

Response to the Scottish Government consultation on the introduction of a Scottish Climate Change Bill

British Ecological Society

"advancing ecology and making it count"

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Introduction to the British Ecological Society

The British Ecological Society is the learned society for ecology in the UK. Founded in 1913 and with over 4,000 members, the British Ecological Society supports ecologists and promotes ecology; the study of living things and their relationship with the environment in which they live.

Our Response

The BES has focused its attention on a sub-set of the Scottish Government's 32 consultation questions in its response, as these are where it can best contribute members' expertise. Our response focuses around the way in which emissions reduction targets are set, scrutiny of the Government's performance in meeting these, and measures for adapting to climate change which could be included in the Bill. Where the BES has no comment to make, the questions have been omitted.

1. Should a Scottish target be based on carbon dioxide only or the basket of six greenhouse gases?

We understand that certain agricultural sectors in Scotland, such as the intensive poultry businesses of the central-south and east of Scotland and the centres of beef and dairy production of northeast and southwest make significant contributions to emissions of greenhouse gases, specifically methane and nitrous oxide. We support the inclusion of these and the other anthropogenic greenhouse gases highlighted (*carbon dioxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride*) in the Scottish Government's emissions reduction targets. Efforts to reduce other anthropogenic greenhouse gases will allow a more comprehensive climate change strategy: a multi-gas approach is also consistent with the Kyoto Protocol.

We do however believe that reductions in carbon emissions should take precedent.

2. Should the Bill contain provisions to alter which gases are included, for example if the reliability of data for a particular gas improves or if science changes in the future about which gases cause climate change?

The BES supports provision within the Bill to alter the inclusion of anthropogenic gases based on revised scientific evidence. The Scottish Government should be open and receptive to emerging scientific evidence and changes in technology; this principle should underpin the entirety of the Bill.

5. Should the emissions reduction target take account of the abatement effort made by companies under emissions trading schemes? If so, how?

The BES is cautious of the use of emissions trading schemes which involve the use of ecosystems to sequester carbon through 'carbon offsetting'. The ecological understanding and permanence here is limited: it is uncertain whether meaningful long-term trading systems can be based around such models.

7. Should the Bill allow the level of the 2050 target to be changed through secondary legislation? If so, should this only be allowed on the basis of independent, expert advice, to reflect international developments or unforeseen consequences of the Bill? Should any changes to the target be limited to an increase in the target?

The BES supports the inclusion of provision to alter the level of the 2050 target through secondary legislation. We understand too the requirement of business for stability, in order to invest in new 'green' technology. We therefore believe that alterations to the target should, as suggested in the consultation document, only proceed from the advice of independent experts, based on firm scientific principles and sound scientific evidence.

The BES must commend the Scottish Government's plans to go a step further than provisions in the UK Climate Change Bill, reducing carbon emissions by 80% to 2050. The IPCC's fourth assessment report suggests that a 50-85% cut in global carbon emissions would have a reasonable chance of keeping global average temperature increases to 2 – 2.4°C¹. At global temperatures exceeding 2.5°C, there are projected to be major changes in ecosystem structure and function through species extinction. The consequent effects for society, through the loss of vitally important ecosystem services, would be devastating. It is for these reasons that changes in the target must be limited to an increase.

8. What factors should be taken into account when setting the level of budgets?

As the BES has already stressed, budgets should be based on sound scientific evidence.

The consultation document acknowledges the carbon-rich nature of many of Scotland's ecosystems, from peatlands to forests, and the unique opportunities and challenges this may present in terms of both lowering carbon emissions and improving sequestration, through land-use. The BES strongly encourage the Scottish Government (through whatever form taken by a 'climate change committee') to take into account agriculture, forestry and other land-use practices, and their consequent effect on the ability of terrestrial ecosystems to sequester carbon, when setting budgets and targets.

Before making carbon-rich soils a mainstay of Government policy to reduce carbon emissions, and 'lock' carbon in sinks, it must be recognised however that scientific understanding of the causes, magnitude and permanence of the land carbon sink is uncertain. Further investment in scientific research will be needed to help us make optimum use of natural carbon sinks, and to monitor their efficiency, with consequences for setting carbon budgets and CO₂ reduction targets.

