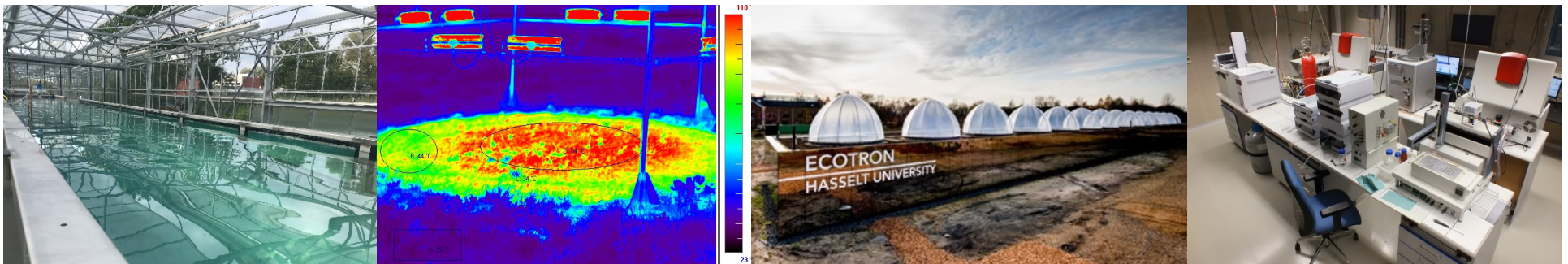


AnaEE: a European infrastructure for future-oriented experimental ecosystem research

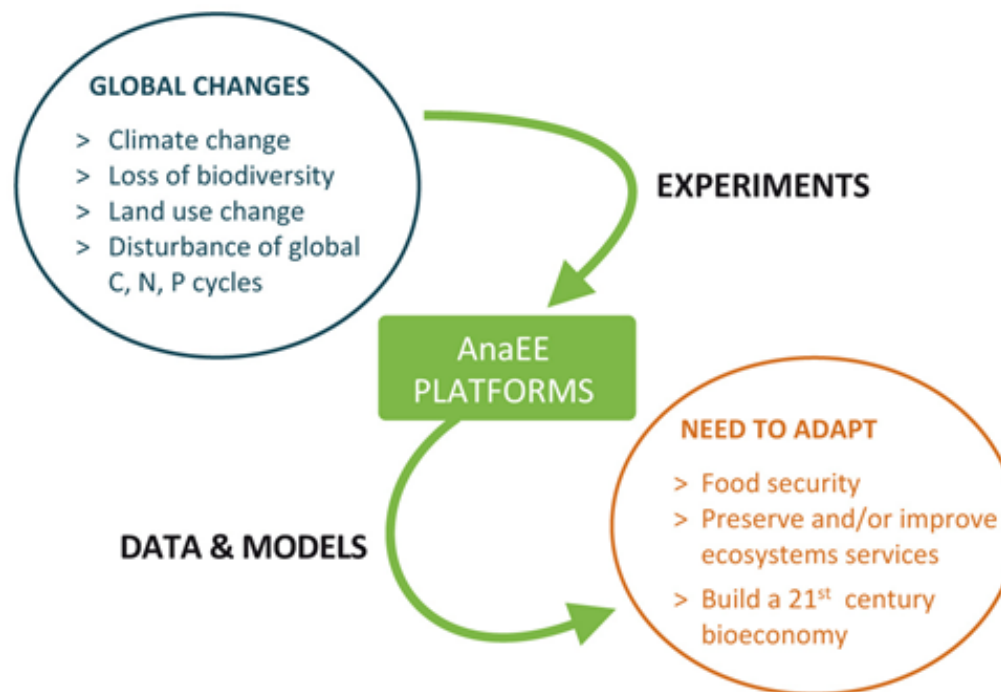
Hans J De Boeck, Simon Reynaert, Ivan Nijs and AnaEE



The AnaEE-Europe Concept

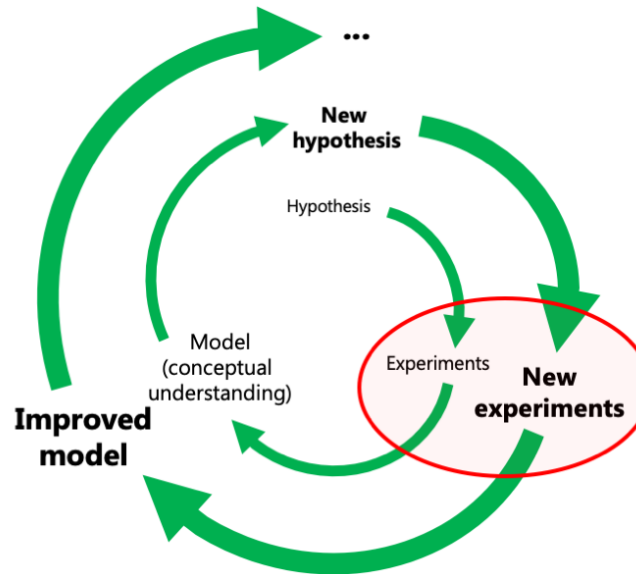
Distributed research infrastructure for the experimental study of managed and unmanaged ecosystems (terrestrial and aquatic)

