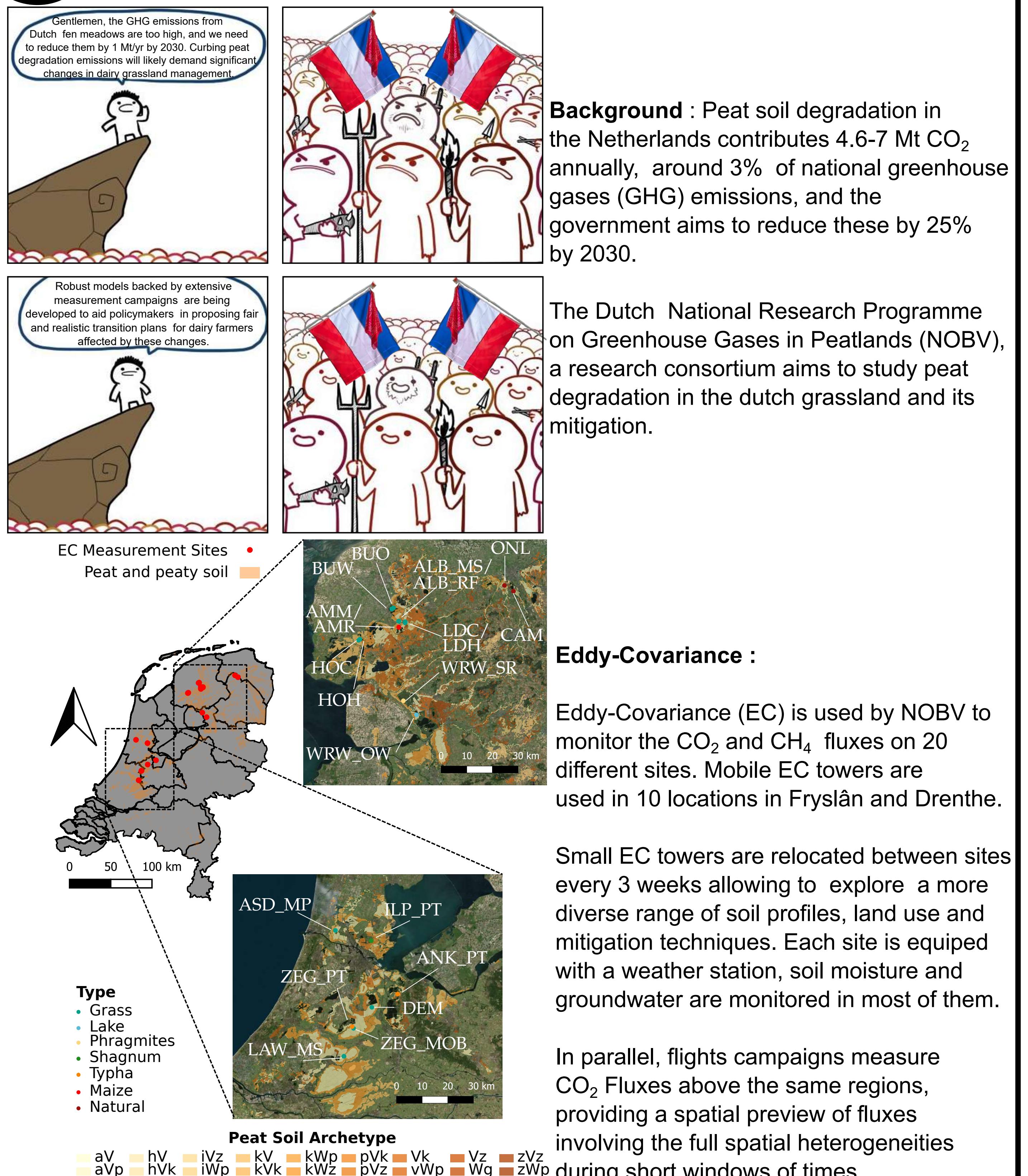


Data-driven modelling of Greenhouse gas balances of Dutch peatlands

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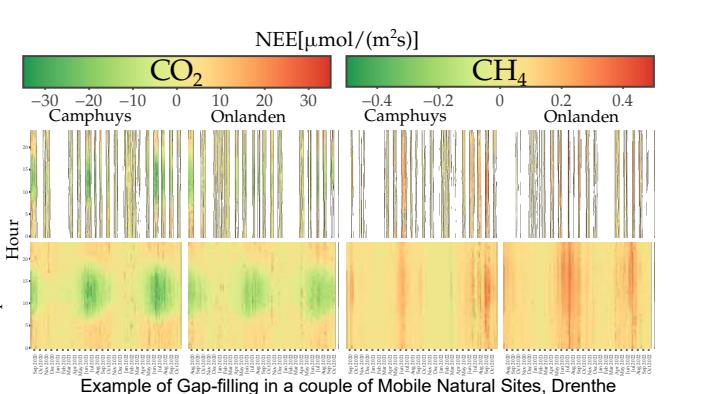
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1 Introduction

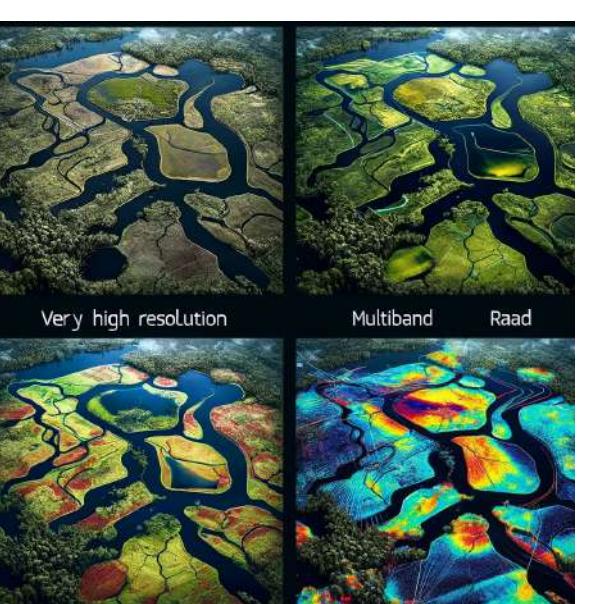


2 My Research Clusters

Data-driven approaches to deal with intermittent EC timeseries and make them comparable to compute seasonal and annual GHG budgets.



Conversion of remote-sensing (HR and VHR) and GIS products in actionable features for my model



Interpretation and explainability timeseries produced of data-driven models, in order to link them to biophysically meaningful flux partitioning

