

Almost 2 million acres of Great Britain grassland lost as woodland and urban areas expand

July 9 2020







The Land Cover Maps show different types of land cover across the UK at a high resolution. Credit: UKCEH

A major loss of grassland and significant increases in urbanisation and woodland in Great Britain since 1990 have been revealed in a new scientific analysis of land cover changes across the country.

Using high-resolution satellite-derived data, the UK Centre of Ecology & Hydrology (UKCEH) has calculated the overall net gains and losses in land cover over 25 years in Great Britain between 1990 and 2015. These show:

- a net reduction in all types of <u>grassland</u> (both farm use and recreational areas) of 7,668 km² or 1.9 million acres—greater than the size of Suffolk and Sussex combined
- a net increase in woodland area of 5,236 km² almost the equivalent of the size of Norfolk—with the majority of this increase in Scotland
- a net increase in <u>urban areas</u> of 3,376 km² an area almost the size of Cornwall—with the majority in England
- a net reduction in arable farmland of 782 km², with Scotland accounting for almost all this net loss. East Anglia also lost significant amounts of arable land, but there were increases elsewhere in England
- 2,505km² of grassland (about the size of Dorset) and 1,121 km² of arable farmland (almost the size of Bedfordshire) were converted to urban use

Kent had the largest net rise in urban land cover in terms of geographical



area (136km²) between 1990 and 2015, while Edinburgh had the largest percentage increase (6 per cent).

Argyll & Bute lost the largest amount of grassland (739 km²) in Great Britain and gained the largest area of woodland (662 km²). This was symptomatic of the significant differences between England and Scotland, which lost a similar total net area of grassland between 1990 and 2015.

In England, grassland was largely replaced by urban development, while in Scotland, there was a massive expansion in woodland at the expense of grassland and also arable farmland, with much less urbanisation. In Wales, the picture was more balanced, with a similar increases in urban and woodland cover.

Dr. Clare Rowland of UKCEH, who led the analytical study, says: "Thanks to sophisticated data analysis of high-quality satellite images, we have been able to produce the most reliable picture to date of the changes across the British landscape in recent years.





A variety of different land uses are shown on UKCEH's new Land Cover Maps, which are based on satellite-derived data. Credit: UKCEH

"Our data show the scale of grassland loss in Great Britain not only to make way for <u>urban development</u> but also woodland expansion. This information on how land cover in Great Britain has altered is crucial for understanding the impact of these changes on our environment, and helping us plan for the next 25 years.

"Overall, our data reveal a mixed picture, with significant differences in trends in changing land use between nations and counties."

The data on the changing land use in Great Britain between 1990 and



2015 is being made available as part of UKCEH's latest additions to its Land Cover Maps series, which show broad habitats across the country at a resolution of 25m or less.

Thanks to better quality satellite data and more advanced analytical computer software, UKCEH plans to release its state-of-the-art <u>digital</u> <u>maps</u> annually, and it has also just released UK Land Cover Maps for 2017, 2018 and 2019.

Data from UKCEH's Land Cover Maps series can now be downloaded without charge for all non-commercial use.

Professor Bridget Emmett, Head of Soils and Land Use at UKCEH, says: "With a growing population, the increasing demand for housing, food and fuel must be balanced with protecting the wildlife and ecosystems that bring a range of vital benefits for humans. Knowing what we have on our land surface and where is crucial when it comes to planning developments and environmental improvements in the future, and our maps are therefore essential tools for government agencies, water companies, land managers, NGOs and researchers.

"UKCEH's more frequent production of these maps, taking advantage of a step-change in satellite and data technologies, reflect the urgency with which these decisions now need to be made."

Dr. Daniel Morton, who developed the software for the new UKCEH Land Cover Maps, adds: "Producing <u>land cover</u> maps annually will enable the tracking of the UK's progress towards the net zero emissions target by 2050 and the success of national tree planting initiatives, as well as give us greater ability to monitor vegetation responses to climate and land use changes plus extreme weather events."



Provided by UK Centre for Ecology & Hydrology

Citation: Almost 2 million acres of Great Britain grassland lost as woodland and urban areas expand (2020, July 9) retrieved 26 April 2024 from <u>https://phys.org/news/2020-07-million-acres-great-britain-grassland.html</u>

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