RURAL ECONOMY AND CONNECTIVITY COMMITTEE

SUBMISSION FROM RSPB SCOTLAND

THE DRAFT CLIMATE CHANGE PLAN (RPP3)

Summary

- We welcome the continued commitment to tree planting and cautiously welcome the increased target to plant 15,000ha per year. This policy lacks some credibility given that the existing lower target has been repeatedly missed.
- We want to see the right tree planted in the right place to maximise carbon sequestration and storage for the long-term. We recommend more research, into the impacts of forestry on soil carbon, especially on shallow peat.
- We are disappointed with the ambition set for the agriculture sector, and the clarity and credibility of many of the policies as set out in the draft Plan.
- Government must introduce stronger policies rather than relying on voluntary approaches. Soil testing must be clearly marked as compulsory and other policies must have a regulatory backstop.
- We are concerned that the transport policies and proposals rely too heavily on technological advances, and on action taken by the UK Government and the EU.

We are disappointed that there are very few transport policies and proposals relating to demand management and modal shift, or policies to increase public transport and active travel

Introduction

RSPB Scotland is a member of Stop Climate Chaos Scotland, and we support the evidence that they have submitted on the draft Climate Change Plan.

The Transport and Agriculture & Related Land Use sectors are relatively high emissions sectors, accounting for 28% and 23% respectively, of Scotland's emissions[1]. Currently, only Energy Supply has higher emissions. Both sectors face large challenges in reducing emissions; transport has seen only a 0.4% reduction in emissions since 1990; agriculture is the greatest source of nitrous oxide and methane, both powerful ghgs.

The land use sector in Scotland is unique in that it is the only sector which provides negative emissions, i.e. land uses and land management activities can remove CO2 from

[1] http://www.gov.scot/Publications/2016/06/2307/329343

the atmosphere and make a positive contribution to Scotland's national ghg accounting. In order to meet targets to 2032 and 2050 we need to optimise this opportunity whilst balancing it with the other many other benefits of land management activities, and avoiding negative impacts.

Forestry

We welcome the policy to plant 10,000ha of trees per year and cautiously welcome the ambition for increasing the planting rate to 15,000ha of trees by 2025. We welcome the aim to increase the amount of timber used in construction and the commitment to investigate how to achieve more tree planting on farms.

Progress since RPP2

Since the last RPP there has been an average of 6800ha of afforestation per year, below the 10,000ha target each year. Government did establish a Woodland Expansion Advisory Group (WEAG)[2] to better understand where trees can be planted in the countryside whilst minimising conflict. However, planting rates remain lower than target and along with previous low planting rates, this has a knock on consequence for the amount of CO2 being sequestered. As a result Figure 22 in the Climate Change Plan shows that by 2026 LULUCF will become a net source of CO2 rather than a sink.

Appropriateness and effectiveness of the proposals and policies for meeting the annual emissions targets and contributing towards the 2020 and 2050 targets

The ambition to increase planting rates to 15,000ha per year lacks some credibility given that the existing target of 10,000ha per annum has been repeatedly missed. It is unclear from listed policies how the actions described in the Plan will counter this trend and see forestry increasing.

Our priorities to improve this policy

1. More research is needed into the implications for soil carbon of tree planting, especially on shallow peat, in order to better gauge the whole lifecycle climate benefits of planting different tree species in the wide variety of soil types. This would enable the right tree to be planted in the right place in order to have the greatest carbon benefit.
2. We recommend a commitment to planting a proportion of native broadleaved trees as part of the tree planting targets. This is in order to; maximize biodiversity benefit;

[2] http://scotland.forestry.gov.uk/supporting/strategy-policy-guidance/woodland-expansion/weag-advisory-group

provide variety and resilience to pests and disease (a climate adaptation response); lock carbon in trees for the longer lifespans of broadleaved trees in order to benefit the climate. We also note recent papers have highlighted the carbon and climate benefits of broadleaved trees[3] and woodland[4].

Agriculture

RSPB Scotland welcomes the narrative vision for agriculture in the document but the ambition for the sector is disappointingly low and is poor when compared to the ghg savings expected from the majority of other sectors. The agriculture sector is being expected to deliver approximately 0.9MtCO2e of savings to 2032[5]. The UKCCC recommended[6] that Scottish Agriculture could deliver 1.5MtCO2e of abatement under its High Ambition scenario over the same period.

