

Scottish Wildlife Trust response to the Scottish Government

Climate Change Bill Consultation Paper

June 2017

Taking peer reviewed scientific literature into account the Scottish Wildlife Trust considers climate change to be one of the major threats to biodiversity both nationally and internationally. Climate change is having, and is likely to have, profound effects on the structure and function of ecosystems at global and local scales. Some of the patterns already being observed include:

- Range shifts to more northern latitudes and higher altitudes
- Population explosions and crashes causing ecosystem imbalance and further species diversity decline
- Changes in ecosystem productivity (e.g. plant growth and decomposition rates, peatland decomposition rates) with unpredictable effects
- Increase in severe weather events leading to increased soil erosion, loss of soil organic matter, flooding and drought – all which have knock-on impacts to biodiversity
- Changes in the timing of natural events such as leaf growth and bird migration and other phenological shifts causing lack of synchronisation between species
- Impacts arising from climate change mitigation measures e.g. agricultural and energy policy changes such as biofuel planting on semi-natural habitats and windfarms on deep peat and important sites

Question 1: Do you agree that the 2050 target should be made more ambitious by increasing it to 90% greenhouse gas emission reduction from baseline levels?

No. Although the Trust is aware the UK Climate Change Committee (UKCCC) report recommends a 90% reduction pathway. However, the Trust notes that this is based on foreseeable future scenarios and does not take into account of advances in technology and efficiency. Therefore **we support a more ambitious target - of net zero GHG emissions by 2050.** The Trust endorses Christiana Figueres, ex- Chief Executive Secretary of the UN Framework Convention on Climate Change, statement that:

“the future of mankind lies in the difference between two concepts: between doing what we think is possible now, what is in our line of visibility, and doing what we know we need to do. Therein lies the future of mankind.”¹

The Trust would like to see a net zero GHG emissions target by 2050. The Trust sees the 90% target as one which is seen as economically achievable (i.e. costing 3% of GDP) but not one that would see us limiting global temperature increase to 1.5C, which is the level that signatories to the Paris

¹ 2017 address to the Business Green Leaders awards:

<https://www.businessgreen.com/bg/opinion/3012884/christiana-figueres-i-would-like-to-thank-donald-trump>

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Agreement agree would significantly reduce risks and the impacts of climate change, within meaningful timeframes. The Trust believes the Scottish Government must be more ambitious and has the opportunity through the forthcoming Bill to be a world leader in GHG emission reductions. There will likely be enormous leaps in technological innovations to address climate change in the future, especially considering extra investment, and this would allow Scotland to achieve net-zero GHG emissions within economic constraints. A good example of rapidly advancing technology being implemented in Scotland is the nation's first vertical farm being established in collaboration with James Hutton Institute and an independent company². This type of agriculture allows food to be produced at point of sale which thereby reducing transport emissions. Due to efficiency optimisation fertilizers and waste (and associated GHGs) could be drastically reduced and power from renewables could be used at times of low demand.

The Trust also believes the Scottish Government should be demanding more, in terms of GHG emission reduction and mitigation, from our land based sectors. Setting more ambitious reduction targets for Scotland's agriculture and transport sector would not only contribute to the net zero target by 2050 but also, if done holistically, help address biodiversity targets.

The Trust also believes the net zero GHG emissions ambition by 2050 is necessary for us to meet our obligations under the UN Sustainable Development Goals (SDGs), this relates to Goal 13: "Take urgent action to combat climate change and its impacts" and the SDG relating to ending Poverty (it is well established that climate change impacts the poorest in society first³).

Question 2: Do you agree that the Climate Change Bill should contain provisions that allow for a net-zero greenhouse gas emission target to be set at a later date?

No – please see above answer – we think the target should be set now for 2050

Question 3: a) Do you agree that the 2020 target should be for greenhouse gas emissions to be at least 56% lower than baseline levels?

Yes – Scotland is on course to achieve this.

b) Do you agree that a target should be set for greenhouse gas emissions to be at least 66% lower than baseline levels by 2030?

