

Food, wood and energy

How important are the uplands for food?

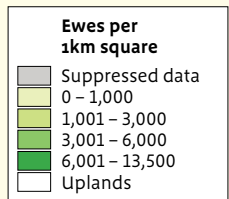
The uplands are an important source of some commodities, particularly lamb and beef. They also supply breeding stock and young livestock which are subsequently fattened in the lowlands.

Sheep products

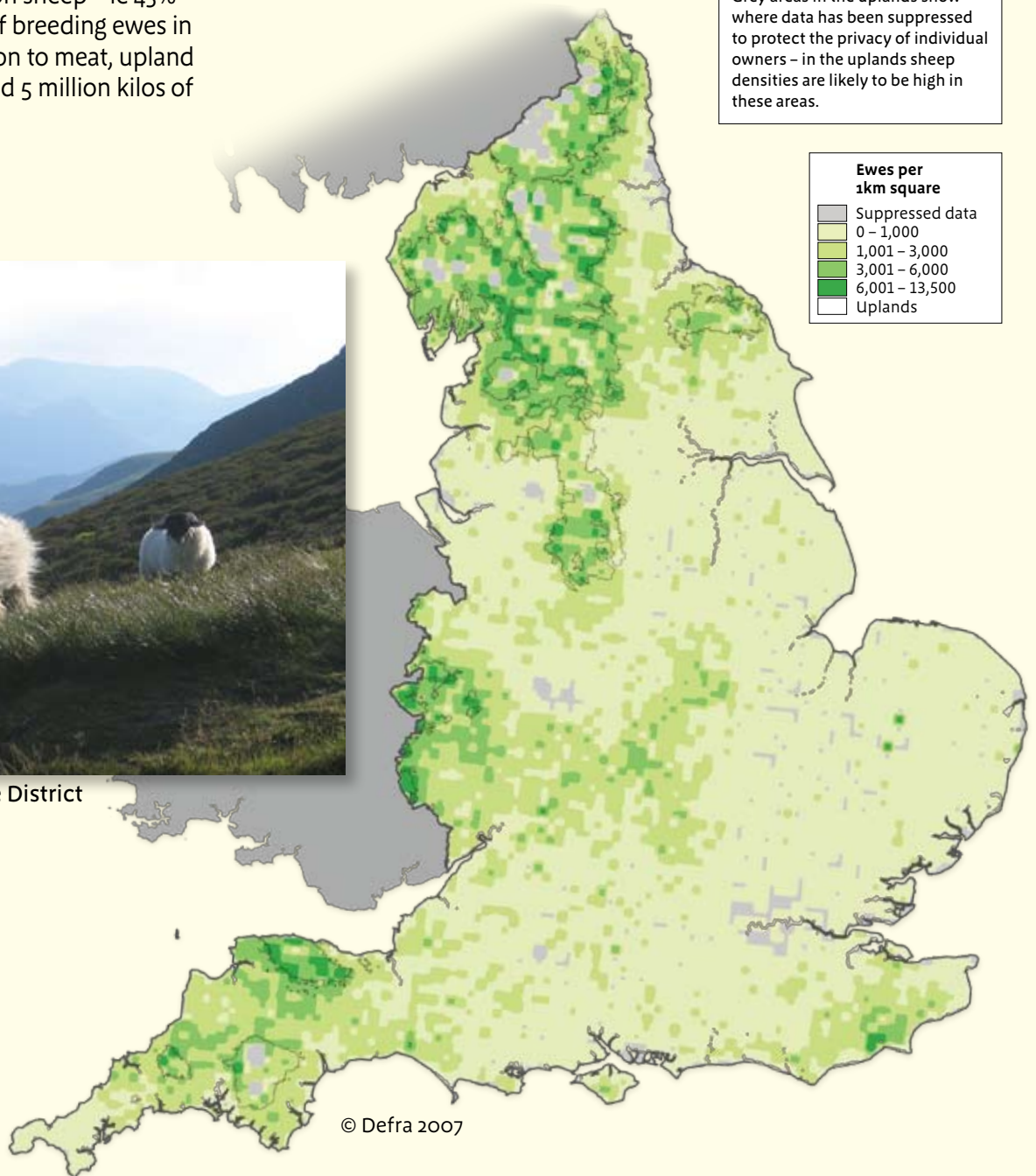
Uplands and upland fringe areas contain about 3 million sheep – ie 45% of the total number of breeding ewes in the country. In addition to meat, upland sheep produce around 5 million kilos of wool every year.

