Natural Capital & Ecosystem Assessment

England Peat Map

Peatlands are important habitats for wildlife and plants, storing vast quantities of carbon and delivering a variety of ecosystem services, such as flood mitigation, water quality regulation and providing opportunities for outdoor recreation. However, England's peatlands currently release approximately 11 million tonnes of CO_2 equivalents per year[1].

11 million
tonnes of CO2 equivalents released by peatlands per year

Why do we need to map England's peatlands?

To succeed in our aims to restore peatlands and cut carbon emissions we need to know where the peat is, how much there is, and what condition it is in. Some information is already available from a range of national and local sources, but there is a pressing need for updated maps of England's peatlands, because:

- current mapping includes some old survey data, is sometimes mapped at a coarse spatial scale, or is imprecisely mapped where peat is shallow or in isolated pockets.
- we don't yet understand how deep much of our peat is. This makes it very difficult to estimate peat volume and from that how much carbon our peatlands currently store.
- information on peat condition is patchy and varied, particularly outside protected sites.
- new baseline mapping can help us understand how future monitoring might work. We need to develop monitoring approaches that are cost-effective and exploit the opportunities offered by advances in technology and data.
- we need to work with a wide range of partners and stakeholders to restore peatlands; open, accessible evidence will help us work together to achieve these aims.

What are we planning to produce?

The England Peat Map will produce a set of accessible, online maps describing peat extent, depth and condition. The maps will be updatable (improved with new data or better models) and designed to facilitate integration with the longer-term monitoring work of the Natural Capital and Ecosystem Assessment (NCEA).

We aim to publish the maps under the Open Government Licence, allowing them to be used by anyone or any purpose, requiring only an acknowledgement statement or link to information about the data sources.

[1] Evans, C., et al. (2017). Implementation of an emission inventory for UK peatlands. Report to the Department for Business, Energy and Industrial Strategy, Centre for Ecology and Hydrology, Bangor.88pp.

How will peatlands be mapped?

The England Peat Map will use a combination of field survey data, earth observation imagery and a suite of modelling and analysis tools to produce the map outputs. These models will address upland and lowland peat (including peat under intensive agricultural and forestry uses), bogs and fens, deep peat, wasted, shallow and isolated peat deposits. We will collate a wide range of peat survey data to support this work and anticipate undertaking a significant amount of new field survey. Our new surveys will capture data from peatlands - recording information such as peat presence and depth, vegetation and land cover characteristics, from sites selected according to a comprehensive sampling strategy.

£3m
Nature for Climate funding over three years

Comprehensive mapping of England's peat resources will provide fundamental evidence to underpin a range of activities, helping us to:

- improve the way we estimate greenhouse gas emissions as part of reporting obligations, helping us track progress towards the UK target of net zero carbon emissions by 2050
- understand where to target restoration activities
- understand how restoration management actions are affecting our peatlands
- calculate the Natural Capital assets of peatlands, so we better understand and value the benefits peatlands provide
- better inform land management activities on peatlands, to improve peatland condition
- share our understanding with our partners and the wider public
- apply our learning to develop better models in the future.

The England Peat Map Project will run from April 2021, with completion of the maps in 2024.

The project is managed as part of the NCEA to ensure alignment to wider environmental monitoring in Defra. Natural England are delivering the project.

It has received funding of £3million over the 3yrs from the Nature for Climate fund.

A request for data...

The quality of the England Peat Map outputs will be dependent on both the quantity and quality of field survey data we are able to incorporate into the models. The more data we can access and use, the better for all of us as these will be open outputs.

We are particularly looking for measurements of peat depth, vegetation survey quadrat data on peat (or on habitats that may be associated with peat such as upland heath), and dipwell time-series measurements; also mapped features such as grips, erosion gullies, peat haggs and areas of bare peat, and data on historical peat diggings.

If you have peat survey data which you think may be useful to us, and would be interested in sharing it, please get in touch to discuss. Email thomas.raven@naturalengland.org.uk.