No – the Trust shares Scottish Environment LINKs opinion based on Rockström et al's analysis, which suggests that there should be a halving of emissions every 10 years in order to reach net zero by 2050. Following this approach, the target should be a 77% reduction in GHG emissions by 2030.⁴

c) Do you agree that a target should be set for greenhouse gas emissions to be at least 78% lower than baseline levels by 2040?

No –the Trust agrees with Scottish Environment LINKs view, based on Rockström et al's analysis, that the target for 2040 should be 90%.

² Please see: <http://www.hutton.ac.uk/news/scotland%E2%80%99s-first-vertical-indoor-farm-be-operational-autumn-2017>

³ Please see: <http://www.ipcc.ch/ipccreports/tar/wg2/index.php?idp=674>

⁴ Please see: <http://science.sciencemag.org/content/355/6331/1269>

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Question 4: Do you agree that annual emission reduction targets should be in the form of percentage reductions from baseline levels?

Yes – This is the accepted approach and is well understood, so maintaining it would avoid confusion and make tracking progress more straightforward.

Question 5: Do you agree that annual targets should be set as a direct consequence of interim and 2050 targets?

Yes

Annual targets should be produced based on the interim targets highlighted above (based on Rockström et al's analysis).

Question 6: Do you agree that all emission reduction targets should be set on the basis of actual emissions, removing the accounting adjustment for the EU ETS?

Yes – This will bring more clarity and reflect actual progress made.

The Trust supports Scottish Environment LINK's call to ensure that there are clear policies in place to drive industrial decarbonisation beyond the ETS cap itself.

Question 7: a) What are your views on allowing the interim and 2050 emission reduction targets to be updated, with due regard to advice from the CCC, through secondary legislation?

Yes

The Trust believes that updating interim targets should be allowed but they should only be able to be strengthened not lowered. Any such regulations should be subject to the affirmative procedure.

b) What do you think are the most important criteria to be considered when setting or updating emission reduction targets?

The Trust supports the existing criteria and believes science and not economic arguments must be the defining criteria. The Trust also considers that particular focus must be paid to the co-benefits to biodiversity off setting targets.

This could be given effect by amending the way the criteria are drawn up. At the moment the criteria are listed in section two of the Act and there is nothing to differentiate between the criteria. This could be changed so that the Climate Change Committee first had to give consideration to a. the science on climate change and b. technology relevant to climate change, and then to c. the economy d. social circumstances etc.

The Trust would like to see more prominence given to the co-benefits to health e.g. reduced harmful emissions, reduced urban heat island effect etc... This could be added with an amendment to the criteria. There is a criteria which currently reads "social circumstances, in particular the likely impact of the target on those living in poorer or deprived communities" this could be changed to add "and on public health".

The Trust supports LINK's proposed amendment: "The criteria: *Environmental considerations and, in particular, the likely impact of the targets on biodiversity*" This should be included as a criteria to make sure that, in addressing climate change, we consider impacts on other planetary boundaries. We recommend that the Government's criteria is reworded: "*Environmental considerations and, in particular, the likely impact of the targets on biodiversity and other planetary boundaries under pressure*"

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Question 8: a) What are your views on the frequency of future Climate Change Plans?

Production every 5 years would appear to be an appropriate time scale.

b) What are your views on the length of time each Climate Change Plan should cover?

We believe the plans should continue to cover a 15 year period, as now. They should divide policies and proposals into short-term (0-5 years), medium term (5-10 years), and long-term (>10 years).

Plans for short-term measures should be detailed and it should be clear how short-term measures will meet annual targets. **c)** What are your views on how development of future Climate Change Plans could be aligned with Paris Stocktake Processes?

Not providing answer

d) How many days do you think the period for Parliamentary consideration of draft Climate Change Plans should be?

This should be a minimum of 90 days

Question 9: The Trust endorses Scottish Environment LINKs response to this question:

- *We do not support this proposal as there is potentially a long time lag between missing a target and the preparation of the next Climate Change Plan. The plan should be a living document that does not allow rollover under-performance to subsequent plans and action must be taken to get back on track as soon as possible.*
- *The Scottish Government has never provided a section 36 report for increased policy to make up for a missed target in the past, which suggests this requirement needs to be strengthened.*
- *We recommend that shortfalls against previous targets should be made up on an annual basis. The October statement to Parliament should be expanded, put on a statutory footing and should set out how any shortfalls will be made up in future years.*

Question 10: What are your views on these initial considerations of the impact of the Bill proposals on Scotland's people, both now and in future generations?

