

ANAAE- Structuring infrastructures for the analysis and experimentation on ecosystem
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This Design Study aims at implementing a new concept of integrated research infrastructures in Europe for research on agro-ecosystems and natural ecosystems and environment.

This infrastructure consists in interfacing three types of platforms:

(i) The in situ Long Term Experimental Platforms which consists in developing experiments for the main type of land use systems (arable crops, grasslands, forest, marchlands, heathlands), where different types of land management are imposed for a long term and where the state variables of the system are monitored for long term in conjunction with the measurement of the environmental fluxes to atmosphere and hydrosphere.

(ii) The in vitro ECOTRON equipments where blocks of ecosystems of different size could be introduced within controlled environment. Since feedbacks between the plants and the soil responses take time to establish, experiments often need to last a few years. An alternative use of Ecotrons is to analyse the physiology of blocks of ecosystems which have been subjected in situ for years to various treatments within LTEP platforms. In that case, Ecotrons can be seen as ecological analysers receiving samples for analysis.

(iii) The in silico Database and Modelling platform should complete the system by developing facilities for sharing data bases among Europe.

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