Density of breeding ewes

Grey areas in the uplands show where data has been suppressed to protect the privacy of individual owners – in the uplands sheep densities are likely to be high in these areas.



Swaledale sheep, Lake District



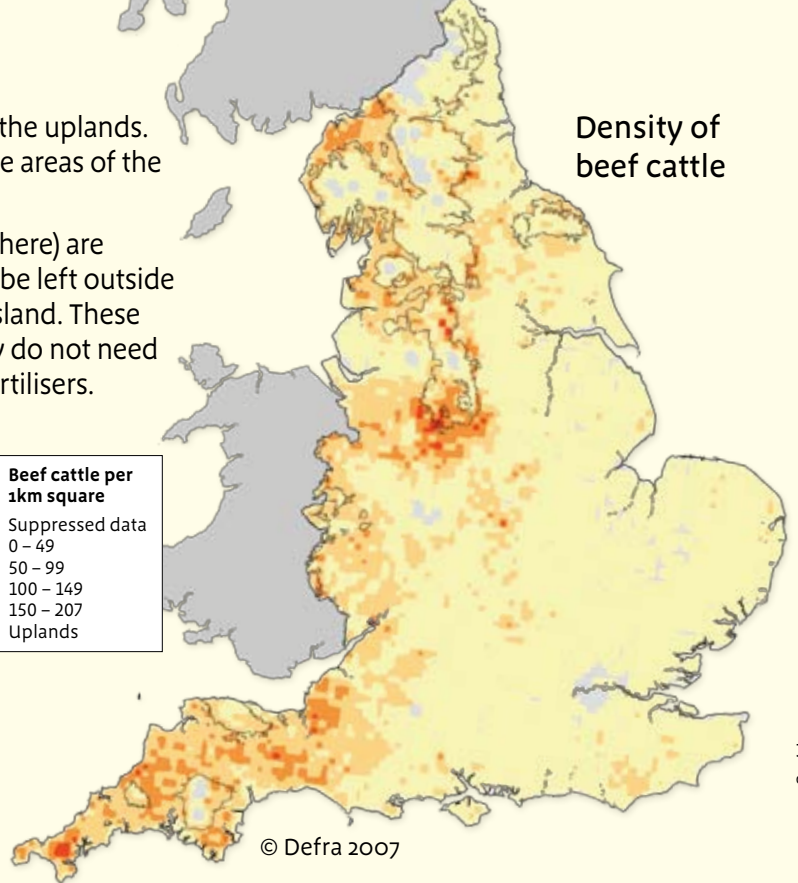
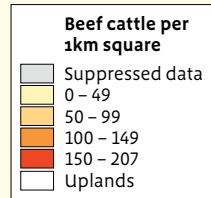
© Defra 2007

Cattle products

- Beef cattle were formerly much more common in the uplands. They are now largely restricted to the upland fringe areas of the south west and the midlands.
- Native breeds of cattle (such as Blue Greys shown here) are returning to the hills. They are very hardy and can be left outside all year round, and feed on the nutrient poor grassland. These cattle are better for the environment because they do not need pastures which have been treated with artificial fertilisers.



