Habitat Classification and Change Detection Tools

Availability: These data are currently available on request from Naomi Gatis N.Gatis@exeter.ac.uk . Following publication in an accompanying journal, the tools and maps will be freely available online.

The Habitat Classification Tool

This tool enables consistent, and annually repeatable, mapping of habitats across the extent of Dartmoor National Park, not possible by previous field survey methods. It improves on current data provision by providing time series data that is easily updated and delivers a comprehensive baseline habitat data against which change can be detected.

The tool uses pixels of known habitat class to train a random forest classifier, with freely available Sentinel-2 satellite imagery combined with LiDAR data products (slope, aspect and elevation), to predict the most likely habitat class for each pixel across the mapped Dartmoor National Park area. It also provides measures of accuracy which enables the user to acknowledge the uncertainties within the map and therefore have an appropriate level of confidence in the mapped habitats.

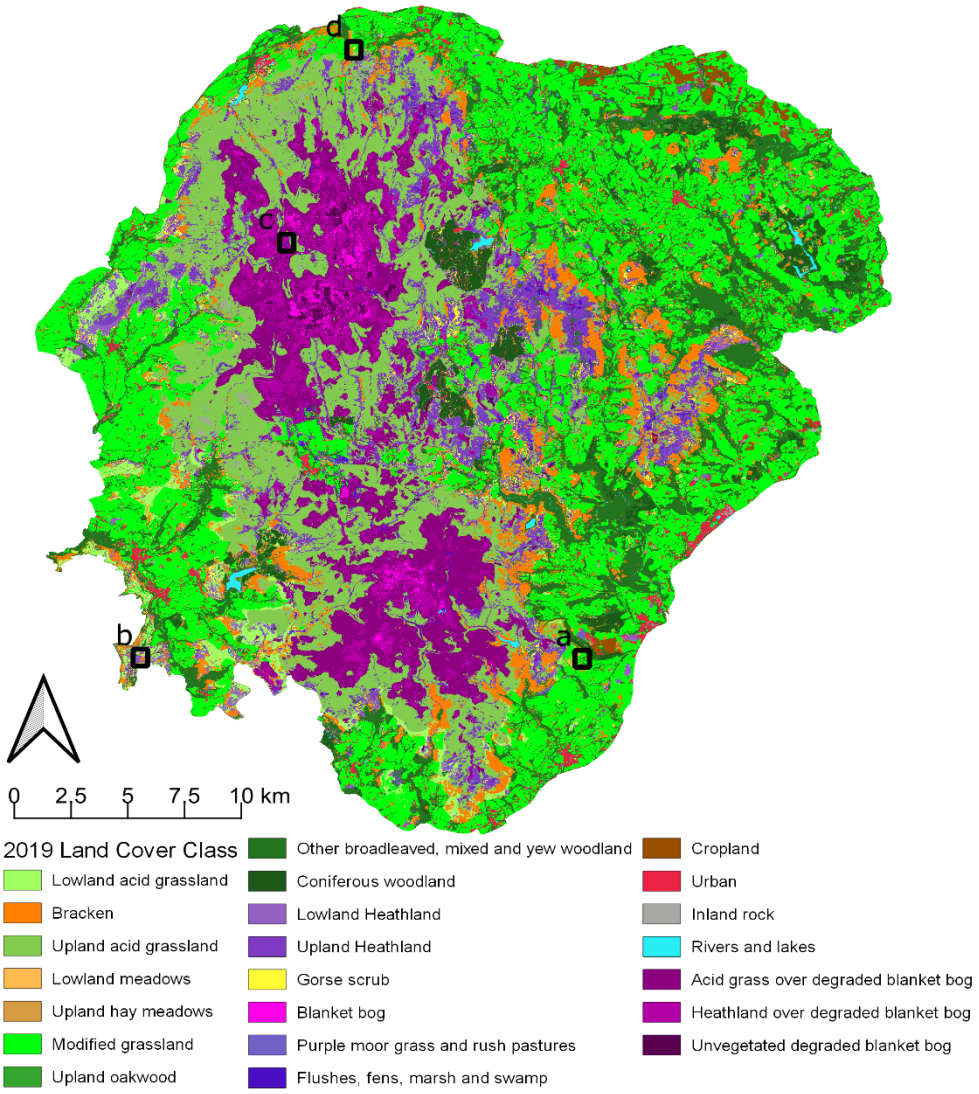

Fig 1. Mapped UKHab Classes across Dartmoor National Park for 2019. Boxes (a)-(d) relate to the images in Fig 2.