Given the scope of the Bill and its potentially wide ranging impact on the people of Scotland and internationally, the Trust does not consider this BRIAM document to be comprehensive enough. The Trust does accept that quantifying indirect impact can be difficult but a greater effort has to be made.

The Trust believes healthy, flourishing and connected ecosystems underpin not only human health and wellbeing but also our economic and social structures. Given the huge impact that climate change will have on the environment - and by extension human health and wellbeing and the economy – greater analysis of impacts to ecosystem health should be considered.

The Trust is of the opinion that through this Bill, if the ambition is realised will have an overwhelmingly positive impact and help Scotland become a more equitable, environmentally sound society.

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Question 11: What are your views on the opportunities and challenges that the Bill proposals could present for businesses?

The opportunities and challenges associated with the Bill should be considered against the massive economic cost associated with from doing nothing or delaying activity vs the relatively low cost of taking action now – which is highlighted in the Stern Review on the *Economics of Climate Change*.⁵

Every effort should be made to help businesses adapt by producing a comprehensive and proactive industrial strategy and policy.

Specifically regarding agriculture, the Trust would like to see a system of land stewardship payments that are conditioned on, inter alia, a mandatory whole farm review – this would include farm units' GHG performance. As demonstrated by the *Farming for a Better Climate* initiative, these kind of whole farm reviews can highlight significant opportunities for cost savings for farm businesses.⁶

Question 12:

a) What are your views on the evidence set out in the Environmental Report that has been used to inform the assessment process? (Please give details of additional relevant sources).

A wide range of evidence has been used and the sources used give good summaries. There could be more reference to the impact on ecosystems as well as ecosystem services e.g. the UK National Ecosystems Assessment and Follow on reports identifies climate change as a driver of ecosystem service decline and identifies climate change as a growing threat.⁷

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

The Trust is surprised the term 'Blue Carbon' has not been used when referring to marine habitats and their carbon sequestration value. There is a need to improve our understanding of blue carbon habitats across Scotland – the sequestration value of different habitat types, their distribution, and health

There is a need to identify Blue Carbon value of MPAs and also include blue carbon value into the criteria for identifying potential MPAs. There is also a need to establish the impact marine activities have on blue carbon habitats (an obvious example would be the damage caused by trawling)

There should be more detail provided on the potential benefits of asking more from our land based industries, with regard to reducing GHG emissions.

13)- Please use this space to tell us any other thoughts you have about the proposed Climate Change Bill not covered in your earlier answers.

Implementation of an NEN

The National Ecological network should be referenced in the bill as a way to meet targets but also as a way to mitigate climate change.

A National Ecological network would provide a strategic, practical and long-term way to invest in natural assets such as peatlands and woodlands which sequester and store carbon and would also

⁵ Please see: http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/sternreview_index.htm

⁶ Please see https://www.sruc.ac.uk/info/120175/farming_for_a_better_climate

⁷ Please see: <http://uknea.unep-wcmc.org/>

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significantly help with regard to adaptation. Further resource should be directed towards creating the national ecological network and future climate plans should include sections on the NEN.

The National Ecological network provides a frame work to strategically plan our green infrastructure and help us implement nature based solutions⁸. A good example of nature based solutions that could be implemented under the National Ecological Network, which relates directly to climate change, would be riparian woodlands as they both sequester carbon and reduce run off of organic matter and nitrates into rivers.

Land Stewardship Policy

Policies under the Scottish Wildlife Trusts Land Stewardship Policy should be highlighted as ways of meeting targets⁹.

The Trust has developed a blueprint for land use post Brexit; the Land Stewardship Policy advocates among other measures support payments being paid to only those who provide public benefits such as climate change mitigation/adaptation. As such the document shows a path towards 'carbon sequestering landscapes'.

