GWCT (Scotland) response to

Forestry Strategy consultation

November 2018

Q1. Do you agree with our long-term vision for forestry in Scotland? Please explain your answer.

In principle, yes, but the devil is in the detail.

The vision represents a sound expression of the economic, environmental and social importance of forests and woodlands to Scotland. Key to progress will be striking the right balance between these components so that all three characteristics are demonstrably advanced.

In this respect, we note that the vision identifies both 'forests' and 'woodland'. Any distinction needs careful development with appropriate stakeholders (e.g. commercial producers and farmers, whose interpretation of the terms may differ considerably). We also note the reference to natural capital. Again, this is can make a valuable contribution to the vision, marking the need for appropriate benchmarking of sustainable management outcomes, providing that such measurement builds from local, catchment and bio-regional assessments rather than top-down measures implied by the Natural Capital Asset Index.

Expansion of forests and woodland has the potential to impact both positively and negatively on keystone species and habitats. Negative impacts, potentially stemming from the reduction of globally rare habitat including peatland, and on mammals (mountain hares) or birds (waders including Curlew and Lapwing, Black Grouse and other hill edge species) should be avoided. The Strategy consultation document is silent on the impact of generalist predators (particularly foxes and crows) which will benefit from woodland expansion. The importance of full Environmental Impact Assessments or other analysis techniques[1] will be critical in objective evaluation of threats.

The vision must be underpinned by clear evidence that we are achieving significant mitigation of climate change through net absorption of CO2 (including all related use of machinery, transport and processing) across the full extent of forestry 'growth and harvest' cycles.

Q2. Does the strategy identify the right objectives for forestry in Scotland over the next 10 years? Please explain your answer

Objectives seem practical but must incorporate progress signposts based on clear evidence. These will help to address any emerging variances from Strategic plan and should include clear information on:

- Carbon sequestration performance
- Evidence of Natural Flood Management mitigation
- Compilation of Natural Capital asset / risk registers at suitable catchment or bio-regional scale
- Maintenance and enhancement of habitat and species

[1] Defining and delivering resilient ecological networks: Nature conservation in England
Nick J. B. Isaac Peter N. M. Brotherton James M. Bullock Richard D. Gregory Katrin Boehning-Gaese Ben Connor Humphrey Q. P. Crick Robert P. Freckleton Jennifer A. Gill Rosemary S. Hails Minna Hartikainen Alison J. Hester E. J. Milner-Gulland Thomas H. Oliver Richard G. Pearson William J. Sutherland Chris D. Thomas Justin M. J. Travis Lindsay A. Turnbull Kathy Willis Guy Woodward Georgina M. Mace

To ensure the adequacy of our response to Climate Change through forestry and woodland management strategy, we must also establish regular, objective assessment of net CO2 absorption, so we can address any emerging issues. Such assessment should adjust for cyclical periods of growth and harvest.

We must strengthen awareness about the effects of any decisions to expand woodland on species and habitats through the application of detailed, auditable environmental impact assessments.

The objectives do not directly comment on the need for appropriate integration with Scottish Government's Land Use Strategy, although this is mentioned elsewhere in the Forestry Strategy document. There are no proposals for the way in which integration is to be achieved. Given the significance of engaging with land managers to assess how forestry and woodland management could fit with other land uses, this needs development. For instance, could we encourage more collaborative proposals through agri-environment schemes focused more on outcomes than processes and compliance.

Q3. Do you agree with our assessment of the major issues likely to have the greatest impact on the achievement of our objectives? Please explain your answer.

The assessment of major issues in section 4 chiefly comprises aspirations and some issues. If the list is to have meaning as part of a Strategy ("A plan of action designed to achieve a long-term or overall gain"), then it should be ranked in a way that balances between the three main objectives (Economy, Environment, People), based on targeted, measurable outcomes. For instance, to what extent can we achieve positive economic gains without negatively affecting the environment? Even if appropriate metrics are elusive at this stage, it will be important to apply some form of benchmarking so that stakeholders can assess progress, variance, and indeed the appropriateness of the measurement over time.

Under innovation and new technology, the document comments on the fact that there is an issue around inappropriate re-stocking, but there is no clarity about what this means. Is it genuinely seeking to ensure that from now on the re-stock will focus on balancing economic, environmental and social objectives and not simply pursue an economic priority, as has occurred in the past?

The same section identifies the added value flowing from the development of new technologies around production of cellulosic plastics. There is no mention of downside risks associated with eutrophication.

To develop skills and participation amongst small and farm woodland owners, we think that there should be suitable accreditation for this scale of management to improve standards and provide access to markets on similar certification terms to larger producers.