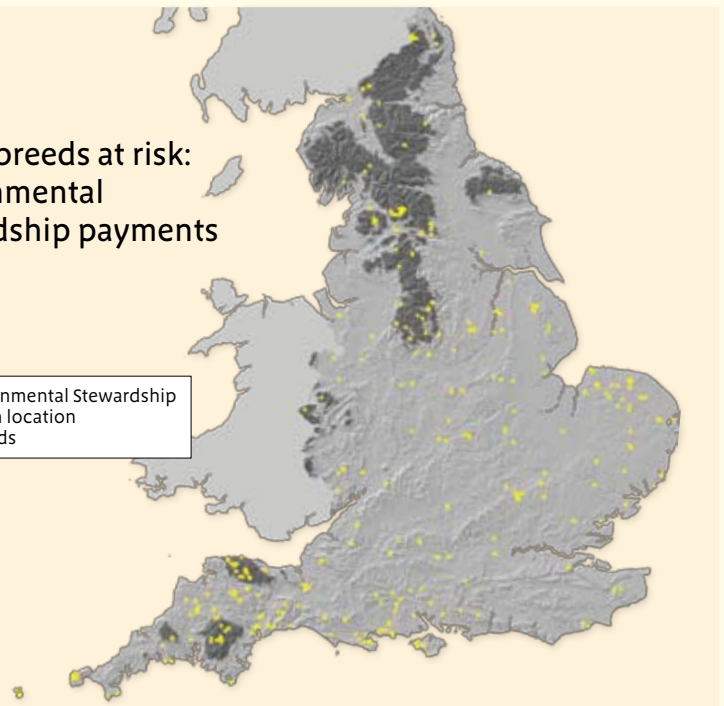
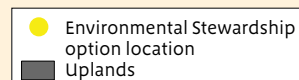
Native Blue Grey cattle



Native breeds – a win-win product

- Since 2005 farmers can receive government payments through the agri-environment scheme 'Environmental Stewardship', for the environmental benefits that grazing with native livestock breeds can provide.
- Some native breeds are highly prized by consumers for their superior taste and nutritional qualities, thus farmers can often sell them for a premium.

Native breeds at risk: Environmental Stewardship payments



Stone walls and barns, Yorkshire Dales

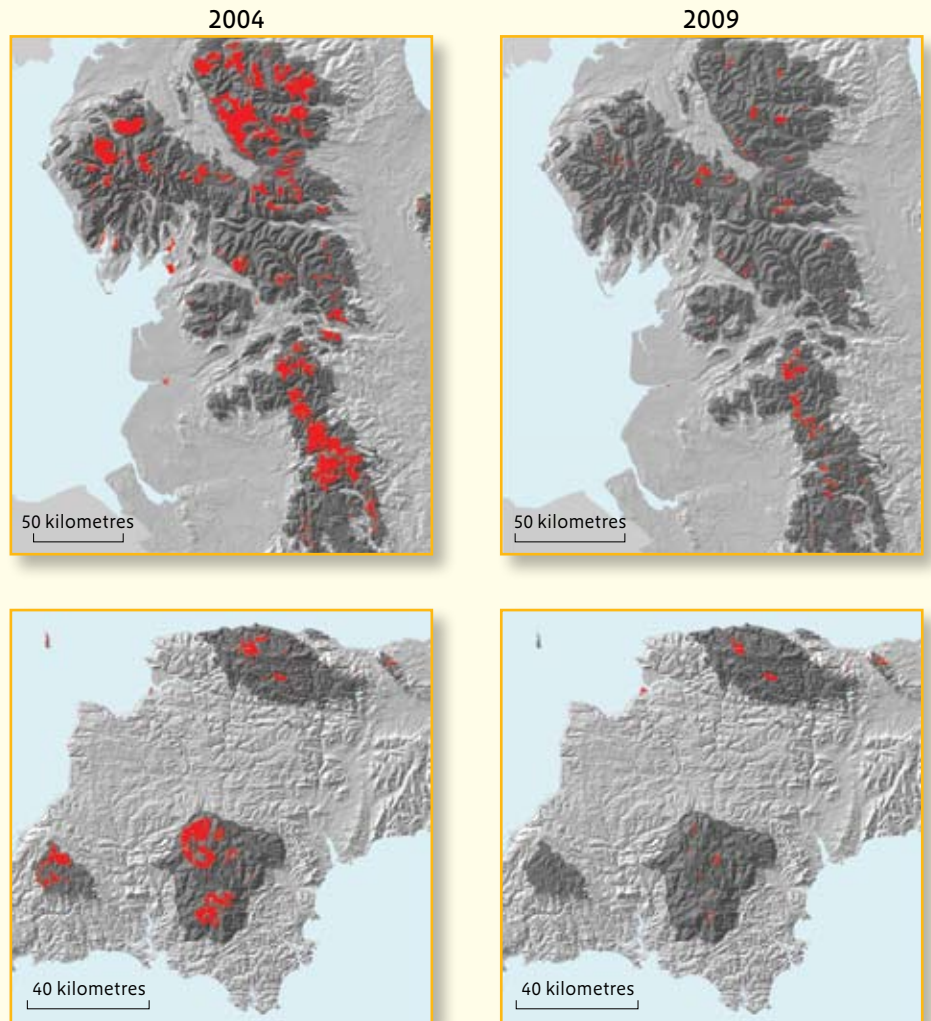
How has livestock farming shaped the uplands?