In addition to the factors listed, politically-led infrastructure developments need to be taken into account. Members of the BES based in Scotland have questioned whether old railway lines, such as the Elgin to Aberdeen via Buckie and Cullen line, will be re-opened. They have also questioned whether new rail routes will be developed. Such developments will affect the ability to meet targets.

It is encouraging that the Bill will include scope for the incorporation of emissions from international aviation and shipping at a future date, once these sectors have been satisfactorily addressed internationally.

9. How long should interim budget periods be?

¹ IPCC Fourth Assessment Report: Synthesis. Summary for Policy-Makers, November 2007. Accessed April 2008 <http://www.ipcc.ch/ipccreports/ar4-syr.htm>.

We support an interim budget period of five years. By harmonising the budget periods for the UK and the Scottish Climate Change Bills, the burden of monitoring and statistical collection will be reduced.

10. How many years in advance should emissions budget periods be set in order to provide sufficient time to develop infrastructure?

Emissions budgets should be set as far in advance as possible to increase certainty for business and encourage domestic investment in low –carbon energy solutions.

12. Should the Bill include an interim point target? If so, what year (or years) should it be for (2020, 2025, 2030, etc.)? How should the level be chosen?

An interim target seems sensible in order to monitor progress towards the overall goal. This is especially important if reductions lag behind actions and a non-linear distribution for reductions over time is more realistic.

However, the BES would like to stress the necessity of the Scottish Government moving quickly towards the overall emissions reduction target. The IPCC fourth assessment report stresses the fundamental importance of the timing of emissions reductions in effecting change to levels of global emissions¹. In order to meet the lowest stabilisation level under their emissions reduction scenarios, global emissions need to peak by 2015 and then reduce rapidly. For this reason also, the BES does not agree with large-scale ‘borrowing’ between emissions periods. Borrowing should be restricted to extreme circumstances only.

13. Should the Scottish Ministers be required to report on any other issues related to climate change in addition to the requirements already set out. If so, what and how often?

The BES firmly believes that adaptation to climate change should be given equal weight in policy-making, alongside strategies for mitigation. It is therefore encouraging that the Scottish Government is considering the introduction of a requirement for Ministers to report at least once in each emissions budget period on objectives for adaptation to climate change, and policies to meet these.

The provision in the Scottish Climate Change Bill should be at least as strong as that in the UK Bill. Therefore we would like to see a requirement on Scottish Ministers to provide a five-yearly report on the likely risks and impacts of climate change to Scotland, along with an annual update. These documents should encompass an adaptation strategy and contain an update on progress made towards meeting the objectives of the strategy, outlined in the previous year’s report.

Other suggestions from our members include additional reporting on:

- forecast emissions
- assessment of policy effectiveness
- aviation and shipping emissions (even if these are not in the targets)
- per capita fossil (carbon) burden

14. Is a process of Parliamentary scrutiny the appropriate way of holding the Scottish Government to account if targets or budgets are not met?

The BES support Parliamentary scrutiny as an appropriate way to hold the Scottish Government to account. We would suggest a system similar to that proposed in the UK Climate Change Bill as appropriate; with the Committee on Climate Change laying an annual report before Parliament on the UK’s progress towards targets and budgets, and the Cabinet Secretary obliged to produce a report from the Government in response.

15. What should be the primary source of advice to the Scottish Government for setting emissions targets or budgets and why? Options include: the proposed UK Committee on Climate Change, a new Scottish Committee on Climate Change, an existing public body in Scotland, or the Scottish Government itself.

The BES suggests that the UK Committee on Climate Change would be the most appropriate body to take on this advisory function. Under the UK Climate Change Bill, the Committee has regard for England and the devolved administrations. Forming a separate Scottish Committee on Climate Change would appear to be a duplication of function.

Nevertheless, the BES recognise that the Scottish Government have gone a step beyond the UK Government in proposing to set an 80% emissions reduction target. We also recognise the unique capacity of Scotland to generate a large amount of renewable energy: 60 GigaWatts of power, equivalent to 75% of the existing electricity generating capacity across the UK.