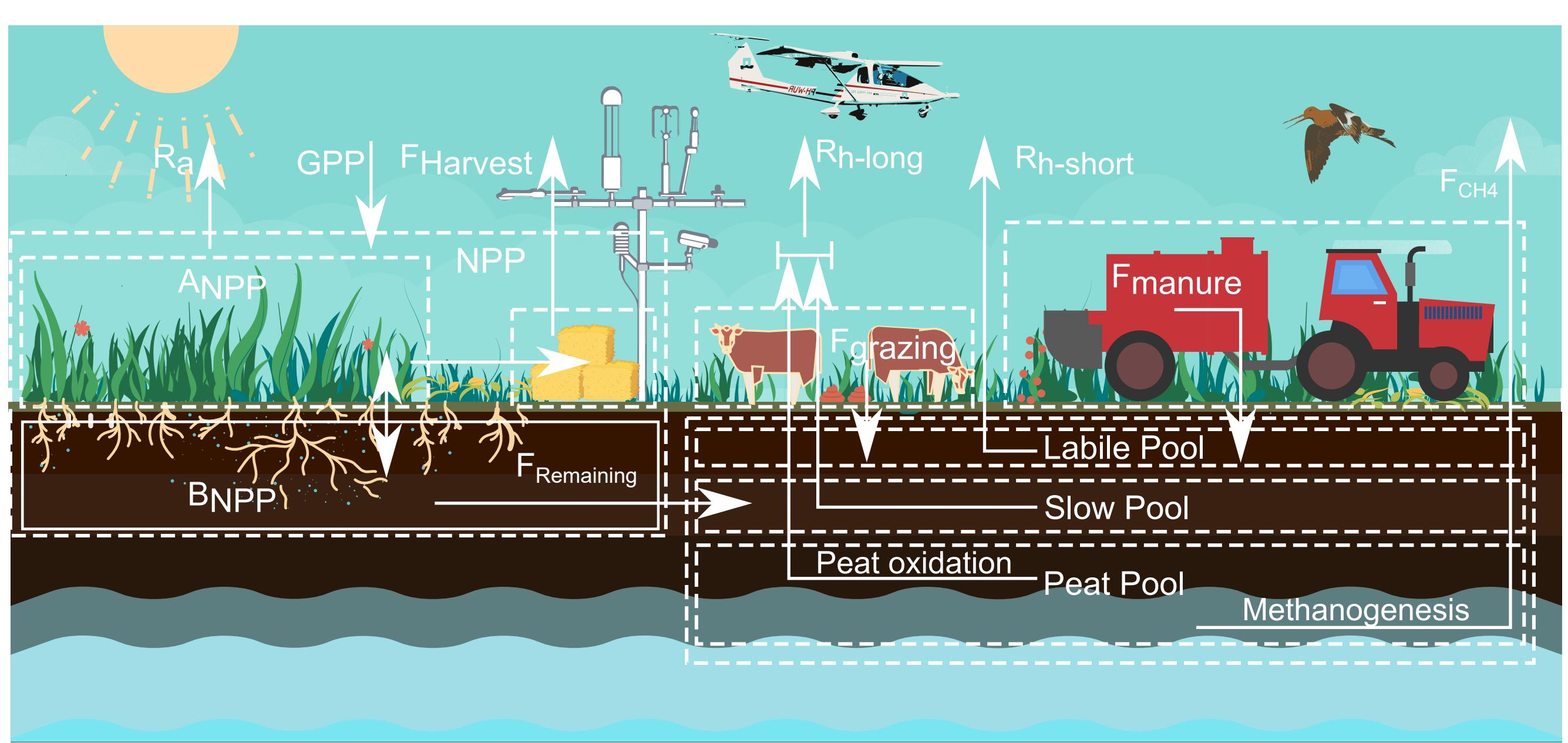


Multiple instance data-driven models for comprehensive footprint analysis



Research Questions

- What are the main drivers influencing soil respiration?
- How relevant is the NOBV site classification according to carbon emissions?
- How is the CO₂/CH₄ trade-off influenced by area characteristics?
- When do the hot moments occur? When does the annual carbon overshoot occur? Can these events be related to extreme drought events? Which area tends to have the latest carbon overshoots?
- Where are the hotspots located? On the opposite, where are located the area producing the lower amount of GHG?
- How does human management (draining, mowing) influence the global carbon budget?



3 Deliverables

Articles

- CO₂ emissions from peatlands in The Netherlands: drivers of variability in Eddy covariance fluxes
- Bridging the Eddy-Covariance Gaps for Enhanced Time Series Comparability in the Dutch
- In search of meaning - Decyphering data-driven models of CO₂ Flux - Biophysical Interpretation of non-parametric models in the Dutch Peatlands based on multitemporal analysis
- Fifty Shades of Green, Blue, and a Few Darker Touches - Building a meaningful spatial model to investigate the Greenhouse Gases Emission based on Eddy-Covariance Measurements in the Dutch Peatlands
- If you can't beat it, join it - Embracing landscape heterogeneities through Eddy-Covariance Measurements
- Reconciling bottom-up models with top-down measurements through data-driven modelling - Combining Airborne and Ground-based Eddy-Covariance Datasets through Knowledge-guided machine learning

Actionable outputs

- Dynamic Emission maps
- Datasets dedicated to data assimilation
- Emissions Scenarios submitted to global change
- Calibrated Models

Reports

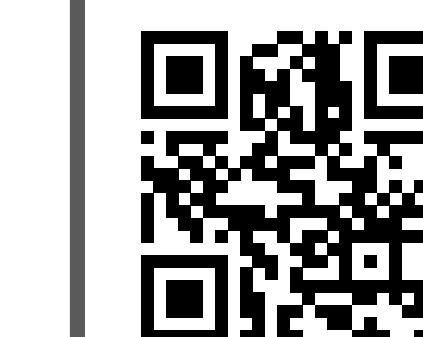
- STOWA
- Frisian Waterboard
- Natuurmonumenten

Conferences



E-mail

Additional Information



Digital version



NOBV Website