The Land Stewardship Policy advocates the use of a whole farm review which would include a review of climate and soil efficiency as well as other carbon intensive inputs such as fuel and fertilizer. Adopting this approach would help our land based industries reduce GHGs, and by being more efficient, would also save money.

The Trust is also in favour of setting a nitrogen budget for Scotland, which could be tied to individual farm reviews.

The Land Stewardship Policy advocates requiring land managers to agree forward cull plans with Scottish Natural Heritage. Cull plans are set at levels intended to reduce deer impacts on climate and biodiversity. For example a reduction in deer density would improve Scotland's ability to meet its woodland planting targets.

The Land Stewardship Policy also advocates greater funding for native woodland creation; future Climate Change Plans should link to this ambition and Scotland's targets for land based industries should reflect their ability to create more woodlands and the climate mitigation/adaptation benefits this would have.

The Trust advocates licensing of driven grouse moors and this would help ensure that moorland management activities such as burning are better regulated thereby leading to a reduction in carbon loss.

Peatlands

The Climate Change Act should introduce a 'sunset clause' for all existing peat extraction consents, either revoking permission or ensuring active sites meet current environmental legislation a time should also be set for all to be re-activated or they permanently expire; and a levy on peat sales for horticulture should be introduced.

Burning of peatlands can result in the emission of large quantities of GHG which are included in the Land Use, Land Use Change and Forestry (LULUCF) section of Scotland's National Greenhouse Gas

⁸ Please see: https://scottishwildlifetrust.org.uk/wp-content/uploads/2016/09/002_057_natureinbrief_naturebasedsolutions_aug2013_1377858417.pdf

⁹ Please see: https://scottishwildlifetrust.org.uk/wp-content/uploads/2017/06/FINAL_Land-Stewardship-Policy_07-ONLINE.pdf

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Inventory, which is a net source of emissions. Guidance on muirburn is given in the Muirburn Code. It advises against burning on sensitive habitats such as deep peats, montane heaths, steep slopes, and close to woodland and scrub. Evidence suggests that burning is increasing in frequency and burning of vegetation on deep peat is widespread, in spite of this advice.¹⁰ The Trust therefore believes that there is a need to regulate to ensure that these areas are not burnt. Scottish Ministers could use existing powers under the Hill Farming Act 1946 to prevent burning on all blanket bog, peatland and other wetlands, montane heaths, steep slopes, thin soils, at the edges of woodland and scrub, and on sites used by specially protected birds for nesting. This would give a statutory basis for the currently advisory provisions of the Muirburn code. Alternatively the Government may choose to give effect to these changes through an amendment in the forthcoming Climate Change Bill. The Trust thinks that this is an example of how measures which are introduced to mitigate climate change can also have co-benefits for biodiversity.

Table summarising Scottish Wildlife Trust proposals on target-setting under the Climate Change Bill

	Current position	Proposals for Bill	SWT proposal
2050 target	80% reduction on 1990 levels	90% reduction on 1990 levels	Zero net emissions
Zero net emissions		Legislate to allow this to be set as the target in future	Adopt this as the target for 2050 now
2020 target	42% reduction on 1990 levels	56% reduction on 1990 levels	56% reduction on 1990 levels
2030 target		66% reduction on 1990 levels	77% reduction on 1990 levels, in line with pathway to meeting zero net emissions by 2050
2040 target		78% reduction on 1990 levels	90% reduction on 1990 levels, in line with pathway to meeting zero net emissions by 2050
Changes to interim targets	Can be changed by Scottish Ministers following advice from the UK Climate Change Committee which must take into account a number of statutory considerations. Equal weighting of each consideration.	Could be changed by Scottish Ministers following advice from the UK Climate Change Committee which must take into account a number of statutory considerations. Equal weighting of each consideration.	Interim targets could only be increased . Differentiate between science and evidence on technology as primary considerations for changing targets, and factors as secondary considerations.
Annual targets	Are set as a consequence of the interim and 2050 targets		

¹⁰ Douglas et al. (2015) Vegetation burning for game management in the UK uplands is increasing and overlaps spatially with soil carbon and protected areas. *Biological Conservation*. Volume 191, pp243–250: <http://www.sciencedirect.com/science/article/pii/S0006320715002372>