Section 4 of the Strategy is silent about the impacts of woodland expansion on vulnerable species and habitats, either in terms of habitat change or increased generalist predator range. Research literature indicates a mix of positive and negative impacts which should be considered in relation to tree species choice, design and active management of woodlands.[2]

[2] Towards a research agenda for woodland expansion in Scotland
Haydn J.D.Thomas, James S.Paterson, Marc J.Metzger, Louise Sing
Forest Ecology and Management
Volume 349, 1 August 2015, Pages 149-161

Synergies and conflicts in the use of policy and planning instruments for implementing forest and woodland corridors and networks; a case study in NE Scotland
J. Muñoz-Rojas, M. Nijnik, M. González-Puente, F. Cortines-García

Similarly, climate change issues are seen chiefly through a largely economic prism. For adaptation, the Strategy comments on "stem straightness, disease resistance, good height and diameter growth." These are fine from a 'value' perspective, but we should also consider whether we have fully estimated the net CO2 absorption rate of commercial woodland throughout the production cycle (planting – harvesting – processing) and all associated carbon-releasing processes? For example, what mix of tree species and harvesting cycles (slightly longer-term production) might be better for climate change mitigation whilst still realising economic benefits?[3]

The balance between objectives appears to be tilted in the direction of economic gain without any satisfactory means to evaluate the risks, rewards and measures that would justify this presumption. It might well be right but there is no clear evidence base.

Q4. Do the ten priorities identified in table 2 capture the areas where action is most needed to deliver our objectives and vision? Please explain your answer

Of itself, table 2 is simply a list of actions connected to the vision and objectives. There is more of a sense about key priorities in table 3. Without some evaluation as to the risks, rewards and measures to track progress of the priorities, it is difficult to place any weighting on the relative importance of the different priorities. With the benefit of such work, it might be easier to evaluate where the optimum allocation of resource and support (including appropriate funding) needs to be applied to achieve positive outcomes across economic, environmental and social objectives.

Q5. Can you provide any examples of delivery mechanisms that have previously been effective in delivering similar objectives and priorities?

We agree with the general thrust of delivery through incentives and partnership working. The picture on incentives, for instance in relation to the success of agri-environment schemes in encouraging substantial woodland expansion, is not clear, but we do think that if articulated with more focus on outcomes, rather than compliance and processes, such schemes will be beneficial.

The section mentions partnership working but chiefly emphasises stakeholder and inter-governmental co-operation. We believe that there is scope for collaborative woodland development between landowners / farmers, in much the same way as GWCT has been able to encourage farmer clusters[4]. These are designed to collectively deliver greater benefits for soil, water and wildlife at a landscape scale. Farmer clusters work from bottom-up, at farmer level, under the guidance of a lead farmer. The cluster devises its own conservation plan, helped by chosen conservation advisors. In England, this work is often supplemented by facilitation support and can dovetail with agri-environment schemes. We think that in Scotland, improved facilitation support and funding in areas such as woodland expansion and environmental benefits, could be successfully piloted within a collaboration initiative.

For. Policy Econom., 57 (August) (2015), pp. 47-64

Graham, M.W. Wilson, T. Gittings, T.C. Kelly, S. Irwin, J.L. Quinn, J. O'Halloran
Implications of afforestation for bird communities: the importance of preceding land-use type
Biodivers. Conserv. (2015),

Whitfield, D.R.A. McLeod, A.H. Fielding, R.A. Broad, R.J. Evans, P.F. Haworth
The effects of forestry on golden eagles on the island of Mull, western Scotland
J. Appl. Ecol., 38

[3] Körner
A matter of tree longevity
Science, 355(6321) (2017), pp. 130-131, 10.1126/science.aal 2449

[4] www.gwct.org.uk/farming/advice/farmer-clusters

Existing partnering arrangements in the Scottish farming sector tend to focus on profitability and efficiency, (e.g. co-operatives, bulk buying and selling), but these may actually provide a novel route to encouragement of woodland schemes, where the convergence of economic, environmental and social benefits may be appreciated.

Q6. For any delivery mechanism examples given in answer to question 5, please explain why they worked well?

Response to Q 5 refers.

Q7. Do you think the proposed progress indicators are the right ones? Please explain your answer.

The progress indicators are pitched at a very high level. We have pointed out earlier that we must understand the balance between the economic, environmental and social objectives, and the trade-offs we may have to achieve in order to ensure we have profitable forestry management at the same time as ensuring our natural capital base is not eroded.

The economic measures provide sound indicators, assuming one can drill down further to identify particular components of each that we may need to monitor.