Provides answers on how to adapt to **a series of global changes**, and secure food production, clean water, stable soils, carbon storage, flood protection, etc.



The AnaEE-Europe Concept

An **experimental approach** is essential to be able to look into the future

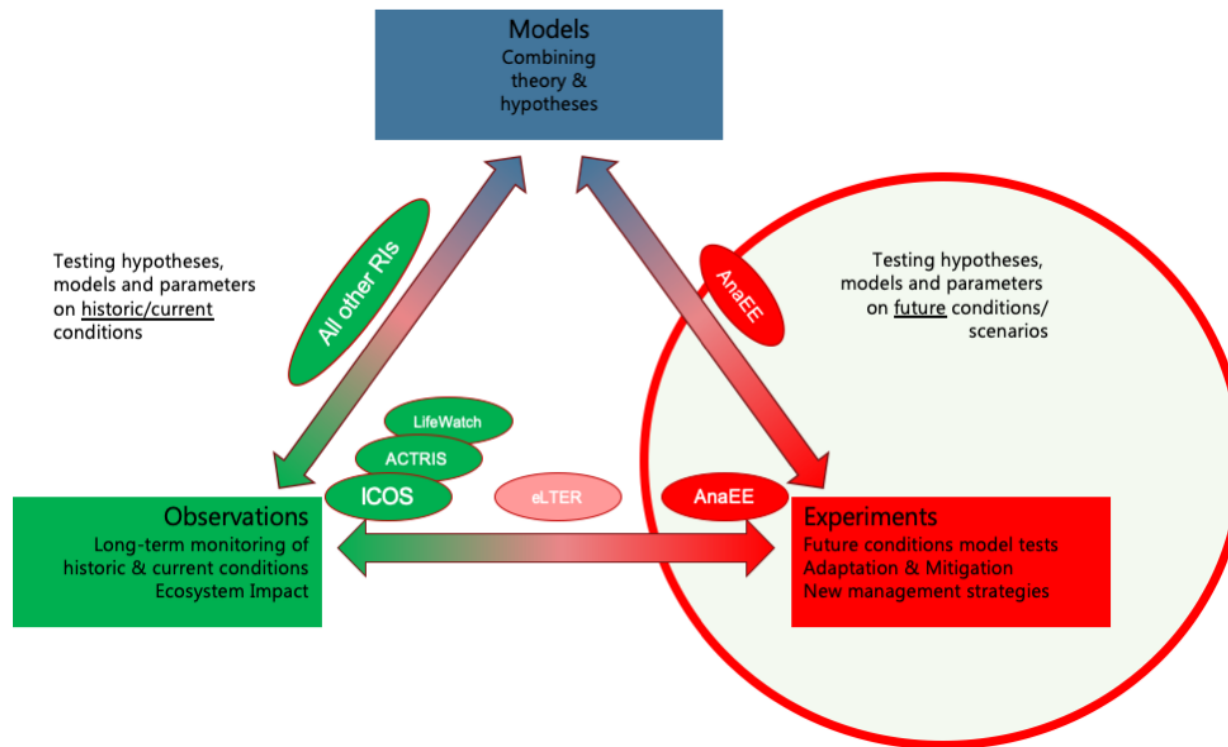


Manipulation of the environment, supported by **modelling** enables

- * quantification and prediction of the impact of current and future global change drivers on ecosystem functioning
- * unravelling mechanisms and feedback involved in ecosystems' responses
- * testing mitigation and adaptation measures

