

Towards integration of low carbon energy and biodiversity policies - WC1021

Description

This project consisted of several components that ultimately supported the development of an innovative biodiversity impact assessment of energy production technologies in the UK. The project included a review of existing evidence on the impacts of energy technologies on biodiversity in the UK and abroad; the development of a biodiversity impact assessment methodology that could be integrated into the DECC Calculator; execution of over 1500 individual biodiversity impact assessments on selected habitats and species in the UK; integration of the results of the assessments into the Calculator; and, investigation into how the biodiversity impact assessment methodology could be improved and developed by using spatially-explicit land use modelling as well as including impacts from indirect land use change.

Objective

The overarching aim of this project was to improve the awareness and knowledge of the impacts of energy technologies on biodiversity among policy makers, scientists, businesses and other stakeholders in society in order to foster the integration of biodiversity and climate change objectives in policy.

The objectives of the project are to:

- Provide an overview of the existing evidence and information about the impacts of energy technologies on biodiversity in the UK and abroad;
- Develop a transparent and evidence-based methodology to assess the current and future impacts of energy technologies on biodiversity in an objective and, where possible, quantitative way. The assessment methodology should take into account different aspects of biodiversity and include direct and indirect as well as positive and negative impacts;
- Evaluate the current impacts of energy technologies on biodiversity (including fossil energy, renewable energy and other low carbon energy technologies) as well as their impacts in 2050;
- Integrate a biodiversity module in the existing DECC Calculator so that users are provided with information on the impacts of biodiversity and can obtain a fuller picture of the potential impacts of energy choices in the UK until 2050;
- Explore whether spatially-explicit modelling in the UK could be implemented to better assess the impacts of bioenergy on biodiversity and what future work is needed for that purpose;
- Investigate the framework developed by the United Nations Environment Programme's World Conservation Monitoring Centre (UNEP-WCMC) to evaluate the impacts of indirect land use change (ILUC) on biodiversity and assess its usability for evaluating the impacts of UK demand for bioenergy on biodiversity outside of the UK.

Time-Scale and Cost

From: 2011

To: 2014

Cost: £147,959 (including £15,000 from JNCC)

Contractor / Funded Organisations

BIO Intelligence Service / BIO by Deloitte
Institute for European Environmental Policy (IEEP)
Centre for Ecology & Hydrology (CEH)

Keywords

Biodiversity
Energy
Assessment methodology
Indirect land use change (ILUC)