

CONSULTATION

Response Document



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Discussion Document on a Northern Ireland Climate Change Bill

(Department of Agriculture, Environment and Rural Affairs)

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Introduction to CIEEM

The Chartered Institute of Ecology and Environmental Management (CIEEM), as the leading membership organisation supporting professional ecologists and environmental managers in the United Kingdom and Ireland, welcomes the opportunity to comment on this consultation.

CIEEM was established in 1991 and has over 6,000 members drawn from local authorities, government agencies, industry, environmental consultancy, teaching/research, and voluntary environmental organisations. The Chartered Institute has led the way in defining and raising the standards of ecological and environmental management practice with regard to biodiversity protection and enhancement. It promotes knowledge sharing through events and publications, skills development through its comprehensive training and development programme and best practice through the dissemination of technical guidance for the profession and related disciplines.

CIEEM is a member of:

- Environmental Policy Forum
- IUCN – The World Conservation Union
- Professional Associations Research Network
- Society for the Environment
- United Nations Decade on Biodiversity 2011-2020 Network
- Greener UK
- Irish Forum on Natural Capital (working group member)
- National Biodiversity Forum (Ireland)
- The Environmental Science Association of Ireland

CIEEM has approximately 260 members in Ireland who are drawn from across the private consultancy sector, NGOs, government and semi-state agencies, local authorities, academia and industry. They are practising ecologists and environmental managers, many of whom regularly provide input to and advice on land management for the benefit of protected species and biodiversity in general. This response was coordinated by our Ireland Policy Group.

We welcome the opportunity to participate in this consultation and would be happy to provide further information on this topic. Please contact Jason Reeves (CIEEM Head of Policy and Communications) at JasonReeves@cieem.net with any queries.

Comments from CIEEM

We support the introduction of a Climate Bill for Northern Ireland and welcome the recognition of the climate emergency as a priority policy area. While this discussion document notes the natural-based carbon sequestration initiatives planned by DAERA, we feel there is more scope for integrating action on both the climate emergency and biodiversity crisis: two crises that are inextricably linked and must be addressed in tandem.

Whilst it is acknowledged in the Ministerial Foreword that we cannot continue with a “business as usual” approach, it is concerning that this discussion document, alongside the Green Growth

Strategy, are being developed along the lines of business as usual for agriculture. The overall farming model of intensive production is a misplaced short term approach.

Dual pressures to grow the agricultural sector and reduce carbon emissions places marginal agricultural land at further risk. These marginal lands are often the most biodiversity rich areas across the wider countryside and are havens to plants, invertebrates and ground nesting birds. Farmers should be rewarded for broader delivery of ecosystem services or “public goods”. We need a sea change in policy and leadership from Government to support farmers to protect the natural environment rather than subsidies to intensify and damage biodiversity rich habitats.

CIEEM recommends the development of a more holistic longer-term approach evaluating and rewarding broader ecosystem services delivered by land managers rather than the continuation of unsustainable agricultural practices.

Consultation Questions

Question 1: Which of the following high level options do you think is appropriate for Northern Ireland to take forward?

Option 1: Northern Ireland Climate Change Bill setting interim emission reduction targets and a long term target of net zero emissions in Northern Ireland by 2050 (long term target does not consider expert climate change advice)

The NI Climate Bill is based on the ‘Balanced Net Zero Pathway’ Scenario [1] devised by the CCC. We would strongly advise that the more ambitious ‘Widespread Engagement’ Scenario would be the basis for the development of the bill. We recognize that Northern Ireland is a net exporter of food and that consumption patterns in the rest of the UK therefore influence food production in Northern Ireland. In this regard, farmers in Northern Ireland must be supported in transitioning to more sustainable food production and the provision of public goods. For example, promoting agroforestry would achieve multiple benefits for carbon sequestration, biodiversity and soil preservation. We recognize that such a transition would require a significant societal change; the government should therefore embark on a campaign to help people to adopt a more sustainable diet which also meets their nutritional requirements.