The AnaEE-Europe Concept

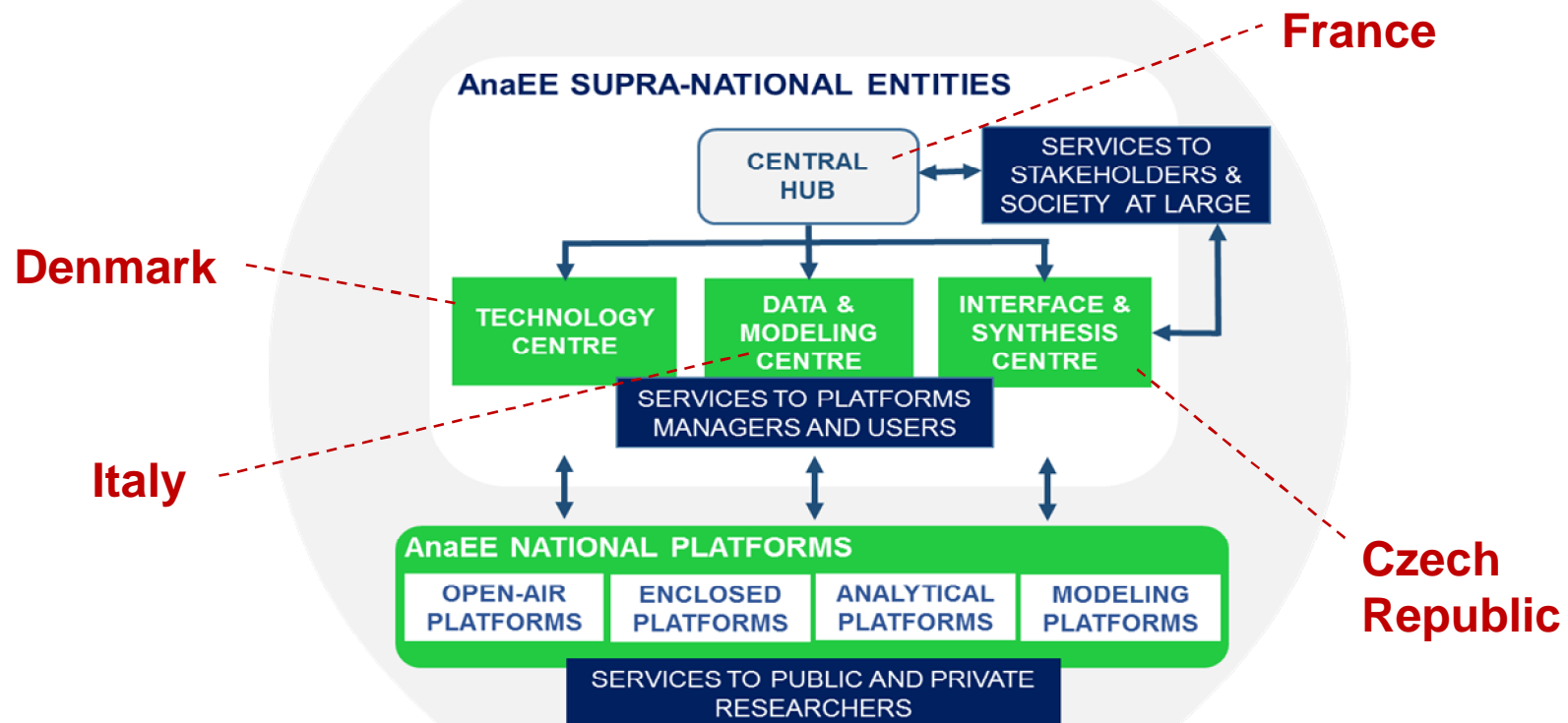
AnaEE thus takes up a **unique position** in the European RI landscape



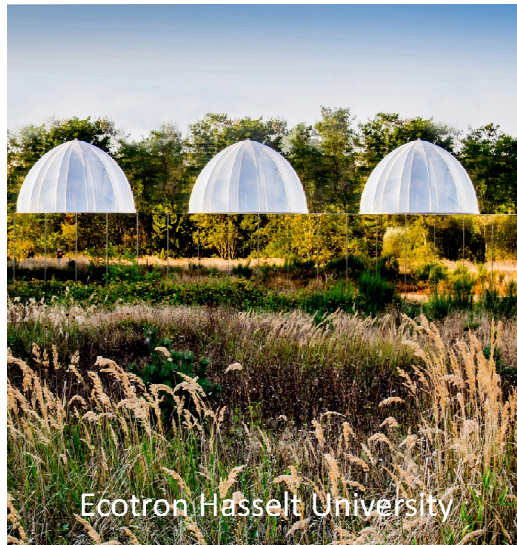
There is a strong **complementarity** with the observational approach, with both needed for modelling ecosystems

AnaEE-Europe structure

Currently 8 countries involved (more are expected to join)
National platforms are **supported** by Hub and Service Centres



