

Project Abstract

Identifying recovery indicators in UK priority habitats

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Air pollution can be a threat to human health and ecosystems. National and international emission reduction policies aim to mitigate this threat and have led to declines in atmospheric pollutants in parts of the globe, including of nitrogen-containing compounds. These reductions are important for ecosystems, as excessive amounts of nitrogen deposition have previously led to deleterious consequences for valued ecological properties including biodiversity. However, ongoing environmental change and system lags mean that simply reducing atmospheric nitrogen pressures may not lead to system recovery. To understand whether emissions reduction policies are having desired ecological impacts, statutory organisations within the UK wish to identify 'baskets of recovery indicators', where habitat-specific properties can be used to indicate whether systems are on trajectories of recovery.

This project will feed into recovery indicator identification and understanding by surveying ideal test-bed sites (e.g. former nitrogen deposition experiments), collecting samples for laboratory analysis, and/or analysing recently collected data on indicator characteristics. In addition, it will provide the successful applicant with the opportunity to understand the background to the wider air pollution recovery indicators research programme and interact with different stakeholders analysing system dynamics across a suite of priority British habitats, including heathlands and grassland. The successful applicant can gain skills in plant species identification, statistical and/or laboratory analysis and reporting, together with being provided the opportunity to grow their professional network. Although mainly based at the UKCEH Bangor office, the successful applicant would have the opportunity to visit other UKCEH offices and partner organisations.