Supporting farmers and landowners to deliver ecosystem services and other public goods would also have significant benefits for other policy areas and goals such as biodiversity enhancements and air quality improvements, for example, ammonia from agriculture which is one of the biggest threats to protected sites in Northern Ireland.

[1] Climate Change Committee (2020) The Sixth Carbon Budget: The UK’s Path to Net-Zero. Available at:

<https://www.theccc.org.uk/wp-content/uploads/2020/12/The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf>

Question 2: Do you have any opinions on what would be the most important criteria to be considered when setting or updating long term and interim emission reduction targets?

Yes

In our opinion, the most important criteria to be considered are:

- How to achieve combined benefits for climate and biodiversity.
- Use of best available scientific evidence.
- How to support farmers to transition to more sustainable farming methods, in particular how to reduce emissions, particularly methane and ammonia.
- Use of nature-based solutions for climate mitigation such as peatland restoration and woodland restoration.
- Assessment of existing carbon stocks within soils prior to land use changes such as the creation of new native woodland, taking into account the value of existing habitats.
- Significant developments in international law.
- Public opinion.

A holistic approach should be applied, involving the public in the decision making process. To enable a coordinated approach, CIEEM recommends that the government develop an overall strategy for land management in Northern Ireland.

Question 3. Do you think flexibility should be built into the Bill, to allow consideration of new emerging evidence and science on climate change (for example on long lived and short lived pollutants) when setting emission reduction targets?

Yes

Yes as long as targets are ambitious and a robust safeguard is included to prevent regression of targets and standards. This would also allow the government to develop sectoral targets and action plans, for example, for agriculture whilst allowing for a just transition.

All greenhouse gases should be considered in light of emerging evidence and science. Assessments should be integrated so that a holistic approach is taken to pollutant reduction in general.

Question 4. Do you agree that a Northern Ireland Climate Change Bill should include a duty for 5 yearly carbon budgets to set a statutory cap (interim emission reduction targets) on total greenhouse gases that can be emitted in Northern Ireland?

Yes

CIEEM agree that statutory five-year carbon budget caps be set on GHG emissions as a means of setting interim GHG emission reduction targets. These should be informed by independent expert advice taking into account the latest climate change scientific evidence.

There should also be a requirement for annual reporting of progress and plans for policies to contribute to these targets as is required in Scotland. This improves transparency and will allow alteration of the approach to ensure NI is on track to stay under the five-year cap.

Question 5. Should provision for reporting on adaptation measures by 'major player' public bodies be included in a Northern Ireland Climate Change Bill?

Yes (which major player public bodies and why?)

Major players should include all the relevant sectors including agriculture and forestry, transport and energy supply. Government Departments and their agencies, Government Owned Companies such

as NI Water, Strategic Investment Board, Invest NI, Local Authorities, Health Trusts, Transport operators including airports should also be included.

This list is not exhaustive and we believe major players should include public bodies with

- Significant sphere of influence - for example expenditure or policy
- Major landowner or employer
- Funding or auditing remit
- Regulatory function

We encourage DAERA to consider nature-based solutions for climate change adaptation, with a particular focus on adaptive land management in the agricultural sector - using an anticipatory rather than a reactionary approach. Following adaptive pathways which consider land-use change in advance of climate hazard events delivers greater benefits compared to waiting until the hazard has occurred. For example, resilience can be increased by a switch from arable land use to a mix of productive grassland for forage and to wet grasslands in high flood risk locations. Adaptation policies should be regionally developed to account for variation in habitat and climate[2].

Additionally, a clearly structured strategic approach to adaptation is needed to enable targeting of resources and planning by bodies/individuals implementing measures.

In addition to requirements for public bodies, there should be encouragement of wider society, particularly the private sector, to adopt such processes and adapt to climate change.

[2] Maslen S. and Ngai R. (2019) 'Anticipating Future Climate Hazards to Improve Land Management in the UK', *In Practice*, 106, pp. 14-19.