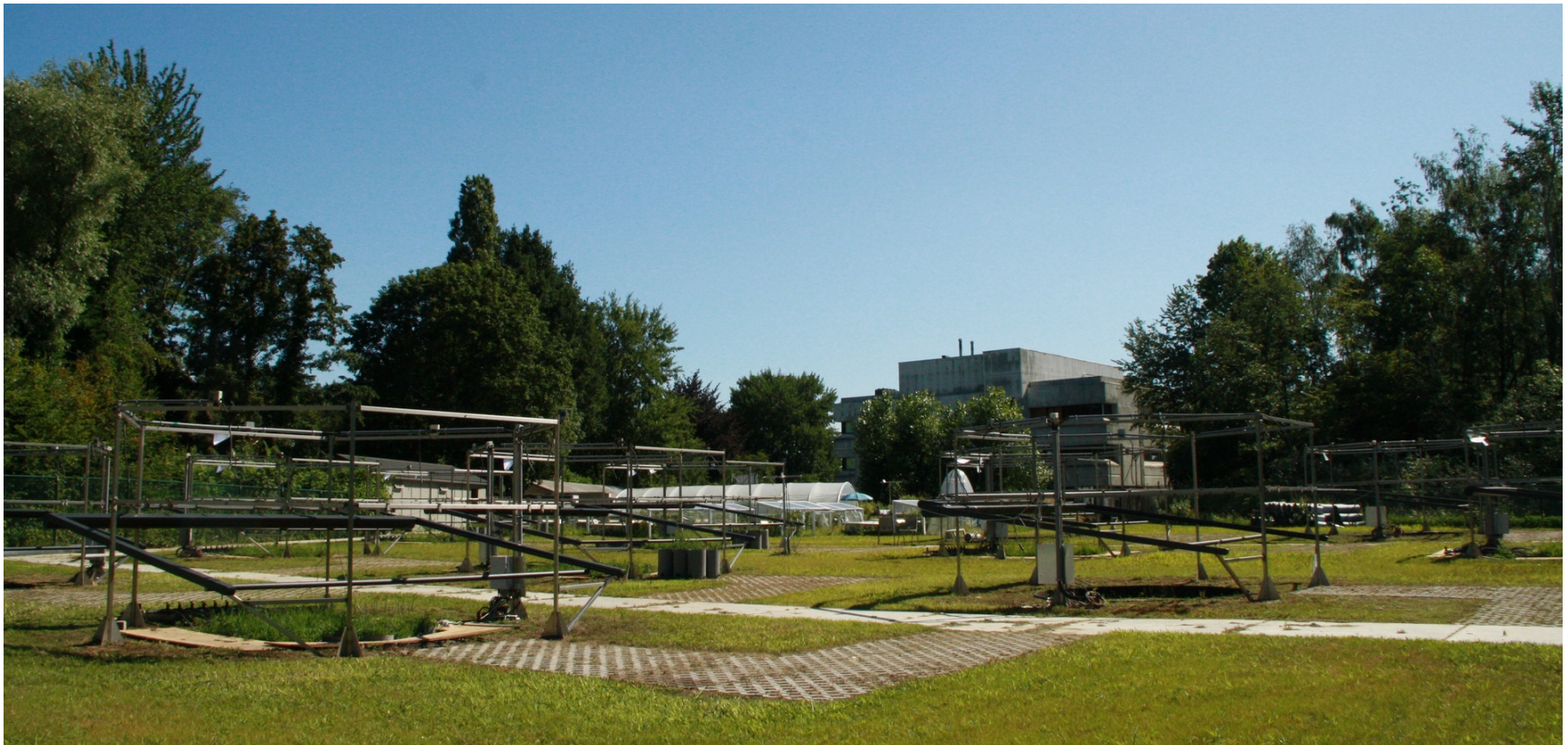
AnaEE-Belgium platforms



FATI-platform at UAntwerp

Free-air Temperature Increase (infrared heating) combined with automated rainout shelters: warming + precipitation manipulations

Twelve 7 m² plots, can be filled entirely or with multiple mesocosms



FATI-platform at UAntwerp

Current experiment: “Regime shift” – impacts of more persistent weather from the sub-cellular level up to the ecosystem scale

