

# Natural Capital

An overview of the Office for National Statistics and Department for Environment, Food and Rural Affairs natural capital project and all related publications.

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# 1 . Overview

- UK natural capital is comprised of all the ecosystem services that UK natural assets provide; natural assets include soil, air, water and all living things.
- Accounting for natural capital is important as many of the most valuable services it provides are intangible, so they are often overlooked; therefore, prior to creating natural capital accounts, decisions can frequently be made without best representing the environment.
- We are constantly expanding and developing our work to stay on path with our [2020 roadmap](#); we welcome all those with expertise in any area of future work to email us at [natural.capital.team@ons.gov.uk](mailto:natural.capital.team@ons.gov.uk).

## 2 . Publications

### Roadmaps

#### [2022 roadmap](#)

Article | Released 31 August 2022

This article assesses achievements since the publication of the natural capital roadmap, outlines various challenges, and sets out priorities for the next phase.

#### [2020 roadmap](#)

Article | Released 12 July 2018

This review and revised roadmap offers an introduction to natural capital accounting in the UK, assesses achievements in the three years since the last review, outlines various challenges, and sets out priorities for the next and final phase of the roadmap.

#### [2015 roadmap](#)

Article | Released 20 March 2015

This article assesses achievements since the publication of the natural capital roadmap, outlines various challenges, and sets out priorities for the next phase.

#### [2012 roadmap](#)

Article | Released December 2012

A roadmap for the development of natural capital accounts within the UK Environmental Accounts.

## Natural capital monetary estimates

### [UK natural capital accounts: 2024](#)

Bulletin | Released 8 November 2024

Estimates of the financial and societal value of natural resources to people in the UK.

### [UK natural capital accounts: 2023](#)

Bulletin | Released 27 November 2023

Estimates of the financial and societal value of natural resources to people in the UK.

### [Scotland natural capital accounts: 2023](#)

Bulletin | Released 15 June 2023

Estimates the value of Scottish natural capital and its beneficial effects for the population.

### [England natural capital accounts: 2023](#)

Bulletin | Released 25 January 2023

Estimates the value of English natural capital and its beneficial effects for the population.

### [UK natural capital accounts: 2022](#)

Bulletin | Released 10 November 2022

Estimates of the financial and societal value of natural resources to people in the UK.

### [UK natural capital accounts: 2021](#)

Bulletin | Released 12 November 2021

Estimates of the financial and societal value of natural resources to people in the UK.

### [UK natural capital accounts: 2020](#)

Bulletin | Released 19 November 2020

Estimates of the financial and societal value of natural resources to people in the UK.

### [Scottish natural capital accounts: 2020](#)

Article | Released 27 March 2020

The Scottish natural capital ecosystem service accounts, highlighting the relative importance of services provided by Scottish natural assets. Natural capital refers to physical and natural resources and the benefits these provide.

### [UK natural capital accounts: 2019](#)

Bulletin | Released 18 October 2019

Estimates of the financial and societal value of natural resources to people in the UK.

### [Scottish natural capital: Ecosystem Service Accounts, 2019](#)

Bulletin | Released 22 March 2019

The Scottish natural capital Ecosystem Service Accounts, highlighting the value and benefits of Scotland's natural assets. These are Experimental Statistics.

### [UK natural capital: Ecosystem service accounts, 1997 to 2015](#)

Bulletin | Released 30 January 2018

Natural capital refers to the physical, natural resources and the benefits that these resources provide. This bulletin presents the UK natural capital ecosystem service accounts, aiming to highlight the relative importance of services provided by the UK's natural assets.

### [UK natural capital: monetary estimates, 2016](#)

Bulletin | Released 30 November 2016

Natural assets provide a wide range of environmental services that make human life possible. The Office for National Statistics (ONS) and the Department for Environment, Food and Rural Affairs (Defra) have been developing methods to value these services, aiming to highlight the relative importance of services provided by the UK's natural assets. This bulletin contains a snapshot of our progress.

### [UK natural capital, monetary estimates: 2014](#)

Bulletin | Released 2 May 2014

First attempt by the ONS to expand on existing approaches to estimate a monetary value for components of UK natural capital for the period of 2007 to 2011.