Progress since RPP2

Most progress in reducing ghg emissions from agriculture has come from factors outwith Government policy. Government's voluntary Farming for a Better Climate initiative has continued but the impact of this on ghg emissions is unknown. Despite this we believe that FFBC recommendations work as the Focus Farms have reduced emissions - Torr organic dairy farm by 11%, and Glenkilrie beef and sheep farm by 10%, both over 3years[7].

Appropriateness and effectiveness of the proposals and policies for meeting the annual emissions targets and contributing towards the 2020 and 2050 targets

The agriculture industry must go through transformational change if Scotland is to meet future long-term ghg reduction targets. The Climate Change Plan gives little indication that Government is willing to provide the leadership and strength of policy needed. The UKCCC advised that there needs to be '*a move away from the current voluntary approach...towards stronger Government policy*'[8].

Despite the lack of ambition the policies and proposals are welcome, even though they need considerable development or clarification. If developed in a positive way we believe that these policies could change farmer behaviour and help agriculture move to low-

[3] http://www.nature.com/nature/journal/v507/n7490/full/nature12914.html
[4] http://science.sciencemag.org/content/351/6273/597
[5] SPICE briefing http://www.parliament.scot/ResearchBriefingsAndFactsheets/S5/SB_17-07_Draft_Climate_Change_Plan_and_Scotlands_Climate_Change_Targets.pdf
[6] https://www.theccc.org.uk/publication/scottish-emissions-targets-2028-2032-the-high-ambition-pathway-towards-a-low-carbon-economy/
[7] http://www.sruc.ac.uk/info/120200/climate_change_focus_farms
[8] UKCCC – as above

emission farming. In analysing the policies in the agriculture chapter it is very difficult to make a judgement as to whether they will credibly help meet the proposed ambition. This is because they are written vaguely, rely on future discussion with stakeholders, or include timetables for action containing descriptions rather than uptake numbers.

Nitrogen use efficiency

We believe that there is a strong case for farming to make much better use of nitrogen resources and introducing strong policy measures through the Climate Change Plan. In 2015, 362,000t of nitrogen were applied to Scotland's agricultural land and 201,000t were taken off in the form of crops. This means that farmers in Scotland applied a net nitrogen surplus of 161,000t, or 87kg per hectare[9]. 44% of the inputs was lost to the atmosphere, water (as diffuse pollution) or to other non-farm habitats. Emissions from the production and application of bagged nitrogen accounts for around a quarter of agricultural emissions, or around 5% of Scotland's total GHG emissions[10]. Therefore, this is a costly loss, both for the farmer's profits, and for the climate.

The Farm Structure & Methods Survey[11] shows that the majority of farmers can do better at planning nitrogen applications and using techniques to improve nitrogen use efficiency. For example, only 30% of grassland farmers did a soil test, whilst only 17% performed a nutrient management plan. Only 7% tested the nitrogen content of manures and slurries they applied to land, and only 34% applied slurry to land in a recommended way to minimise nitrogen loss and nitrous oxide emissions. 36% of slurry stores are not covered. Manures and slurries are a valuable nitrogen resource rather than a waste and their proper use can displace chemical fertiliser use.

The most basic measure for any farmer to take is to test and know the pH of their soil and applying lime as required. The next step is to carry out a nutrient management plan. Both of these are recommended and can save farmers money. We understand that carbon audits carried out with advice from the Farm Advisory Service cost approx. £500, however, the RPP2 included figures of £240M potential savings by the industry in 2027 if uptake was widespread.

[9] www.gov.uk/government/uploads/system/uploads/attachment_data/file/552438/agriclimate-7edition-12sep16.pdf
[10] http://www.nourishscotland.org/nitrogen-budget-scotland/
[11] http://www.gov.scot/Resource/0050/00509969.pdf

We welcome the policy in the draft Plan to 'work with industry to develop a science-based target for reducing emissions from nitrogen fertiliser'. However, we recommend a wider approach to nitrogen resources across more sectors in Scotland to encourage the recycling of the nitrogen resources contained in, for example, food wastes, crop residues, and sewage sludge. A Nitrogen Budget for Scotland could help to identify the gaps where nitrogen is lost from the 'cycle' and where these resources can be reused and recycled, for example through anaerobic digestion. We recognise the benefits this has had for reducing nitrogen loss in Denmark[12]

Our priorities to improve agriculture policies

1. A wholesale rethink of all policies to more clearly communicate Government's desired outcome, with timescales, including which will be regulatory and by when.
2. Soil testing must be clearly indicated as a compulsory measure.
3. Government must commit to a roll out of Carbon Audits across Scotland, with a regulatory backstop indicating the level of voluntary uptake expected before measure is made compulsory.
4. Introduce a Nitrogen Budget for Scotland and targets to reduce nitrogen wastage from all applicable sectors and reduce the use of chemical nitrogen fertiliser.
5. Indication of when policies will be implemented including measurable indicators.
6. All proposals to become policies at the earliest opportunity.

