

NON-NATIVE TREES TO MITIGATE CLIMATE CHANGE?

In my two most recent visits to Iceland I have had the good fortune to visit real native woodland and to see the unplanned enlargement of Sitka spruce and Lodgepole pine plantations.

In south Iceland I visited predominantly birch woods with shrub and herb layers, giving complete ground cover and good soil formation. Truly magnificent! Hopefully, these stands can be helped to spread more widely throughout the country.

I also observed extensive areas of non-native conifers, specifically Sitka spruce and Lodgepole pine in the east and south of the country. I came away with absolutely the opposite opinion. I am puzzled why these two species are being grown in Iceland! I am well familiar with these species and their effects from my many decades of observations and policy related work in Scotland. Are they really likely to produce a timber crop which is at all useable to meet Icelandic needs? I doubt it given slow growth rates, so many side branches resulting in knotty timber that is difficult to work, and lack of ongoing management of the crop. Are they going to help to mitigate the effects of climate change by sequestering and storing carbon? They might if they are left in the ground for long enough and the ground is not disturbed at the planting stage. But, certainly from the scientific evidence back home in Scotland, these non-native species are much less efficient at sequestering and storing carbon than native deciduous species. Do these plantations improve the landscape? Surely not as they are not in keeping with the ecological restoration efforts in, for example Helkaskogar, using native species, and the natural regeneration of birch for example on the Skeidarásandur, as they provide a discordant feature in the Icelandic landscape. Have the views of the resident population or the visitors been assessed? It is not evident, despite the fact that landscape quality is an important consideration for both groups. Have the consequences of these plantings been considered? For example, it is apparent from my observations in, for example, Steindalur that the seed rain from the non-native species is significant as seen by their growth beyond the edge of the plantations with apparently no attempts to remove them. Was this meant to happen?

What then is the rationale? Is it because of a fixed and outmoded mind set of the Icelandic foresters who have limited understanding of forest ecology and even less about the use of different species for sequestering and storing carbon in the ground. That maybe explains why we see monocultures of species unsuited to the landscape and ecosystems of the country. Surely that is hardly a valid reason for such wholesale change to the soils, ecosystems and landscapes in Iceland.

Lessons can be learned by seeking advice and experience from elsewhere. In Scotland for example, many mistakes have been made, and unfortunately are still being made. For decades planting of non-native species on carbon rich soils has resulted in immediate loss of carbon irrespective of whether the ground preparation is by ploughing or mounding and the

addition of sediment into the rivers harming the spawning beds of migratory species such as salmon. Did the Icelandic forestry leaders, for example, never observe the disastrous state funded planting of Sitka spruce and Lodgepole pine on the blanket mires of The Flow Country of Caithness and Sutherland? Only when we let nature provide the natural solution, rather than the failed one produced by humans, do we have a sensible long-term solution.

Surely the answer in Iceland has to be a ban on non-native tree species planting of Sitka spruce and Lodgepole pine until there has been a full independent and objective assessment of the pros and cons of that approach. The checklist of issues to be addressed should include: the loss of carbon from the soil through ground preparation for planting, the take up of carbon at various stages during the growth cycle, the perceptions of the landscape effects of the planting and the benefits of using native tree species instead. And please avoid returning forestry to the Ministry of Agriculture. What is needed is forward thinking policy and action where native species and working with nature will help to address both the climate change and biodiversity crises. Wake up Icelandic foresters!

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