## Habitat accounts

### [Woodland natural capital accounts, UK: 2024](#)

Bulletin | Released 15 May 2024

Woodland natural capital accounts, UK: 2024

### [Urban natural capital accounts, UK: 2023](#)

Bulletin | Released 7 September 2023

Natural capital accounts estimate habitat extent, condition indicators, ecosystem services and asset value of urban areas in the UK.

### [Woodland natural capital accounts: 2022](#)

Bulletin | Released 15 December 2022

Natural capital accounts containing information on ecosystem services for woodlands in the UK.

### [Saltmarsh flood mitigation in England and Wales, natural capital: 2022](#)

Bulletin | Released 15 July 2022

This data estimates the impact saltmarsh has on reducing flood risk in coastal areas in England and Wales.

### [Habitat extent and condition, natural capital, UK: 2022](#)

Bulletin | Released 3 May 2022

The size of area and condition indicators for eight natural UK habitats, including woodland, enclosed farmland, semi-natural grasslands and coastal margins. Uses the System of Environmental-Economic Accounting framework for Ecosystem Accounting. Experimental estimates.

### [Woodland natural capital accounts: ecosystem services for England, Scotland, Wales and Northern Ireland: 2020](#)

Bulletin | Released 11 May 2021

Additional information splitting down UK data in the Woodland natural capital accounts, UK: 2020 publication for England, Scotland, Wales and Northern Ireland.

### [Marine accounts, natural capital, UK: 2021](#)

Bulletin | Released 6 April 2021

Natural capital accounts containing information on ecosystem services for marine and coastal areas in the UK.

### [Semi-natural habitat natural capital accounts, UK: 2021](#)

Bulletin | Released 10 February 2021

Exploring the size, condition, quantity and value of semi-natural habitats and ecosystem services, as part of the UK Natural Capital accounts. These are our most natural spaces, although they have been altered by human activity.

### [Woodland natural capital accounts, UK: 2020](#)

Bulletin | Released 28 February 2020

Natural capital accounts containing information on ecosystem services for woodlands in the UK.

### [UK natural capital: urban accounts](#)

Bulletin | Released 8 August 2019

Natural capital accounts containing information about green space in urban areas.

### [UK natural capital: mountains, moorland and heath accounts](#)

Bulletin | Released 22 July 2019

Ecosystem accounts for the mountains, moorlands and heath (MMH) environment in the UK. This is the first iteration of the MMH ecosystem account.

### [UK natural capital: ecosystem accounts for urban areas](#)

Bulletin | Released 12 July 2018

Initial natural capital accounts containing information about green space in urban areas.

### [UK natural capital: ecosystem accounts for freshwater, farmland and woodland](#)

Bulletin | Released 25 July 2017

Natural capital accounts for freshwater, farmland and woodland have been developed with categories not previously included. Methodology is experimental and some services are not currently measured.

## Cross-cutting accounts

### [Impact of hot days on productivity in Great Britain methodology](#)

Methodology | Released 15 May 2024

Models estimates of output lost in gross value added (GVA) from the impact of hot days (28 degrees Celsius and over) on labour productivity in Great Britain.

### [Developing estimates of depletion for the UK natural capital accounts: 2024](#)

Article | Released 7 March 2024

Developing methods to estimate the depletion of UK natural capital assets, with initial results for three non-renewable services. These are official statistics in development.

### [Health benefits from recreation, natural capital, UK: 2022](#)

Bulletin | Released 27 May 2022

Further development of the UK recreation natural capital ecosystem service accounts, including specific methods used to estimate the health benefits gained from nature-based recreational activities.

### [Tourism and outdoor leisure accounts, natural capital, UK: 2021](#)

Bulletin | Released 28 April 2021

In this bulletin we put into practice new methods for estimating the value of tourism and outdoor leisure in the UK.

### [Does exposure to air pollution increase the risk of dying from the coronavirus \(COVID-19\)?](#)

Article | 13 August 2020

Our analysis measures the link between long-term exposure to dirty air and COVID-19 deaths in England.