Q8. Do you have any suggestions for other indicators we could use to measure progress (especially ones which draw on existing data)?

Our main concern is with the proposal to adopt the Natural Capital Asset Index (NCAI) as a basis for assessing sustainability. We feel that this is a blunt instrument. Whilst recognising that assessment flowing from review of designated sites will provide substantial analysis of native woodland conditions, we are concerned that this information should be updated on a sufficiently regular basis to provide current insight. We question whether the NCAI will provide significant guidance on the quality of sustainability in commercial or farm woodland outside of the designated site framework. Scotland must contribute catchment or bio-regional natural capital assessments to ensure an adequate view about the overall provision of ecosystem services.

Whilst we can see that natural capital approaches provide insight into the quantity of species and habitats, we are not clear that such measures yet contribute satisfactory insight into species quality (for instance, breeding productivity). We are concerned that trends at national NCAI level will not pick up changes that may result from local or regional woodland expansion and management.

Progress indicators should seek to evaluate the balance between economic gains and the maintenance or improvement of our natural assets. In particular, we have mentioned the tracking of net CO2 absorption as a key indicator, allowing for all activities and processes linked to woodland management.

Q9. For any indicators suggested in answer to question Q8, please explain why you think they would be appropriate.

Local or bio-regional natural capital accounts would fill gaps that do not appear to be well covered by the NCAI

Measurement of net CO2 absorption will help us better understand the point at which economic gains may be offset by key biodiversity losses, particularly in relation to climate change.

Q10. Would you add or change anything in the Equality Impact Assessment (which includes our assessment of the potential impact of the strategy on inequalities caused by socioeconomic disadvantage – Fairer Scotland Duty)?

No – it seems comprehensive

Q11. Would you add or change anything in the Business and Regulatory Impact Assessment?

The business and regulatory impact assessment seems comprehensive.

Q12. What are your views on the evidence set out in the Environmental Report that has been used to inform the assessment process?

The analysis and evidence in the Environmental Report seems robust. It acknowledges that some aspects are at high-level and may require further review and development to assess impacts.

Q13. Should any additional evidence sources be used in the Environmental Report? Please provide details.

We explain earlier in the consultation response that we are uncomfortable about the appropriateness of measuring natural capital by reference to the NCAI. We feel this could lead to significant misreading of NC assets and changes at local or bio-regional level.

Q14. What are your views on the predicted environmental effects as set out in the Environmental Report?

In the main, we recognise the considerable thought, detail analysis that has gone into assembling the EIA. As such, we are broadly content with the predicted environmental effects set out in the report, except to flag up a few areas of concern where it will be important to track trends that appear under-played. These occur in analysis of Biodiversity, flora, and fauna in Priority 2. This section identifies the potential for carbon storage, soil stabilisation and flood attenuation. We suggest that this opportunity should be led by our knowledge on land capability for forestry in making decisions regarding any expansion on upland sites. Further, hill edge and moorland areas have become refugia for a range of bird species formerly found on low ground, particularly red-listed wading birds. The assessment should recognise that there are risks to these iconic species through reduction of habitat. Extension of woodland onto upland areas also increases the range of generalist predators such as foxes and crows. Their impact on vulnerable bird populations is well documented[5]. The impact of expanding woodland should be monitored and suitable responses (such as predator control) considered.

Q15. Do you agree with the conclusions and recommendations set out in the Environmental Report?

Yes, we broadly agree with the conclusions and recommendations. Table 4 (Scoping of environmental topics for the Forestry Strategy SEA) provides succinct, valuable information which should serve as an excellent reference point for a monitoring framework.

Q16. Please provide any other further comments you have on the Environmental Report.

No other comments

Q17. Do you have any other comments you would like to make about the draft strategy for forestry in Scotland?

GWCT would like to play a more significant role in contributing research and policy insights for aspects of Forestry Strategy development, particularly in relation to species and habitats.

[5] Fletcher, K.L., Aebischer, N.J., Baines, D., Foster, R., & Hoodless, A.N. (2010). Changes in breeding success and abundance of ground-nesting moorland birds in relation to the experimental deployment of legal predator control. Journal of Applied Ecology, 47: 263-272.
www.gwct.org.uk/media/249256/waders_on_the_fringev2.pdf

We also propose to compile natural capital asset registers at our demonstration farm in Aberdeenshire and encourage local participation to build to a bio-regional assessment. We have undertaken species and habitat baselines and are therefore in a position to track changes. We would wish to share monitoring insights as information builds up.

Considering the possibilities for integrated land use stemming from development of agroforestry, we are surprised that this doesn't feature as part of the overall Forestry Strategy. It could form a very important route to collaborative working