- The stone walls and barns associated with upland livestock farming have become, in many places, characteristic and much loved features of the landscape, along with the livestock themselves.
- Grazing animals also impact soils and vegetation where they graze, which can have knock-on implications for wildlife and water quality.

What impacts does livestock grazing have on vegetation and wildlife?

- Sheep numbers increased dramatically in the uplands from the 1950s onwards (eg by up to 400% in the Peak District), encouraged by European and domestic policy.
- By 2004 upland SSSIs and their wildlife were under severe pressure from overgrazing by livestock. Natural England has paid farmers to maintain sustainable levels of livestock, which has resulted in SSSI vegetation beginning to recover, with greater numbers of flowering plants and mosses, and more scrub and trees. Soil compaction has also been reduced.

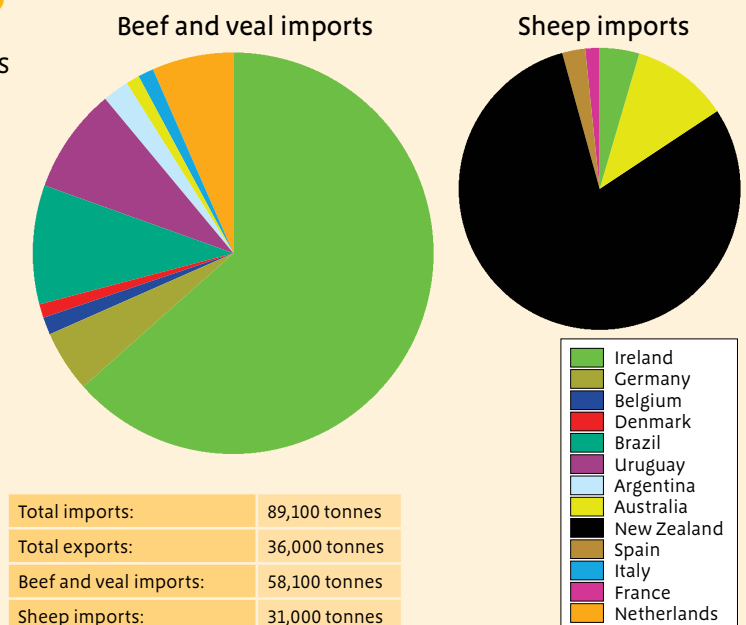
Reduction in overgrazing between 2004 and 2009 on SSSIs



Should we increase food production from the uplands?

- UK imports of cattle and sheep outweigh exports of these products by two and a half times.
- Meat comes from across the world, showing there is a large demand for these products in the UK.
- A warmer climate in the uplands in the future may mean more abundant vegetation available for grazing animals.
- Many of the other benefits from the upland environment (like clean water or carbon storage) often require reduced grazing pressure to maintain their quality.
- The challenge for land use and management will be finding the right balance.

