

CCNI Response to DAERA Carbon Budget consultation



[Introduction]

The Climate Coalition Northern Ireland (CCNI) is a network of organisations and individuals formed in early 2020 with a collective membership of over 300,000 people in NI. The CCNI's mission is to facilitate cooperation between organisations working on climate change issues, locally and globally, in order to bring about appropriate action in Northern Ireland to tackle climate change.

As the largest, collaborative body on climate action in Northern Ireland CCNI feels that the first Carbon Budget and Climate Action Plan must match the democratic will of the NI Assembly and act with urgency to deliver a cleaner, greener, fossil fuel free Northern Ireland with better health outcomes for its citizens and environment.

CCNI Members include:

Belfast Food Network

Buglife

Business in the Community

Butterfly Conservation

Chartered Institute of Ecology and Environmental Management

CAG (QUB)

Chartered Institute of Environment Health

Christian Aid Ireland

Energy Saving Trust

Extinction Rebellion (XRNI)

Friends of the Earth NI

Habitat for Humanity Ireland

Keep Northern Ireland Beautiful
National Trust NI
National Union of Students–Union of Students in Ireland
Nature Friendly Farming Network
Northern Ireland Environment Link
Northern Ireland Marine Task Force
Oxfam Ireland
Queen’s University Belfast
Red Cross NI
RSPB NI
Surfers Against Sewage
Sustainable Northern Ireland
Sustrans
Tearfund
Trócaire
Ulster Wildlife
Woodland Trust
Youth Climate Association Northern Ireland

Question 1. The 2030 Target:

Do you agree that DAERA should follow the current advice provided by the CCC and keep the current 2030 emissions reduction target in the Act of an at least 48% reduction in emissions compared to the baseline?

Yes

Like all government departments, DAERA has to meet its legal obligations under the Climate Change Act (Northern Ireland) 2022 and so must ensure that there is a reduction in NI’s greenhouse gas emissions of at least 48% by 2030, though CCNI believes that NI should aim for a greater level of emissions reductions before 2030.

The UN Secretary General Antonio Guterres described the IPCC AR6 Synthesis Report in March 2023 as a clarion call to massively fast-track climate efforts by every country and every sector and on every timeframe. The UN Secretary General said

“In short, our world needs climate action on all fronts — everything, everywhere, all at once.”

“Specifically, leaders of developed countries must commit to reaching net-zero as close as possible to 2040, the limit they should all aim to respect.”

Question 2. The 2040 Target:

Do you agree that DAERA should follow the current advice provided by the CCC and set a 2040 emissions reduction target of an at least 77% reduction in emissions compared to the baseline?

Yes

Question 3. First Carbon Budget (2023-2027):

Do you agree that DAERA should follow the current advice provided by the CCC and set the first carbon budget at a level that has a 33% average annual reduction in emissions compared to the baseline?

Yes

Question 4. Second Carbon Budget (2028-2032):

Do you agree that DAERA should follow the current advice provided by the CCC and set the second carbon budget at a level that has a 48% average annual reduction in emissions compared to the baseline?

Yes

Question 5. Third Carbon Budget (2033-2037):

Do you agree that DAERA should follow the current advice provided by the CCC and set the third carbon budget at a level that has a 62% average annual reduction in emissions compared to the baseline?

Yes

Question 6. CCC advice:

Do you agree that DAERA should follow any updated advice and recommendations from the CCC (as a result of the publication of the Northern Ireland 2021 Greenhouse Gas Inventory) when setting the first three carbon budgets?

Yes

We believe that DAERA should follow the CCC advice as long as it ensures that NI meets its Net Zero by 2050 target, though there may be situations where NI could be more ambitious than the CCC advice such as in relation to the use of agroecological options and nature based solutions and land and in the sea, including the role of blue carbon stores, so the CCC advice is important but should not be seen as representing the limit of NI's ambition. The CCC advice is important and relevant but should not be seen as representing the limit of NI's ambition. As the CCC said in the [Advice report: The path to a Net Zero Northern Ireland](#) in relation to its speculative pathways and the possible use of direct air capture (DAC)

"It is up to Northern Ireland to decide whether to pursue other speculative options to reduce net emissions".

Question 7. Impact assessments

Can you provide any information (relating to the potential financial, economic, social, rural and equality impacts) which will help inform the completion of the relevant impact assessments on the proposed carbon budgets?

The many cross departmental benefits of achieving net zero are well established and it is clear that investing in a green economy and zero carbon options can also save money in the long term. The CCC said in its Sixth Carbon Budget report that

"Around half of the measures to reduce emissions are expected to be cost saving by 2050, primarily decarbonising electricity and surface transport."

In relation to the financial benefits, modelling commissioned for the CCC Sixth Carbon Budget report suggests achieving net zero in the UK will give a boost to UK GDP growing to around 2% of GDP by 2030, with an accompanying boost to employment of around 1%. According to this analysis the GDP boost will continue growing after 2030 before levelling off at around a 3% boost by 2050. The CCC goes on to say that considering the various economic models and evaluations, the investment programme for achieving net zero set out in section 2 of the Sixth Carbon Budget report

"can provide a significant economic boost in the coming years and support the UK's economic recovery."

In a letter dated 1st April 2021 to the AERA Minister at the time, the UK Climate Change Committee said

"Long-term decarbonisation can also bring substantial co-benefits, particularly for the natural environment, climate change adaptation, and public health."