### [One in eight British households has no garden](#)

Article | 14 May 2020

The percentage of homes without a garden is higher among ethnic minorities, with Black people in England nearly four times as likely as White people to have no outdoor space at home.

### [Valuing green spaces in urban areas: a hedonic price approach using machine learning techniques](#)

Article | Released 14 October 2019

Estimation of the value of recreational and aesthetic services provided by green and blue spaces in urban areas in Great Britain, capitalised into property prices.

### [UK natural capital: peatlands](#)

Bulletin | Released 22 July 2019

Natural capital accounts for peatlands measures the ecosystem services which nature provides from this dramatic landscape, including water, carbon sequestration, food and recreation.

### [UK air pollution removal: how much pollution does vegetation remove in your area?](#)

Article | Released 30 July 2018

Explore how air pollution removal varies across the UK and use our interactive map to see how much pollution was removed from your area in 2015.

### [UK natural capital: Experimental carbon stock accounts, preliminary estimates](#)

Bulletin | Released 28 June 2016

The first experimental estimates of carbon stocks being compiled to support the incorporation of natural capital into the UK Environmental Accounts by 2020.

### [Developing ecosystem accounts for protected areas in England and Scotland](#)

Report | Released September 2015

Project to scope and pilot ecosystem accounts for a selected suite of protected area landscapes that consist of a variety of habitats and produce multiple ecosystem services.

### [UK natural capital: land cover in the UK](#)

Bulletin | Released 17 March 2015

Land cover ecosystem accounts for the UK. The initial land cover accounts, based on data from the Countryside Survey, show that the land cover changed significantly in the UK between 1998 and 2007.

### [Land use in the UK \(PDF, 527KB\)](#)

Article | Released 2013

First experimental physical asset accounts for UK land use for 2000 to 2010.

### [Urban green spaces raise nearby house prices by an average of £2,500](#)

Article | Released 14 October 2019

Urban properties close to public parks, gardens and playing fields are more expensive, analysis reveals.

### [The UK environment – fighting pollution, improving our health and saving us money](#)

Article | Released 2 October 2017

An article looking at the findings from a new study commissioned by the Office for National Statistics (ONS) suggests that the environment is playing a vital role in tackling the problem of poor air quality and helping to protect people's health and reduce spending on healthcare.

## Scoping studies

### [UK natural capital: developing semi-natural grassland ecosystem accounts](#)

Article | Released 19 April 2018

A discussion of semi-natural grassland ecosystem accounts, including available data sources, and recommended approaches to developing an initial account.

### [Developing urban natural capital accounts for the UK as part of the ONS–Defra 2020 roadmap](#)

Report | Released October 2017

Project to scope and produce as far as possible an outline natural capital account for the urban “broad habitat” across the UK.

### [UK natural capital: developing UK mountain, moorland and heathland ecosystem accounts](#)

Article | Released 21 July 2017

A discussion of mountain, moorland and heathland ecosystem accounting techniques and data sources and the recommended approach to developing an initial account.

### [Scoping UK coastal margin ecosystem accounts](#)

Article | Released 28 June 2016

Scopes the development of a coastal margins ecosystem account and discusses several methodological challenges arising from the unique characteristics of coastal margin habitats.

### [Development of a monitoring protocol and financial modelling to enable quantification and valuation of carbon impacts of peatland restoration](#)

Report | Released March 2015

Research to support the quantification and valuation of carbon-based peatland restoration to facilitate business investment through the new UK Peatland Code.

### [Developing natural capital accounts for woodlands and the marine environment](#)

Report | Released September 2014

Experimental national ecosystem accounts, which capture the benefits of nature in the nation's balance sheet in a way that is as consistent as possible with System of Environmental–Economic Accounting (SEEA) guidance on ecosystem accounting, over the period 2013 to 2015.

## Methodology articles

### [Principles of UK natural capital accounting: 2023](#)

Methodology | Released 1 June 2023

The challenges and principles we have developed to transform the United Nation's guidance on environmental accounting into the UK's natural capital accounts.