UK cattle and sheep meat imports January – March 2008

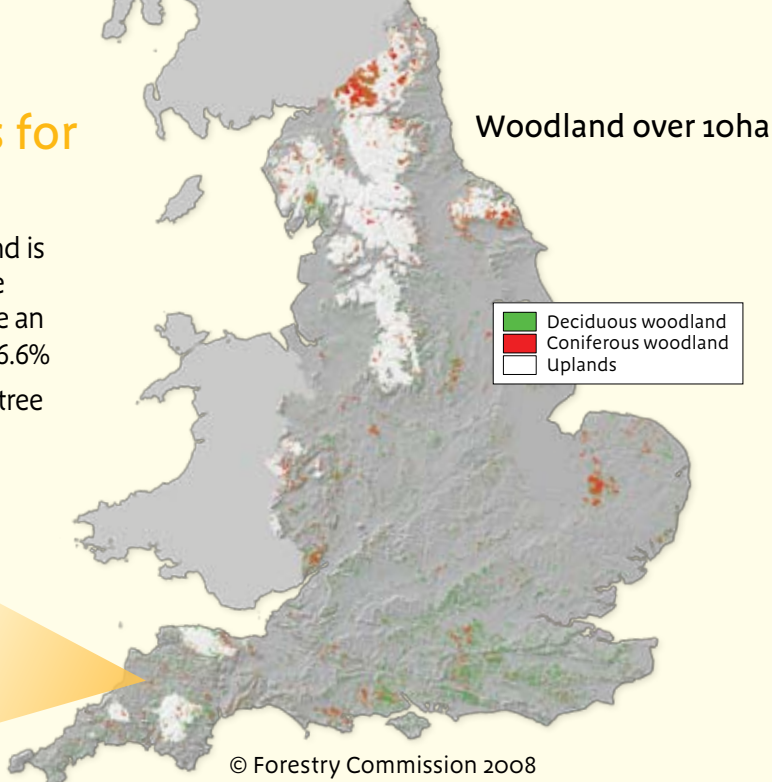
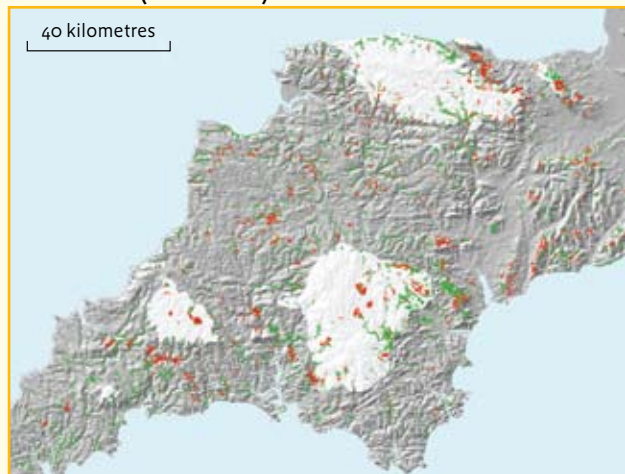


© English Beef & Lamb Executive (EBLEX). Website (www.eblex.org.uk)

How important are the uplands for wood production?

- Formerly heavily wooded, woodland cover in England is now the lowest of any country in Europe. 9.6% of the uplands is currently wooded, mainly scattered native mixed woodland (3%) and large conifer plantations (6.6%)
- Most of the uplands lie below the altitudinal limits of tree growth and could support woodland.

Woodland (over 10ha) in the South West



- The extent of conifer plantations in the Borders and on the North York Moors points to their importance for wood production.
- Deciduous woodland cover is sparse, but contributes significantly to wildlife and recreation value of the uplands.

Can we make better use of upland woods?

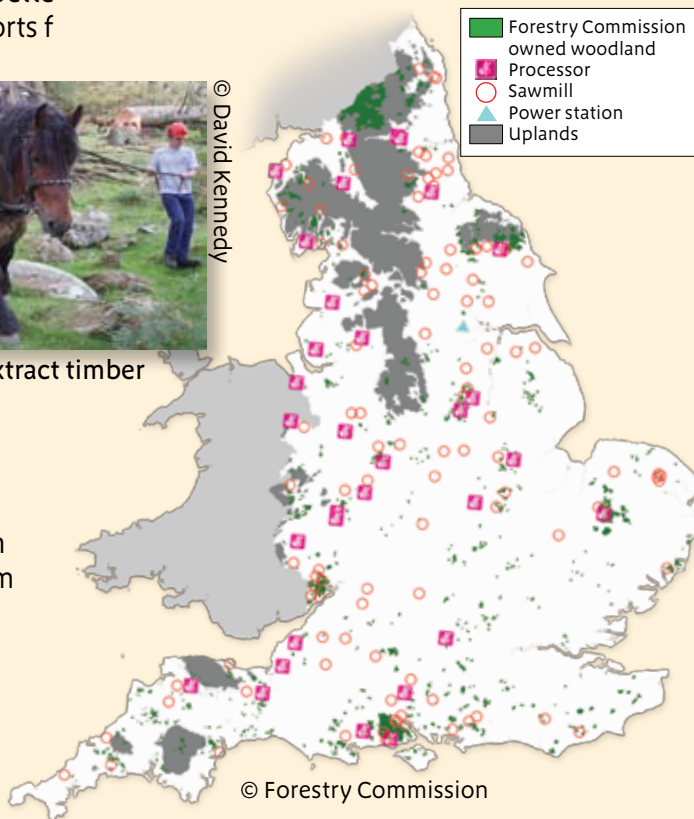
- Large scale wood processing sites tend to be located close to, but not in, the uplands. The lowlands have better transport infrastructure and more ready access to ports for imported supplies.
- Processing plants need large, regular supplies of relatively uniform material, such as is produced by conifer plantations, but is rarely available from the small scattered native woodland resource.
- Smaller, local markets may hold the key to bringing neglected upland broadleaved woodland into more active management; for example, using the wood in local biomass boilers. Improving the value of the woods may encourage owners to protect them from grazing animals.
- Upland woodland is often wet and steep, with difficult access. In these situations, use of horses to extract timber can be more effective than large scale forestry machinery. This also helps protect woodland flowers, is a lower carbon option, and enhances sites with public access.



