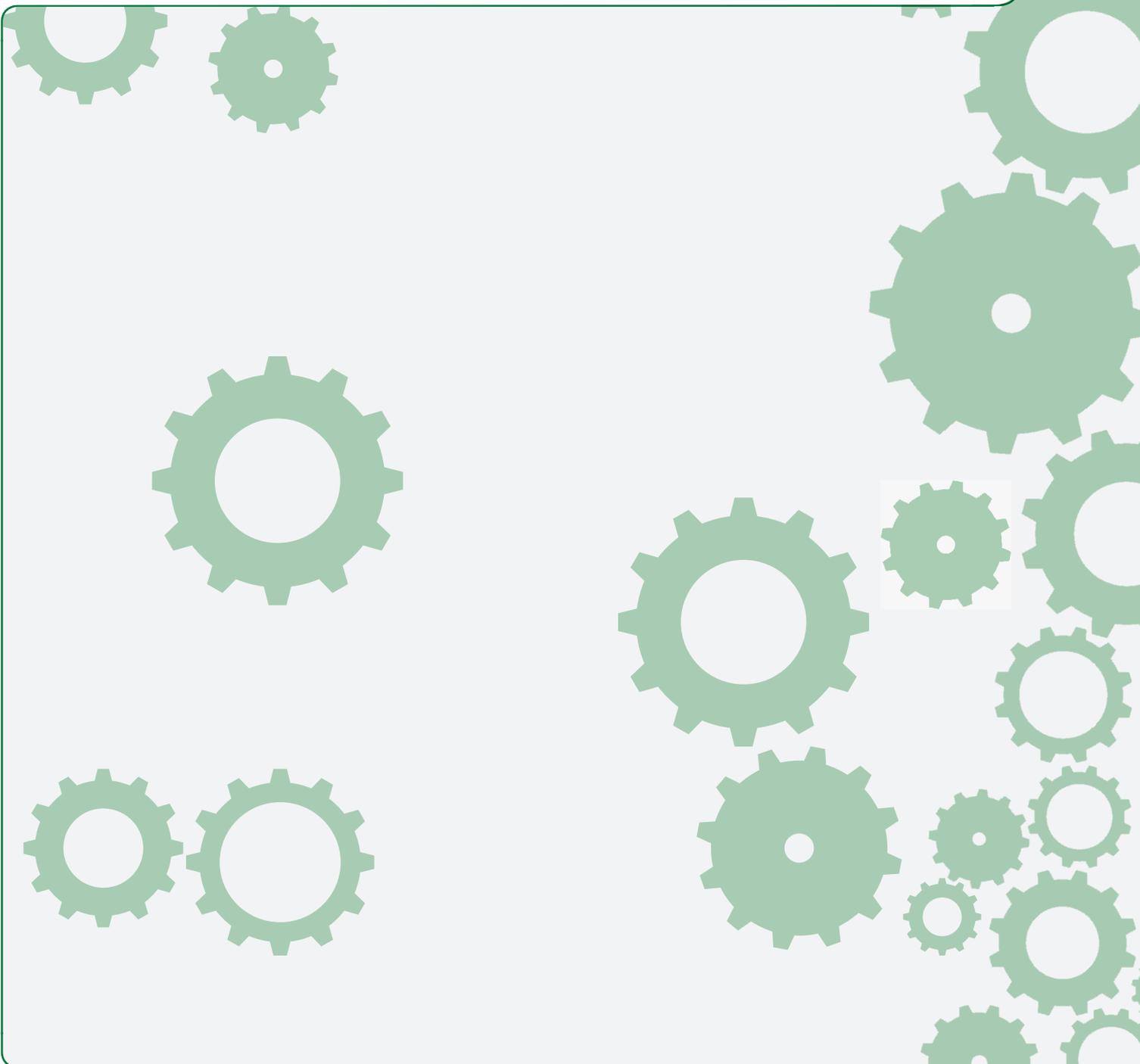


# UK National Ecosystem Assessment

## Technical Report



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## Foreword

The UK National Ecosystem Assessment (UK NEA) provides a comprehensive overview of the state of the natural environment in the UK and a new way of estimating our national wealth. It shows how we have under-valued our natural resources. Valuing them properly will enable better decision making, more certain investment, new avenues to wealth creation and jobs, and greater human well-being in changing times ahead.

Our wealth as a nation and our individual well-being depend critically upon the environment. It provides us with the food, water and air that are essential for life and with the minerals and raw materials for our industry and consumption. Less obviously, it provides the processes that purify air and water, and which sequester or break down wastes. It is also in our environment where we find recreation, health and solace, and in which our culture finds its roots and sense of place. Scientists refer to these services that our environment provides as 'ecosystem services', recognising that it is the interaction between the living and physical environments that deliver these necessities.

Yet we tend to take this largely for granted. While we pay for some ecosystem services like food and fibre, we are often unaware of the importance of others such as natural water or air purification, and would be alarmed at the cost of providing these artificially. This under-estimation of the value of natural processes in economic terms means that we take inadequately informed decisions on how to use these resources. The result is pollution, the loss of species and ecosystems and damage to the processes we need, with real economic costs to either recover them or provide artificial alternatives.

With ever increasing pressures on these natural resources, partly from growing populations but still more from growing levels of individual consumption, it is essential that we learn to take account of the full value of ecosystem services in our decision making. By doing so,

we can not only protect what we have and repair damage where needed, but harness these resources more effectively to generate wealth and well-being. The UK NEA represents a first attempt to assess our stocks of natural ecosystem resources, their state and the trends in their development. This ground breaking assessment has been adopted by the partnership that I chair, of Government, Devolved Administrations, Research Councils and other bodies (22 in all) who form the *Living with Environmental Change Partnership* (LWEC). The aim of LWEC is to ensure that decision makers in government, business and society have the knowledge, foresight and tools to mitigate, adapt to and benefit from environmental change.

Funding for the UK NEA has brought together about 500 experts in the natural sciences, economics and the social sciences, under the chairmanship of Professor Robert Watson (Defra's Chief Scientific Advisor and Strategic Director of the Tyndall Centre at the University of East Anglia) and Professor Steve Albon of the James Hutton Institute (formerly the Macaulay Land Use Research Institute). This team has assembled and analysed an enormous body of published information about the UK environment and generated new tools for valuing it, in economic and non-economic terms; this is a world first. It provides for the first time, a coherent body of evidence about the state of our natural environment and the services it provides for each country in the United Kingdom. This can serve as the basis for thinking about how we want to use these services to best effect, for national wealth and national well-being, now and for our nation's children into the future.



Lord Selborne GBE, FRS

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