

FELNET – 20211012 – FLANDERS RESEARCH CENTER

The Ecotron Hasselt University is a technology to bridge the complexity of in situ experiments & ‘simplicity’ of environmentally controlled ecosystem chambers.

The Ecotron contains a set of 12 advanced environmentally controlled rooms, including an above ground unit and a below ground unit.

This facility allows to study the responses of ecosystems above ground (vegetation) and below ground (e.g. carbon, nutrient and water cycles, bacteria, fungi, invertebrates).

International research teams will investigate the effects of a changing climate – intensified and more frequent drought events – on the ecosystem functioning and dynamics.

The 100m long semi-automated infrastructure supports the study of fundamental, modeling and applied research questions coming from many disciplines including biology, ecology, biogeochemistry, mathematics, engineering sciences, etc that either need short or long term periods.

Several variables are continuously monitored and can be manipulated above ground (in the domes) and below ground (in the lysimeters): light intensity, radiation, air temperature, relative humidity, precipitation, greenhouse gas concentration, soil temperature, soil water content and soil carbon content.

The climatic conditions of each ecosystem unit can be adjusted in real time to ambient conditions. The data observed by the ICOS-observation tower - located in the Mechelse Heide - are directly transferred to the Ecotron Facility. This is realised through collaboration with ICOS Belgium (PLECO UAntwerpen).

Several variables are continuously monitored and can be manipulated above ground (in the domes) and below ground (in the lysimeters). Light intensity Radiation Air temperature Relative humidity Precipitation Greenhouse gas concentration Soil temperature Soil water content Soil carbon content This is realised through collaboration with ICOS Belgium (PLECO UAntwerpen).

The Ecotron Hasselt University is located at the Terhills project area in the immediate vicinity of the main gate of Hoge Kempen National Park, Connecterra

The offices, a seminar room and research infrastructure are situated in the Field Research Centre, located at ConnecterraTerhills, the main gateway of Hoge Kempen National Park. The Field Research Centre is part of the Centre for Environmental Sciences (CMK), Hasselt University.

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