Transport

Transport accounts for 28% of Scotland's emissions and have fallen by just 2% since 1990. We are therefore disappointed with the overall ambition for cutting emissions from transport by 2032. The Draft Plan relies too heavily on market-led technological change and on actions by the UK Government or EU to deliver the policy outcomes which are expected to deliver the biggest emissions reductions. In addition, the Plan builds in expectations of significant increases in transport demand, without tackling the causes of demand such as the availability of public transport as highlighted by the Scottish Government's own behavioural research.[13]

The RSPB's 2050 Energy Vision[14] identifies the decarbonisation of transport as crucial to meeting our climate targets. We recommend greater policy effort towards modal shifts to

[12] https://phys.org/news/2015-09-danish-nitrogen-nutshell.html
[13] See 5.1.12 in the Draft Climate Change Plan
[14] *The RSPB's 2050 Energy Vision technical report*, available at https://www.rspb.org.uk/Images/energy_vision_technical_report1_tcm9-419581.pdf

public and active travel are crucial, as is the shift to zero carbon transport such as electric vehicles.

Our priorities to improve Transport policies

1. While we welcome the Climate Change Plan's support for electrification of transport, we are concerned that there is an over-reliance on incentivising uptake of these technologies. We consider that policies and proposals around electric vehicles should be monitored closely and reviewed regularly, to ensure that uptake is consistent with emissions reductions targets. We would also recommend that the shift to electric vehicles be complemented by policies and proposals to increase public transport and active travel. Although there is a policy outcome to increase passenger journeys by active travel, this is not supported by any increase in funding or new policies or proposals; there is no such policy outcome relating to bus and train travel, and we consider this to be a missed opportunity, since it is a significant area of influence by the Scottish Government.

2. Behaviour change will be a significant factor in the uptake of electric vehicles, both from individuals and organisations, and we are concerned that there is no mention of how this will be achieved. We are also concerned that the significant role for electrification of travel relies on action by the UK government and the EU. Again, this needs to be monitored closely to ensure that emissions from Scottish transport can be reduced if these institutions do not act in the way that the Scottish Government would hope.

3. Policy Outcome 1 includes a commitment to '*negotiate biofuels policies that will enable them to be used sustainably....*' RSPB Scotland considers that the quality of biofuels used is more important than the quantity that is used. It is of critical importance to decarbonise Scotland, and the UK's, transport system, however, biofuels can come with substantial environmental risks caused by both direct and indirect land use change[15]. Any attempt to deploy them should ensure that sustainability is guaranteed and this should be prioritised above using a certain quantity. We believe that there should be no crop-derived fuels included in vehicle fuels. There is clear scientific evidence that crop-based fuels can be associated with substantial environmental impacts through both direct and indirect land use

[15] http://www.birdlife.org/europe-and-central-asia/black-book

change[16]. We welcomes the fact that no biofuels in the UK are currently supplied by palm oil, one of the most carbon intensive biofuel feedstocks. However, other types of crop-based biofuels can also have significant emissions impacts.

The GLOBIOM report published in 2016 concludes that many crop-based biofuels (both bioethanol and biodiesel) deliver meagre emissions savings compared to conventional fuels or can even result in emissions increases[17]. Furthermore, all crop-based biofuels are likely to require significant land-take for their production. Such pressure on land can have detrimental impacts on wildlife and the wider natural environment through direct and indirect land use change.

Jim Densham, Senior Land Policy Officer

RSPB

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[16] http://www.atmos.washington.edu/2009Q1/111/Readings/Fargione2008_biofuel_land-clearing.pdf; https://www.theccc.org.uk/archive/aws2/Bioenergy/1463%20CCC_Bioenergy%20review_interactive.pdf

[17] https://ec.europa.eu/energy/sites/ener/files/documents/Final%20Report_GLOBIOM_publication.pdf