The BES would therefore support the Scottish Government's proposal to use the UK Committee for both advice and monitoring for the next three years, before carrying out an evaluation. It would seem sensible, again as suggested, to include provision in the Climate Change Bill allowing for a separate Scottish Climate Change Committee to be convened if necessary. We stress that such a body must constitute scientific and technical experts, from the natural sciences and economics, along with experts on land-use and forestry, in order to make sure that scientific evidence and understanding has a firm place in climate change policy-making.

16. If it were to be an existing Scottish public body, which public body is most suited to carrying out this task and why?

The BES supports the use of the UK Committee on Climate Change to provide an independent source of advice to the Scottish Government. We do not have a view on which existing public body could be asked to fulfil a liaison function between the Government and UK Committee on Climate Change.

As highlighted in our response above, it is vital that such a body draws heavily on scientific and technological expertise, with representatives from the natural sciences, economics, technology, and forestry and land-use experts.

17. Which organisation should be tasked with monitoring the progress of the Scottish Government on reducing emissions and why? Options include: the proposed UK Committee on Climate Change, a new Scottish Committee on Climate Change, an existing public body in Scotland, or the Scottish Government itself.

As above.

18. If it were to be an existing Scottish public body, which public body is most suited to carrying out this task and why?

As above.

19. Should additional independent mechanisms for scrutinising the effectiveness of the Scottish Government's policies in reducing emissions be created by the Bill (in addition to any scrutiny already provided by the Scottish Parliament)?

Whilst scrutiny of the effectiveness of the Scottish Government's policies is important, the Government should be wary of introducing layers of bureaucracy into the process. The UK Government will scrutinise the UK Government's effectiveness in meeting its targets to reduce emissions, including the effectiveness of these

policies in the devolved nations. When this UK-level scrutiny is taken into account, it would seem adequate for the provisions of the Scottish Climate Change Bill to face scrutiny solely through the Scottish Parliament.

20. If so, which organisation is best placed to carry out this function and why? Options include a new Scottish Committee on Climate Change or an existing public body in Scotland.

As above.

30. Are there any provisions to help Scotland adapt to the impacts of climate change which should be included in the Scottish Climate Change Bill?

The Stern Review has shown clearly that the economic risks of doing nothing are far higher in the long-term than the economic costs of climate change mitigation and adaptation². The BES strongly believes that adaptation should be given greater precedence within policy-making and could be considered conjointly with mitigation strategies in development planning.

In response to the consultation on the UK Climate Change Bill, the BES argued for the inclusion of a requirement on the Secretary of State to deliver a five-yearly report to Parliament, alongside an annual update, outlining the risks to the UK of the impacts of climate change. The Government should be required to outline progress made in addressing these risks in the interim, since the last year's report. We would suggest that a similar system be developed in Scotland.

In devising measures to adapt Scotland to the impacts of climate change, an 'ecosystem approach' must be taken, defined by the Convention on Biological Diversity as: *"a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.... It is based on the application of appropriate scientific methodologies focused on levels of biological organisation which encompass the essential processes, functions and interactions among organisms and their environment. It recognises that humans, with their cultural diversity, are an integral component of ecosystems."*³

Ecologists and others in the environmental science community have a vital advisory role to play in operationalising this holistic approach to managing Scotland's natural resources. Working with UK agencies, the Scottish Government should act as an intelligent consumer and commissioner of research, supporting studies at a regional and local level to resolve uncertainties around adaptation strategies for ecosystems and biodiversity conservation and their impact on the vital functions (for example flood protection), which ecosystems provide.

BES engagement

The BES would welcome the opportunity to engage further with the Scottish Government as the draft Climate Change Bill progressed. If you have any questions about this submission or would like additional information, please contact Ceri Margerison, Policy Officer at the British Ecological Society.

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² Stern Review on the Economics of Climate Change, 2006. Accessed April 2008, <http://www.occ.gov.uk/activities/stern.htm>

³ Convention on Biological Diversity. Accessed April 2008, <http://www.cbd.int/>