Project Database of ICP Forests
PROJECT DESCRIPTION

PROJECT INFORMATION

Project title:	**ANALYSIS OF BIODIVERSITY TRENDS USING LONG-TERM DATA**
Project ID:	148
Contact person:	Francesca Pilotto (francesca.pilotto@senckenberg.de)

PROJECT DESCRIPTION

Principal investigators:
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Institution:
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Time frame:
The project started in January 2018 and will be completed by March 2019. Data collection will be finalized on 15th October 2018. Data analysis and paper writing will be completed by the 31st March 2019.

Study aim and approach:
We aim at providing a comprehensive analysis of the trends in biodiversity, encompassing a long time span (>15 years) and large variety of biotic groups in different ecosystems and ecoregions. For that, we will compute a set of biodiversity metrics (including total abundances, richness, diversity and community stability) for each time series that we will receive. We will compute the trends of such biodiversity metrics over the studied period and we will test whether such trends are related to the climatic changes at the sites. We will also take into account possible drivers of biodiversity trends other than climate change, such as changes in land use and pressures at the sites. We will compare the results among biotic groups, ecosystems, ecoregions, and levels of anthropogenic pressure.

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Data:

Biotic data:

We have already gathered about 120 time series, mostly from the ILTER network, for several biotic groups (including plankton, insects, birds, and vegetation), from several European countries (Fig. 1). We would like to further increase the number of time series to increase the relevance of the project. We believe that the ICP forest database could be a great source of valuable data. 2

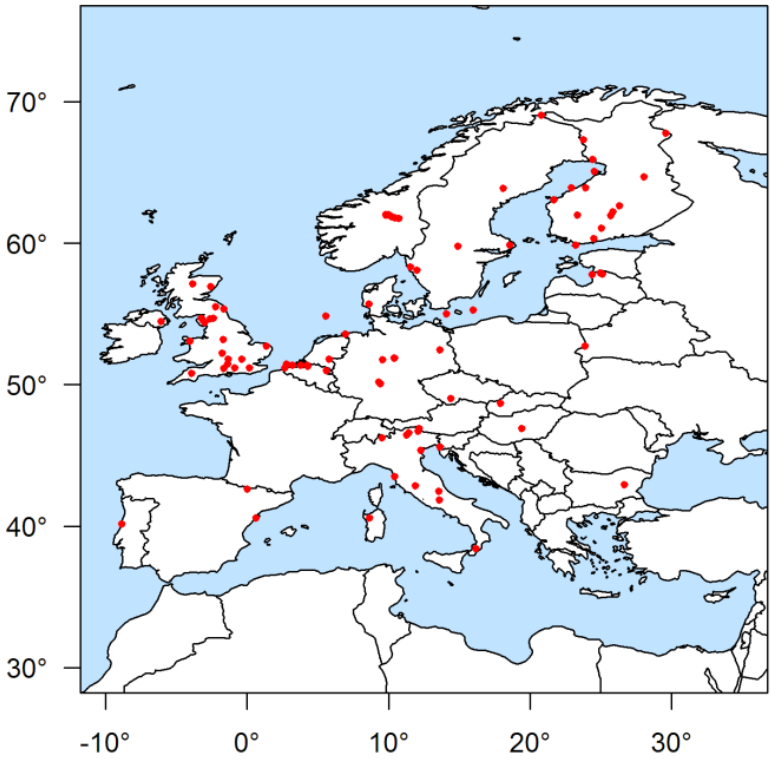

FIGURE 1. STUDY AREA, EACH DOT REPRESENTS A TIME-SERIES OF BIOLOGICAL DATA THAT WE HAVE ALREADY RECEIVED

Abiotic data:

For each study site we will gather climatic data and land cover data from online databases (e.g. ECA&D and CORINE). An exception is for datasets dealing with aquatic ecosystems, for which we ask data providers to send us water temperature data because such data are not available in online databases. In addition to this, we will assess the level of anthropogenic impacts acting at the study sites, how impacts changed during the study period and whether there are biases in the datasets that could mislead the interpretation of results. For this, we developed an online survey (https://goo.gl/forms/vRZl8TRZqZZxlIWq2) that data providers will fill in for each study sites.

Expected outcome:

Publication in an international peer-reviewed journal