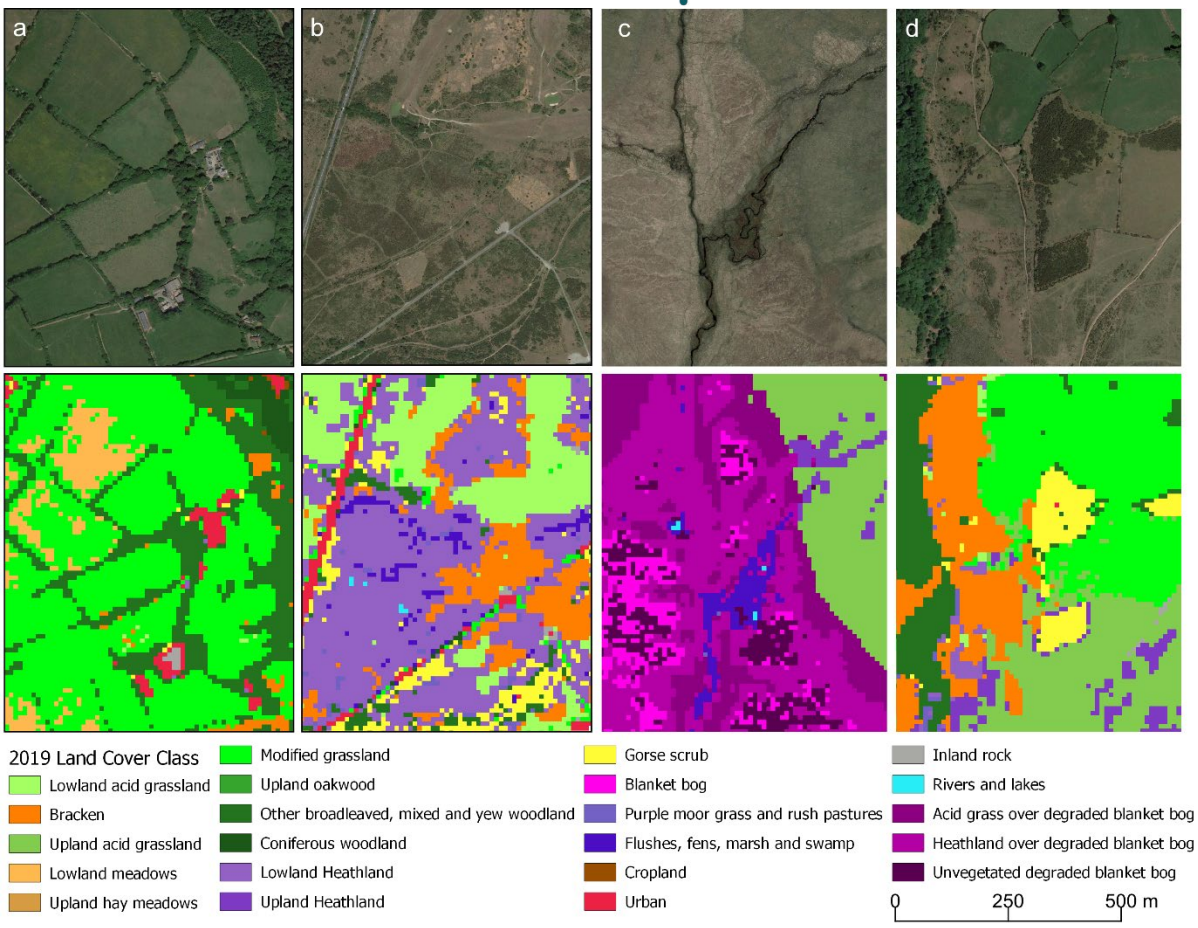

Fig 2. 1:10000 scale images showing examples from Dartmoor National Park of (a) mapped lowland habitat types including Lowland meadows (b) the complex mosaic of fragmented habitats captured in semi-natural areas (c) the variation in vegetation cover overlying degraded blanket bog (d) Gorse and Bracken encroachment on the moorland fridge. Aerial Imagery ©2021 Google.