Question 6. Should provision for reporting on mitigation measures by 'major player' public bodies be included in a Northern Ireland Climate Change Bill?

Yes

All the key sectors including agriculture and forestry, transport and energy supply should be included. Major players should include the same public bodies as those that report on adaptation.

Should the Department consider reporting is too onerous on smaller public bodies the department must develop a mechanism to represent these in order to fully record and report on GHG emissions.

Question 7. In addition to continuing to avail of the expertise of the UK Climate Change Committee, should we also include provision in the Bill, for an independent Northern Ireland advisory body on climate change?

Yes

We support the proposal for an independent Northern Ireland advisory body. An independent advisory body for NI must work closely with the UK Committee on Climate Change (CCC) and the Ireland Climate Change Advisory Council to enable joined-up decision making and address cross border issues. Recognising also that the Climate Emergency and Biodiversity Crisis are inextricably linked, we would recommend that this body work very closely with the Northern Ireland

Environment Agency, Joint Nature Conservation Committee and the environmental NGO sector to ensure that a holistic approach is applied to climate mitigation and adaptation.

The IPCC's Special Report on Global Warming of 1.5C states that "*Limiting global warming to 1.5°C would require rapid, far-reaching and unprecedented changes in all aspects of society.*" In recognition of this fact, a new Climate Change Advisory Body for Northern Ireland should include individuals and organisations with expertise in a wide range of disciplines, including but not limited to ecology, agriculture, social sciences, food science and education. Such a range of expertise is required in order to assist the general public in transitioning to a low-carbon society and economy.

To ensure public participation in decision-making, we encourage the Northern Ireland Executive to form a Citizen's Assembly to consider the joined crisis of climate change and biodiversity and would inform the new Climate Change body. This approach has been adopted by the Committee for Climate Change in the UK and for the development of Climate Change policy in the Republic of Ireland. Due to the recognized interlinkages between climate change and biodiversity, we advise that an assembly consider both topics together.

Question 8. Do you have any other comments in respect of the issues raised in this discussion document?

Yes

We welcome the Discussion Document's recognition of the interlinkages between climate change and biodiversity loss and the potential for nature-based solutions such as peatland restoration to achieve combined goals of emissions reductions and nature recovery.

There are considerable benefits, not to mention cost-effectiveness, of considering climate change mitigation and adaptation, biodiversity, and other environmental issues together. For example, it provides the opportunity for win-wins when applying ecosystem-based approaches to climate mitigation and adaptation, and avoiding mitigation actions that have no adaptive capacity or that reduce the resilience of other factors.

However, we would have reservations regarding tree planting to sequester carbon. The Forests for our Future demonstrates an emphasis on crop productivity rather than a holistic approach considering broader impacts and ecosystem services. Whilst the aim to create 9,000 ha of new woodland appears laudable CIEEM is concerned with the focus on coniferous plantations. Simply viewing woodland creation through the lens of carbon draw down is a missed opportunity to address both climate change issues and make a meaningful contribution to biodiversity loss and restoration. There is an urgent need to reduce atmospheric carbon levels and trees planted now will not mature for several decades. In the past, tree planting has resulted in the loss of valuable upland habitats and pollution of watercourses. In planning for tree planting, we would strongly advise that due consideration be given to existing carbon stocks and the suitability of areas proposed for planting in order to avoid collateral damage to biodiversity. Consideration should also be given to alternative approaches such as natural regeneration.

CIEEM recommends a focus on the creation of native broad leaved woodland and a review of the Forestry Scheme to ensure dual benefits are realised.

CIEEM has recently produced a Briefing Paper on Nature-Based Solutions and we can provide further advice to the Northern Ireland Executive on this topic.

9. Are there any important issues you feel have not been adequately covered at this early discussion stage?

Yes

The Discussion Document does not mention the IPCC's Special Report on Global Warming of 1.5C and the recommendations for policymakers given therein; we would expect that the new Climate Bill for Northern Ireland gives due consideration to the recommendations given in this report.