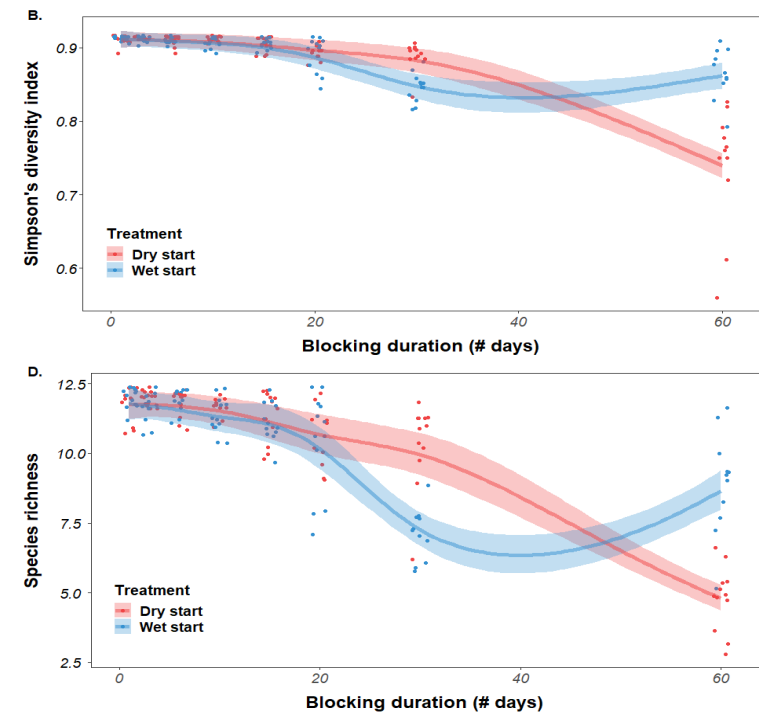
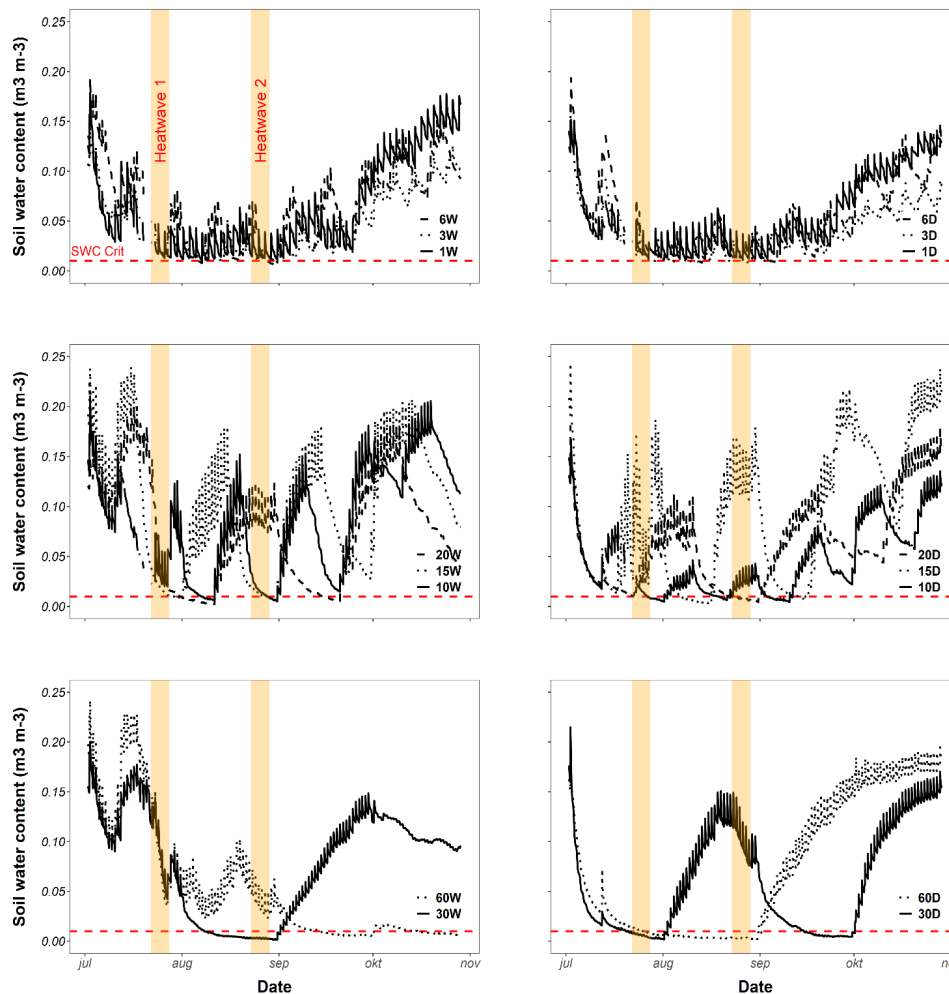
Small communities with 12 common grassland species

Four research groups involved, project running 2019-2022



FATI-platform at UAntwerp

Eight regimes, from 1 to 60 consecutive dry or rainy days, starting with a dry or a rainy period, i.e. 16 treatments in total



First study being wrapped up –
diversity declines with dry/wet
length, but apparent timing effect

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