Using horses to extract timber on steep ground

© David Kennedy

Major wood processing sites



Grazing – a challenge for upland woods?

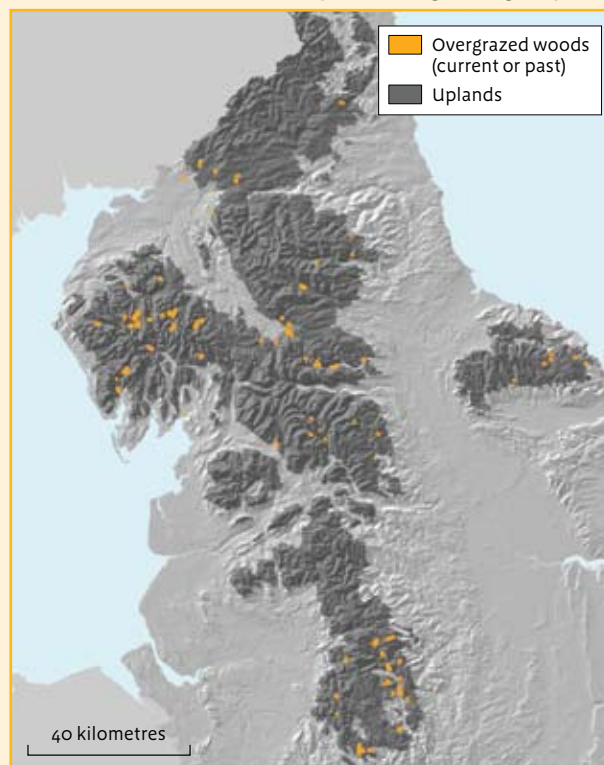
- Grazing by livestock and wild herbivores (deer and rabbits) is an integral part of the character of many upland woods and contributes to both their biological and cultural interest.
- However, long-term overgrazing may also stop the woods regenerating and the woods gradually become more open as the existing trees die.
- Addressing overgrazing of woods is essential for both woodland wildlife and wood production.



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Sheep grazing a wood in Ennerdale, Lake District

