

Historical land use and land-use change in Great Britain 1930s-2007

SND-ID: 2023-172. **Version:** 1. **DOI:** <https://doi.org/10.5878/9wks-qg91>

Download data

GB_LandUseChange_Data.csv (251.61 KB)

GB_LandUseChange_LowlandGrasslandChange.csv (142.75 KB)

GB_LandUseChange_Raster.tif (106.54 KB)

Associated documentation

GB_LandUseChange_Classes.pdf (107.32 KB)

GB_LandUseChange_Code.R (4.07 KB)

README.txt (7.65 KB)

Rplots.pdf (795.36 KB)

sessionInfo.txt (1.29 KB)

Download all files

2023-172-1.zip (~1.38 MB)

Citation

Suggitt, A. J., Wheatley, C. J., Aucott, P., Beale, C. M., Fox, R., Hill, J. K., Isaac, N. J. B., et al. (2023) Historical land use and land-use change in Great Britain 1930s-2007 (Version 1) [Data set]. Swedish University of Agricultural Sciences. Available at: <https://doi.org/10.5878/9wks-qg91>

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Description

This dataset contains summary data regarding historical (1930s-40s) land use and land-use change between 1930s and 2007 according to broad land-use categories. Data provided are summary values at the 10-km grid square 'hectad' level of the British National Grid, specifying the proportion and proportion of change in broad land-use categories.

Historical data are based on the first Land Utilisation Survey of Great Britain (Stamp 1931). For England and Wales, digitisation of the historical maps contains information supplied by Natural England, based on methods developed by Baily et al. (2011). For Scotland, map images were digitised using the R package HistMapR (Auffret et al. 2017). Both methods involve processing and classifying images based on the colour of the historical land-use map categories. Classified maps were then resampled to the 25m resolution of the modern UK Land Cover Map 2007 (Morton et al. 2011), and both historical and modern land-use categories were adjusted to produce broad categories of equivalent land use: Arable, Grassland, Urban, Woodland, Agriculturally-Improved Grassland and Surface Water. In Scotland, surface water from a modern map is used for the historical time period due to issues in classifying this category. Pixels within a 75m buffer of the modern road network were removed due to the disproportionate size of roads shown in the historical maps, and pixels falling into some coastal land-use categories in the modern maps were removed due to a lack of equivalent in the historical maps. The proportions of remaining pixels within each hectad, and the change in the proportion over time was then calculated. Full details of data creation and processing can be found in Suggitt et al. (2023), and more information on the data files can be found in the readme.

The extent of the data files:

GB_LandUseChange_Data.csv - table containing summary data, 2802 rows and 15 columns

GB_LandUseChange_LowlandGrasslandChange.csv - table containing data on lowland grassland change, 2802 rows and 10 columns

The file GB_LandUseChange_Raster.tif is a GeoTIFF file primarily intended to be used with the R script. It can also be opened using other GIS software.

If R is installed with required packages (see sessionInfo.txt), the file Rplots.pdf can be generated running:

```
Rscript GB_LandUseChange_Code.R
```

References:

Auffret, A.G., Kimberley, A., Plue, J., Skånes, H., Jakobsson, S., Waldén, E., Wennbom, M., Wood, H., Bullock, J.M., Cousins, S.A.O., Gartz, M., Hooftman, D.A.P., Tränk, L., 2017, HistMapR: Rapid digitization of historical land-use maps in R, *Methods in Ecology and Evolution* 8: 1453-1457.

<https://doi.org/10.1111/2041-210X.12788>

Baily, B., Riley, M., Aucott, P. & Southall, H., 2011, Extracting digital data from the First Land Utilisation Survey of Great Britain – Methods, issues and potential, *Applied Geography* 31: 959-968.

<https://doi.org/10.1016/j.apgeog.2010.12.007>

Morton, D., Rowland, C., Wood, C., Meek, L., Marston, C., Smith, G., Wadsworth, R., Simpson, I.C., 2011, Final Report for LCM2007 – the new UK Land Cover Map, Centre for Ecology & Hydrology,

Wallingford, UK. <http://nora.nerc.ac.uk/id/eprint/14854>

Stamp, D.L., 1931, The Land Utilisation Survey of Britain. Geographical Journal 78: 40-47.
<https://doi.org/10.2307/1784994>

Suggitt, A.J., Wheatley, C.J., Aucott, P., Beale, C.M., Fox, R., Hill, J.K., Isaac, N.J.B., Martay, B., Southall, H., Thomas, C.D., Walker, K.J., Auffret, A.G., 2023, Linking climate warming and land conversion to species' range changes across Great Britain, Nature Communications,
<https://doi.org/10.1038/s41467-023-42475-0>

Data contains personal data

No

Language

[English](#)

Time period(s) investigated

1930 – 2007

Data format / data structure

[Numeric](#)

[Geospatial](#)

Data collection 1

- Mode of collection: Compilation/Synthesis
- Description of the mode of collection: Map images classified according to colour, see dataset description and readme for more information.
- Spatial resolution: 10 kilometres

Geographic spread

Geographic location: [United Kingdom](#)

Geographic description: Data cover the island of Great Britain: England, Wales and Scotland.

Responsible department/unit

Department of Ecology

Funding 1

- Funding agency: UK Natural Environment Research Council
- Funding agency's reference number: NE/M013030/1

Funding 2

- Funding agency: Swedish Research Council
- Funding agency's reference number: 2020-04276

Funding 3

- Funding agency: Formas
- Funding agency's reference number: 2015-1065

Funding 4

- Funding agency: Northumbria University Vice Chancellor's Senior Research Fellowship

Research area

[Environmental sciences](#) (Standard för svensk indelning av forskningsämnen 2011)

[Physical geography](#) (Standard för svensk indelning av forskningsämnen 2011)

[Ecology](#) (Standard för svensk indelning av forskningsämnen 2011)

[Environment](#) (INSPIRE topic categories)

Keywords

[Habitat mapping](#), [Land cover mapping](#), [Habitats and biotopes](#), [Historical maps](#), [Land use](#), [Land cover](#)

Publications

Suggitt, A.J., Wheatley, C.J., Aucott, P., Beale, C.M., Fox, R., Hill, J.K., Isaac, N.J.B., Martay, B., Southall, H., Thomas, C.D., Walker, K.J., Auffret, A.G., 2023, Linking climate warming and land conversion to species' range changes across Great Britain, Nature Communications, <https://doi.org/10.1038/s41467-023-42475-0>

Polygon (Lon/Lat)

-7.978512, 49.267805

2.065175, 50.847573

2.284858, 55.751849

2.372715, 61.270233

-7.978512, 61.227957

-7.778376, 56.12106

-7.978512, 49.267805

Accessibility level

Access to data through SND

Data are freely accessible

Use of data

[Things to consider when using data shared through SND](#)

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Versions

Version 1. 2023-10-30

Download metadata

[DataCite](#)

[DDI 2.5](#)

[DDI 3.3](#)

[DCAT-AP-SE 2.0](#)

[JSON-LD](#)

[PDF](#)

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[File overview \(CSV\)](#)

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