Soil Carbon Stocks

Soil stores vast amounts of carbon and the first meters of mineral soils contain between three to four times the amount of carbon in vegetation and twice to three times the amount in the atmosphere.

Restoring soil health is vital to safeguard its benefits to humanity as soils play an essential role in food security, carbon storage, biodiversity and ecosystem functions. There is a huge potential for developing a win-win strategy for climate, biodiversity and food security by adopting new farming practices geared to sustainability. Healthy agricultural soils have a substantial capacity to reduce CO₂.

CIEEM recommends that the Department should consider soil carbon sequestration strategies alongside reduction strategies for other greenhouse gas emissions.

Peatland Conservation and Restoration

Peatlands cover just 3% of the world's surface and yet hold twice as much carbon as all the world's forests combined, illustrating their global significance in mitigating climate change. The relevance of healthy peatlands to the emissions reduction agenda is reflected by the UK Committee on Climate Change (UK CCC): "The future inclusion of emissions from degraded peatland in the UK emissions inventory could add around 9% to Northern Ireland's total emissions".

The net benefits, in terms of climate change emissions alone, of restoring 55% of peatlands to near natural condition are estimated to have a value of approximately £45 billion to £51 billion [3]

Over 85% of NI peatlands have been damaged by pressures including drainage, afforestation, overgrazing, burning and extraction. Consequently many of our peatlands are net emitters of greenhouse gases when they should be valuable carbon sinks. Despite the urgent need to restore peatland habitat, as little as 1% has been restored in the past 30 years.

CIEEM recommends a commitment to the restoration of peatland sites across NI with significant government investment in these crucial habitats.

Coastal and Marine Habitats - Developing a 'Blue Carbon Strategy' for Northern Ireland

The Discussion Document does not include any mention of opportunities to restore and protect coastal and marine habitats; we would encourage the government to consider these habitats in the

NI Climate Bill. Despite their relatively limited global extent, coastal ecosystems have a disproportionately important role in sequestering carbon compared with terrestrial ecosystems, but these habitats are being lost at an alarming rate[4]. Northern Ireland's coastline has a range of valuable habitats including saltmarsh, seagrass beds, shellfish reefs and kelp forests, all of which sequester carbon at high rates, and these habitats should not be overlooked when considering Nature Based Solutions. Coastal and marine habitats that capture and store large amounts of carbon are sometimes referred to as 'Blue Carbon'.

In addition to sequestering large amounts of carbon, the preservation and enhancement of coastal and marine habitats would have significant benefits for biodiversity and would provide increased resilience to climate change in coastal areas. There would also be added benefits for tourism and food security; healthy coastal and marine habitats are vital for maintaining fish stocks.

There has been very little research on such habitats in Northern Ireland to date. The government prepared action plans for seagrass beds and saltmarsh habitats in the early 2000s; however, to our knowledge there has been no reporting on the outcome of these action plans. CIEEM recommends that the Department prepare a report on the success, or otherwise, of these action plans, and develop a new overall strategy for the protection and restoration of coastal and marine habitats - a 'Blue Carbon Strategy' - across NI, with yearly reporting on the outcome of the strategy.

CIEEM can provide advice to DAERA on habitat restoration and creation techniques; our Ecological Restoration and Habitat Creation and Marine and Coastal Special Interest groups have a wealth of knowledge and experience in these areas.

[3] Hazel Trenbith/Adam Dutton (2019) *UK Natural Capital for Peatlands Report*, Office for National Statistics, Available at:

<https://circabc.europa.eu/sd/a/4cf9023f-64d5-41e6-af91-0f1560b0ee20/UK-2017-Peatlands.pdf>

[4] Mcleod E, Chmura GL, Bouillon S, Salm R, Björk M, Duarte CM, et al. A blueprint for blue carbon: toward an improved understanding of the role of vegetated coastal habitats in sequestering CO₂. *Front Ecol Environ*. 2011;9(10):552–60.