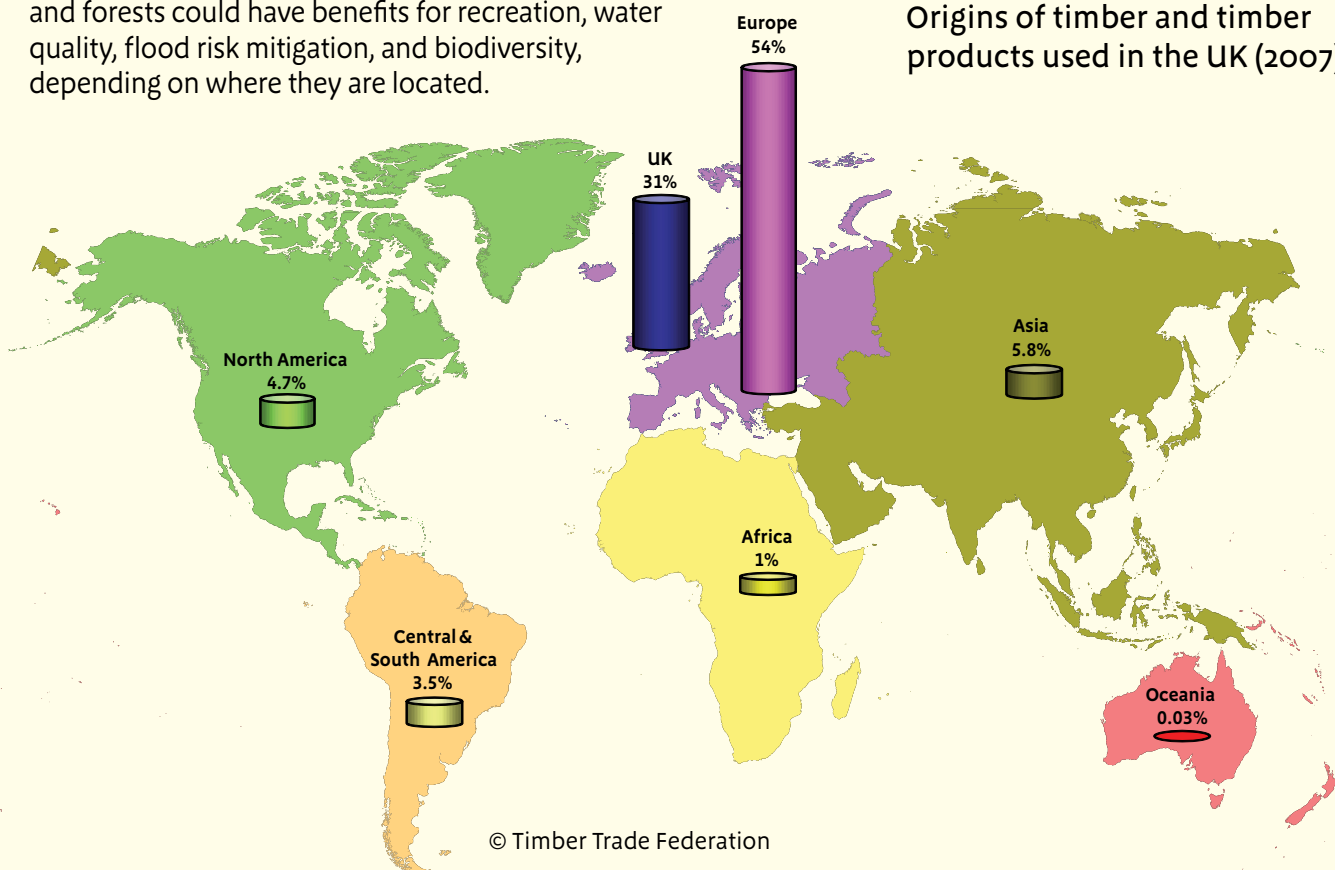
Upland woodland SSSIs with current or past overgrazing impacts



Should we increase the area of upland woods and forests?

- The UK imports about 69% of the timber we use, largely from Europe.
- There is scope for increasing the area of woodland in the uplands. As well as the potential for timber products, upland woods and forests could have benefits for recreation, water quality, flood risk mitigation, and biodiversity, depending on where they are located.

Origins of timber and timber products used in the UK (2007)



