# Economics of biodiversity

This programme aims to inform decision making by addressing critical gaps in our current understanding of the economic values, benefits and costs that society associates with, and derives from, biodiversity.

We will fund projects, bringing together scientists and economists to advance our knowledge in biodiversity and economics.

The programme will explore how economies are embedded in nature, and how nature and biodiversity are integrated into economic models and decision making processes, by:

* examining how multiple pluralistic values associated with biodiversity are captured, derived, applied and utilised
* investigating the ways in which socioeconomic and ecological systems are interlinked or coupled, and how this can help build and maintain resilience of these systems in response to increasing disturbances
* exploring how different evidence-based biodiversity valuation methods (including those beyond monetary valuations) can be embedded within mainstream local and national decision making in the UK, whilst also reflecting upon the needs of future generations and meeting global biodiversity and development targets.

### Research themes

Three research themes have been identified.

#### Biodiversity values in decision making

The values associated with the economics of biodiversity are more nuanced than market valuation, and the values that different individuals, groups, organisations and sectors assign to biodiversity are not uniform.

This theme seeks to better understand how biodiversity values are captured in decision making and where new and existing data and evidence informs the types of interventions required to maintain, enhance and optimise biodiversity in terms of its value to functional landscapes and the economy.

#### Biodiversity, natural capital and resilience

Resilience has multiple definitions across disciplines. In this context, it refers to the ability of subjects (populations, organisms, systems or networks) to withstand, recover from, or adapt to disturbance. Both ecological and socioeconomic systems within which human societies operate can be considered in relation to their resilience to disturbances.

This theme considers the economics of biodiversity through the lens of the interconnected socioeconomic and ecological systems. The aim is to generate new thinking and knowledge regarding what represents resilient, sustainable, healthy and fair systems.

#### Management tools for decision makers

This theme considers how the economics of biodiversity can be applied to support management decisions. This theme explores if and where this data gap exists.

It investigates how to make data of sufficient quality available for accurate and integrated forecasting and reporting on biodiversity, natural capital, fiscal forecasting and predictive modelling used in decision making. This includes economic, financial, population, cultural value and environmental data.

Under this theme, the emphasis is on improving scalability, interoperability and user uptake of decision support tools. This includes working with:

* temporal variability, for example seasonality and land use change
* spatial variability, for example topography land parcel location bordering land use
* differing knowledge requirements for various users, for example local, regional and national priorities.