

# Policy Briefing

## Forestry policy and carbon sequestration in Scotland

### Synopsis

LINK believes that **carbon sequestration should not be a primary driver of forestry policy**, management of the National Forest Estate, and grant spend in Scotland. Whilst we accept that trees do sequester carbon, and through this process can make a small contribution to combating climate change, primary focus should continue to be on ensuring delivery of **multiple public benefits** such as enhanced biodiversity, improved access and health opportunities, landscape and historical environment enhancement and rural economic development. LINK does not therefore support any *shift* in resources away from existing policy priorities towards support for 'sequestration forestry' *per se*.

LINK calls for a substantial increase in Government spending on '**climate change adaptation forestry**' as an urgent response to the threat climate change poses to Scotland's landscapes and biodiversity. 'Adaptation forestry' may include initiatives such as the restoration and expansion of native and mixed woodland planting, forest habitat network development and facilitating a move towards low impact silvicultural systems. These objectives are consistent with the current Scottish Forestry Strategy and will also have important secondary carbon sequestration benefits.

### The limitations of carbon as a driver for forestry policy

The science behind carbon sequestration is still developing but evidence to date suggests that even if amount of new planting in Scotland each year was doubled or quadrupled, the contribution of new woodlands to offsetting an estimated 20Mt of carbon emitted each year in Scotland will only ever be minimal<sup>1</sup>. This is a key reason why sequestration should not be a primary driver of forestry policy. The other compelling reason is that public money should continue to purchase a range of public benefits. We believe the type of woodlands most likely to deliver these multiple benefits, including significant levels of carbon sequestration, are well designed, strategically located native and mixed woodlands, rather than plantations of fast growing non-native species.

The sequestration issue is further complicated by the fact that planting on certain substrates, particularly peat-rich soils, may actually cause a net loss of carbon from soil loss and changes to soil chemistry and structure. Studies have also shown that the way we manage existing forests could be at least as important as forest expansion for sequestering carbon. Forest Research recently recommended the use of low impact silvicultural systems (LISS) as a tool for both locking up carbon and as a "basis for adaptation strategies"<sup>2</sup>.

<sup>1</sup> The carbon sequestered from ½ ha of woodland over one rotation can compensate for the emissions associated with car fuel consumption during an average driver's lifetime: this sounds a small area, but it should be borne in mind there are 30 million registered drivers in the UK". From Broadmeadow, M & Matthews, R (2003) Forests, carbon and climate change: the UK contribution. FCIN48. Forestry Commission.

<sup>2</sup> Ray, D. (2008) Impacts of climate change on forestry in Scotland – a synopsis of spatial modelling research. FCRN101. Forestry Commission.

A recent topic paper<sup>3</sup> commissioned on climate change and published with the review of the Scottish Forestry Strategy suggests a carbon trading scheme which will ‘offset’ development such as airport expansion through purchasing credits from those planting woodland. This sends a dangerous message on two counts. First, it grossly overestimates the contribution new woodlands can make to offsetting emissions from industries such as aviation, which one study predicts could contribute 17.7 million tonnes of carbon emissions a year in the UK by 2030<sup>4</sup>. Secondly, it could send the message that a ‘business as usual’ emissions scenario is acceptable so long as we plant plenty of trees to balance the books.

LINK considers carbon offsets from UK forests is a policy distraction from the key climate change issue of reducing domestic emissions of green house gases. If carbon offset schemes are developed we believe that such schemes must be properly regulated, with standards that are based on robust science, ensure genuinely additional carbon benefits, ensure that any future banked carbon is safeguarded, be transparent and independently verified by accredited auditors, be consistent with sustainable forest management & biodiversity policy & practice.

### **The rationale against ‘carbon sequestration plantations’**

There are a range of potentially negative environmental impacts of pursuing a carbon sequestration programme. The impacts fall into the following categories:

- Cultural and historic landscapes. Whilst non-native plantations will always be an important element in Scotland’s forest portfolio, inappropriately located or poorly designed schemes can be detrimental to landscape character and local people’s sense of place and history.
- Biodiversity loss. LINK is concerned about the potential loss of important non-woodland habitats, such as blanket bog, to inappropriately located ‘carbon sequestration’ forestry. The Scottish Government has national and international biodiversity commitments to protect and enhance such biodiversity. Forestry policy and grants should support the restoration of existing native woodland and open ground sites currently inappropriately planted. Government forestry policy must continue to support the improvement in the ecological condition of Scotland’s native woodland habitats, and the important species that rely on them.
- Soil loss. A particular problem if the land was previously peat or rich in organic matter; drainage and disturbance resulting from tree establishment accelerates decomposition and the loss of carbon from soil may often exceed the carbon sequestered by growing trees.
- Water loss and water quality. All forestry planting and woodland management must be planned and managed to ensure the quality of water resources, courses and catchments.
- Reputational risk. The science behind carbon sequestration is still controversial and there is far from a consensus within the scientific world on the issue. This can make tree planting solely for sequestration purposes an uncertain prospect. Ensuring forestry planting and woodland management effectively delivers multiple public benefits will significantly mitigate this risk.

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<sup>3</sup> [http://www.forestry.gov.uk/pdf/topic\\_paper\\_1.pdf/\\$FILE/topic\\_paper\\_1.pdf](http://www.forestry.gov.uk/pdf/topic_paper_1.pdf/$FILE/topic_paper_1.pdf)

<sup>4</sup> The Independent, 27 May 2005

### The rationale for multiple benefit forestry

LINK suggests forestry planting and woodland management should deliver multiple public benefits which:

- provide *local* and *long term* employment opportunities such as those associated with forest management, biomass plants, quality timber products, tourism and recreation;
- conserve and enhance biodiversity;
- enable Scotland's ecosystems to *adapt* to climate change;
- protect soils from loss and degradation;
- regulate water flow and improve water quality;
- provide *quality* timber and environmentally sustainable woodfuel;
- provide a resource for outdoor recreation and education;
- enhance the beauty of our landscapes and people's sense of place and history.

Wider carbon benefits will also flow from multiple benefits woodlands, including long term carbon storage (this is particularly high in long term retention woodlands) and contributions to reducing carbon emissions through providing timber as a substitute for high emissions materials such as coal, oil, concrete and steel.

The Forestry Commission Scotland is to be commended for pursuing exactly these types of policies<sup>5</sup> in recent years and reflecting these in their grant packages. LINK believes FCS should be given the resources needed to deliver a coherent response to rapid climate and environmental change based on 'climate change adaptation forestry' and the continued delivery of multiple public benefits.

***This is a working policy brief, written by the Scottish Environment LINK Woodland Task Force, January 2008. It is intended to stimulate discussion both within LINK and between LINK, the Scottish Government and the Forestry Commission Scotland.***

### Organisations signed up to this briefing:



For further information please contact:

Angus Yarwood, Convener of the LINK Woodland Task Force

T: 0131 558 8619 M: 0782 455 2016 E: [angusyarwood@woodlandtrust.org.uk](mailto:angusyarwood@woodlandtrust.org.uk)

<sup>5</sup> Scottish Government's Scottish Forestry Strategy and Biodiversity Strategy objectives.