© Timber Trade Federation

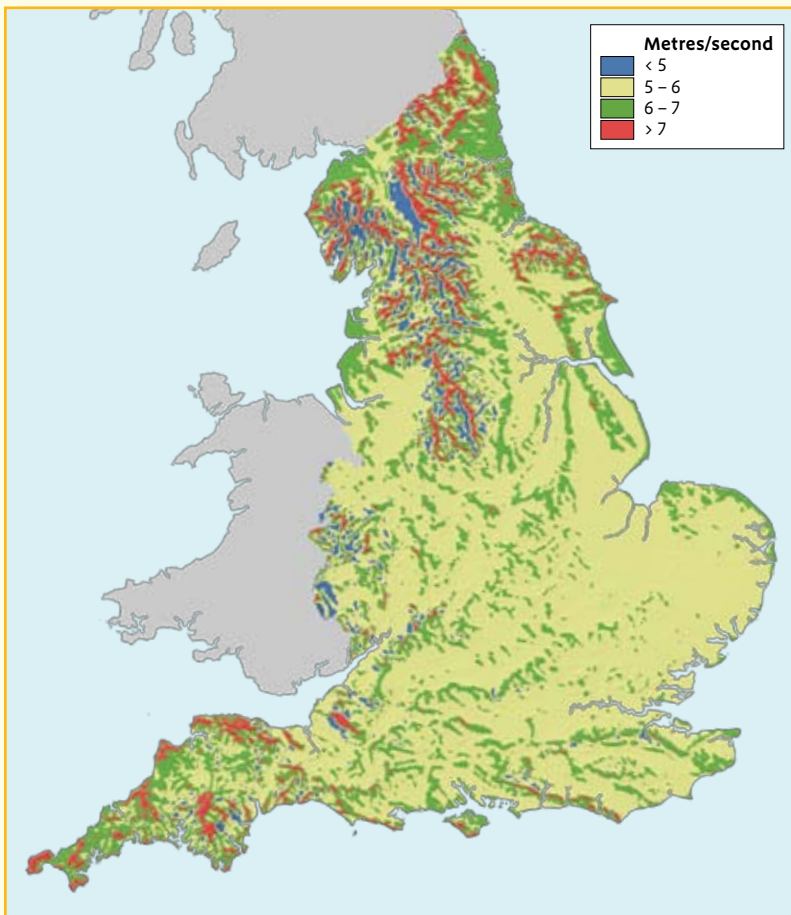
What potential have the uplands for renewable energy production?

- The uplands and the coast are the windiest places in on-shore England. The uplands have been relatively protected from wind farm development because of their landscape designations (National Parks and AONBs), and their distance from user populations.
- There is however considerable potential for low impact renewable energy generation in appropriate upland locations. This might include wind, solar, biomass from wood or micro hydro, to supply local populations and perhaps those further afield.



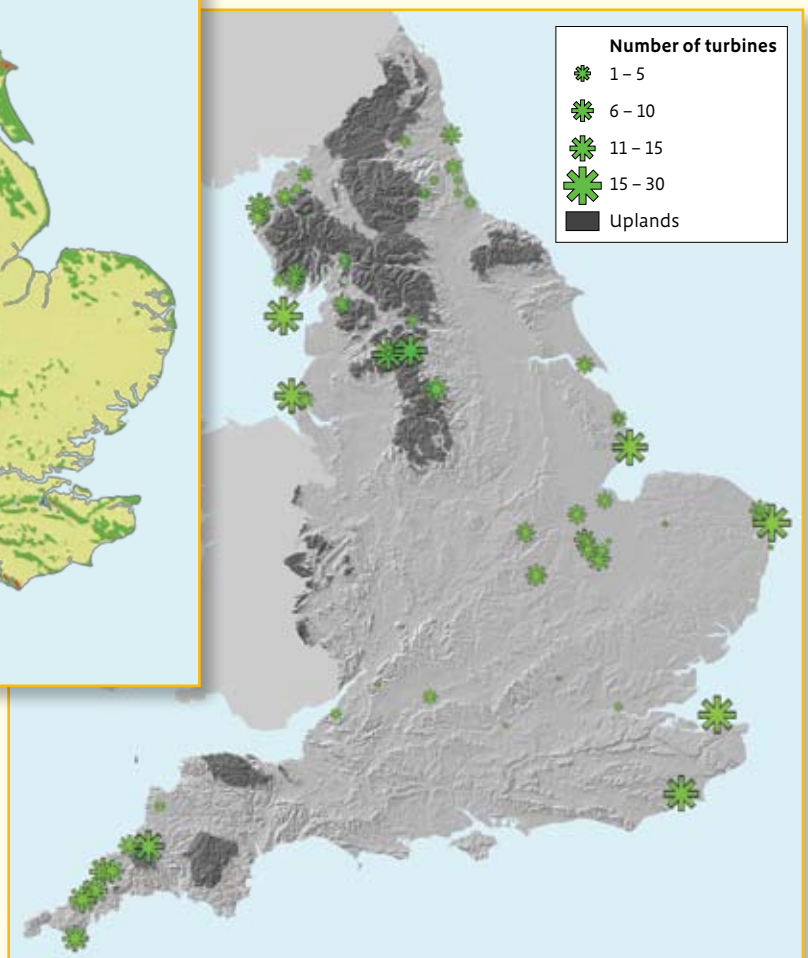
A micro-hydro installation above Coniston in the Lake District

Annual mean wind speed 25m above ground level



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Wind farms



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