### [Developing supply and use tables for UK natural capital accounts: 2023](#)

Article | Released 21 March 2023

How we developed supply and use tables for UK natural capital accounts, which contain experimental estimates of the flow of goods and services generated by nature through the economy.

### [Tourism values for Natural Capital Accounts](#)

Report | Released September 2019

A transparent and repeatable method for, and estimates of, the contribution of different ecosystems to the output of the tourist and outdoor leisure sectors in the UK as part of the UK natural capital accounts.

### [Marine Natural Capital Accounts](#)

Report | Released June 2019

Provides economic accounts based on the valuation of the goods and benefits provided by marine and coastal natural capital and ecosystem services.

### [Scoping UK urban natural capital accounts – extending noise regulation estimates](#)

Report | Released July 2018

A study to extend the existing analysis of noise regulating benefits of natural capital in urban areas to cover (if possible) the entire UK.

### [Scoping UK urban natural capital accounts – Extension to develop temperature regulation estimates](#)

Report | Released June 2018

A study to extend the existing analysis of local climate regulation benefits of natural capital to cover the entire UK.

### [Principles of Natural Capital Accounting](#)

Article | Released 24 February 2017

A background paper for those wanting to understand the concepts and methodology underlying the UK natural capital accounts being developed by the ONS and Defra.

### [Discounting for environmental accounts \(PDF, 453KB\)](#)

Report | Released 30 November 2016

Guidance on social discounting for the purposes of natural capital accounting.

### [Valuing flood-regulation services for inclusion in the UK ecosystem accounts \(PDF, 1.26MB\)](#)

Report | Released 30 November 2016

Methodology to value floodplains and an initial floodplain ecosystem account that could be incorporated into the UK ecosystem accounts.

### [Reviewing cultural services valuation methodology for inclusion in aggregate UK natural capital estimates \(PDF, 1.22MB\)](#)

Report | Released 30 November 2016

Review of potential approaches that could be taken to value cultural ecosystem services (CES) for inclusion in the UK's ecosystem accounts.

## Seminar notes

### [2013 Pimlico Seminar summary notes and supporting documents](#)

Summary notes | Released 11 November 2013

Notes from an Expert Seminar in London in November 2013 to discuss practical valuation approaches for natural capital accounting in the UK.

## Articles

### [UK air pollution removal: how much pollution does vegetation remove in your area?](#)

Article | Released 30 July 2018

Explore how air pollution removal varies across the UK and use our interactive map to see how much pollution was removed from your area in 2015.

### [The UK environment – fighting pollution, improving our health and saving us money](#)

Article | Released 2 October 2017

An article looking at the findings from a new study commissioned by the ONS suggests that the environment is playing a vital role in tackling the problem of poor air quality and helping to protect people's health and reduce spending on health care.

### [A million fewer people are gaining health benefits from nature since 2020](#)

Article | Released 27 November 2023

People in the UK are spending less time in natural environments since the coronavirus (COVID-19) pandemic.

## 3 . Importance of measuring natural capital

Natural assets provide a wide range of ecosystem services that make human life possible: the food we eat, the water we drink and the plant materials we use for fuel, building materials and medicines, to name a few. They also provide less visible services such as climate regulation, the natural flood defences provided by forests, removal of air pollutants by vegetation, and the pollination of crops by insects. Then, there is the inspiration we take from wildlife and the natural environment. Despite nature being priceless, it is not valueless.

We take a balanced approach to producing natural capital accounts, which entails creating stock and flow accounts of specific habitats or services. This means we are able to focus development on important accounts where the policy interest lies. All these specific accounts are then amalgamated into a national UK natural capital account that provides a "quick overview" of UK natural capital. The ultimate goal of the Office for National Statistics (ONS) and Department for Environment, Food and Rural Affairs (Defra) project is to incorporate UK natural capital into the UK Environmental Accounts by 2020.

Natural capital is predominantly hidden, partial or missing from the nation's balance sheet. However, by providing valuations of the UK's natural capital, decision makers can better include the environment in their plans to allocate resources to develop, and promote the growth of, the economy.