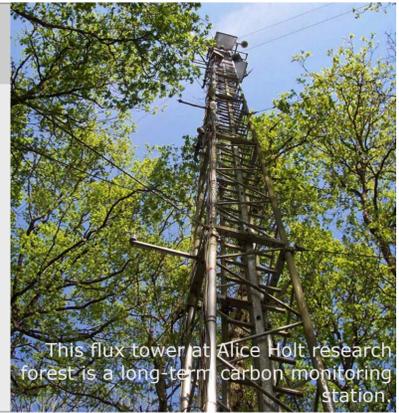


The Forestry Commission and Climate Change Adaptation

Introduction

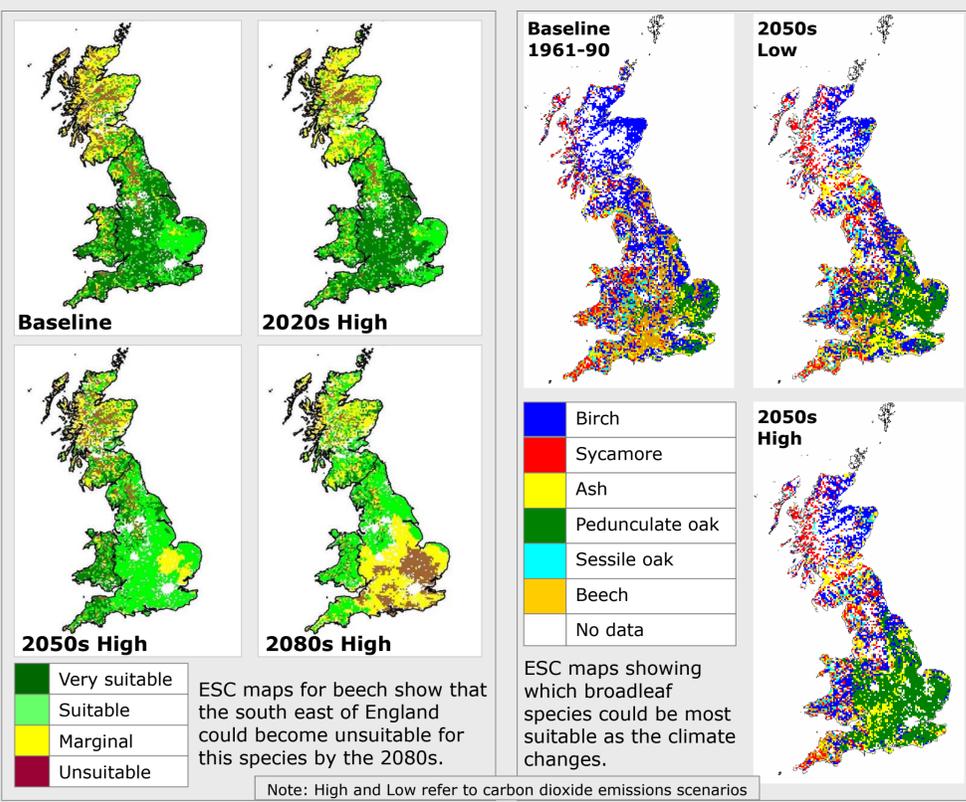
Based on evidence from its scientists that we are experiencing global climate change, the Forestry Commission is putting into place actions to protect our trees, woods and forests, and help them to adapt.

Because of the long lifespan and generation time of trees, these actions must take place now to ensure that our woodlands are resilient to change and can help society and biodiversity adapt to the climate of the future.



Modelling species suitability

Forest Research have developed an Ecological Site Classification tool (ESC) to assess the likely impacts of climate change on individual tree species and native woodland communities.



Species and Provenance Trials

The Forestry Commission is looking at whether species native to England but sourced from more southerly areas of Europe may grow better than native sources in our hotter, drier future climate.

Trials are also being established to identify alternative species for commercial forestry and as components of future woodlands resilient to climate change.



Results from ash (*Fraxinus excelsior*) trials in Hampshire (above) show that seed sourced from Slovenia showed the best vigour overall, whereas seeds from Scotland performed poorly.

The Forestry Commission has set up climate change plots at Jeskyns in Kent (picture, right). As well as planting seeds of native trees sourced from southern Europe, potential new species of the future like silver birch and pinaster pine, have also been planted. An interpretation board explains this work to the public (far right).



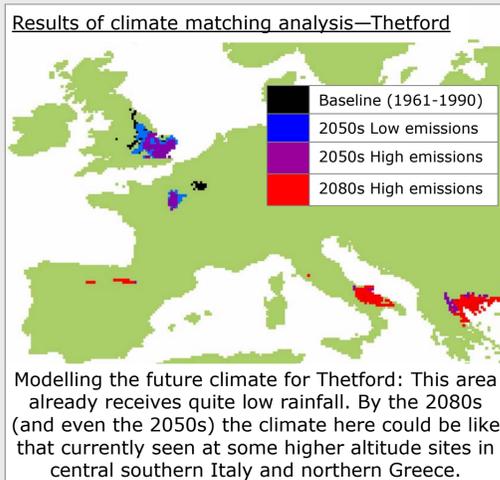
Creating habitat networks

In southwest England the Forestry Commission is offering enhanced English Woodland Grant Scheme rates in five priority areas centred around clusters of ancient woodland. This will increase the resilience of this habitat to climate change and help important species move across the landscape in response to the changing climate.

Climate Matching

The identification of areas that currently have a climate similar to that predicted for the UK in future can provide guidance on the likely effects of climate change on tree growth.

The Forestry Commission are also using this information to identify areas from which to collect seed material for provenance trials focusing on climate change adaptation.



Biosecurity

Climate change will mean that:

- Stressed trees are more susceptible to insect pests and diseases
- More pests will be able to survive over winter and summer activity is likely to increase

The Forestry Commission is carefully monitoring pest and disease outbreaks and is working to identify and reduce the impact of future threats.



Top: Green spruce aphid, a defoliator of Sitka spruce is thought to be on the increase because of higher winter temperatures. Bottom: Trees affected by red band needle blight. It is thought that the increase in this fungus could be due in part to warm, wet springs in recent years.

Forests & Climate Change Guidelines

The UK Forestry Guidelines series supports the UK Forestry Standard by explaining how the requirements for the sustainable management of forests and woodlands can be met. Guidelines have now been drafted for climate change, including guidance on how to make woodlands more resilient to the climate of the future.

Find out more...

www.forestry.gov.uk/england

www.forestresearch.gov.uk

westonbirt.education@forestry.gov.uk



Slowing the Flow

The Forestry Commission is working with the Environment Agency and others in the Yorkshire and Humber region to meet the challenges posed by flooding.

The "Slowing the Flow" project, with funding from Defra, is using an opportunity map created by Forest Research to target new woodland planting so that it increases floodplain storage capacity. Long term monitoring is in place to evaluate its effectiveness.



Existing high levels of regional flood risk in the Yorkshire and Humber region are expected to increase further as the climate changes.