For example, the benefits from investing in better insulation in buildings could create jobs for people and firms (relevant to the Department for the Economy), reduce carbon emissions (relevant to DAERA) and reduce fuel poverty (relevant to the Department for Communities) by saving energy and making buildings warmer. This would have very positive impacts on the physical and mental health of those who

would be taken out of fuel poverty and live in warmer properties (relevant to the Department of Health) and all of this could be delivered by improving building regulations, which is the responsibility of the Department of Finance.

In order to make the most of the economic opportunities offered by achieving net zero, NI needs to make different investment choices. As the CCC said, a priority for all government departments is to

“Integrate Net Zero into all policy making, and ensure procurement strategies are consistent with the UK's climate objectives”

Question 8. Stretch Ambition Scenario to reach 93% reduction by 2050:

Do you think that the Northern Ireland Executive should follow the advice provided by the CCC and choose the Stretch Ambition Scenario?

Yes.

Like all government departments, DAERA has to meet its legal obligations under the Climate Change Act (Northern Ireland) 2022 and achieve Net Zero GHG emissions by 2050. In that context the wording of this question appears inconsistent with those obligations. The language used in the debate around Net Zero is important and DAERA needs to be ambitious and positive and consistently reinforce the message that NI will do all in its power to meet its Net Zero targets.

It may be possible to close the remaining gap and reach Net Zero by 2050 by exploring other options, such as a greater level of reduction in GHG emissions from agriculture. As such, the advice of the CCC should be followed but should not be seen as a limit to what NI can or will do, as it may be possible to close the remaining gap and reach Net Zero by 2050 with other options, such as a great reduction in GHG emissions from agriculture. As such the advice of the CCC should be followed but should not be seen as a limit to what NI can or will do.

Question 9 (a). The Speculative DACCS Option to reach Net Zero by 2050:

Do you think that the Northern Ireland Executive should choose the Speculative Direct Air Capture with CCS (DACCS) option to reach Net Zero?

No.

While this is the only pathway that the CCC has calculated will bridge the gap to net zero on its own, the CCC notes that this should not be taken as a recommendation that DACCS is used on this scale: other speculative options could be used in combination, supplemented with DACCS. Technology can be

included in future net zero policy as and when it is proven but engineered removals are extremely expensive and a high degree of uncertainty exists around the speed and scale that the technology can be rolled out, particularly in Northern Ireland. Northern Ireland needs to reduce its GHG emissions as far as possible, with significant changes required across every sector, before relying on unproven options like engineered removals which should, only be applied to those emissions that cannot be reduced any further. Less reliance on expensive engineered removals could allow more investment to be directed towards ensuring a just transition in all sectors of society.

There is not only very limited potential for NI to remove CO₂ directly from the air but the CCC predict that it will be expensive, around £200 per tonne of CO₂. According to the CCC direct air capture (DAC) “is expected to have high costs and may be difficult to deliver at scale in time.” Therefore, as far as possible, direct air capture should not be relied upon as a means of trying to meet the net zero target in NI.

Question 9 (b). The Speculative Agriculture Option

Do you think that the Northern Ireland Executive should choose the Speculative Agriculture option?

Yes.

On balance, we feel the Executive should choose the Speculative Agriculture option but at the same time feel it is overly simplistic to say ‘Yes’ or ‘No’ as the options need to be carefully considered. For example, while significant change is needed in UK diets to achieve carbon targets and health benefits, there is nothing to suggest that a lower meat diet is being seriously promoted. This option would potentially have serious economic and social impacts on the UK/NI livestock sector without actually reducing meat consumption.

Significant carbon reductions are already being achieved by some farmers through adaptations such as the growing of herbal leys with reduced Nitrogen inputs, agroforestry and cover crops to reduce soil and nutrient loss and these options also benefit biodiversity. There are insufficient policy incentives to encourage wider use of such techniques. A number of current research projects may also enable future transition in the agriculture sector.

The NI government must deliver the provisions of the Climate Change (Northern Ireland) Act 2022. We respect the duty in subsection (1), which does not require the net Northern Ireland emissions account for methane for the year 2050 to be more than 46% lower than the baseline. 46% reductions should therefore be achieved as a bare minimum and, as the Act allows, government should seek to go further where possible. A failure to go beyond 46% reductions in methane could see Northern Ireland fail to reach net zero by 2050. The Balanced Pathway shows that most emissions in 2050 are methane, indicating that furthering overall emissions reductions will need to be achieved by reducing methane emissions and increasing greenhouse gas removals. Although the speculative agriculture option does not specify how much more methane should be reduced by, further reductions are critical to reaching NI’s Net Zero target.

However, current agriculture policy proposals as set out by DAERA suggest an attempt to find some efficiencies while maintaining the status quo; this approach will see Northern Ireland fall well short of the 46% figure. A cap on livestock numbers is likely to be needed to help achieve the necessary levels of emissions reductions.

The CCC said in its 2023 “Advice report: The path to a Net Zero Northern Ireland”

“Our assessment is that some DAC deployment would be required, but that the further reduction in livestock numbers would reduce this need significantly.”

While the Speculative Agriculture Option will also require DAC it will require less DAC than the DACCS option. Given the very high cost of DAC, if other effective but cheaper emissions reductions options such as reducing livestock numbers are available then those should be developed and maximised first.

We would like to see an agricultural industry in Northern Ireland that produces a wider range of food for local consumption and we are supportive of ‘nature-friendly’ farming practices that add value to agriculturally productive land and the management of low productivity ‘high nature value’ farmland using extensive grazing and zero input farming that delivers primarily for wildlife and delivery of ecosystem services.

We support the need for change in the industry to meet local demands for food where there is not a significant increase in emissions and to deliver multiple positive outputs for nature and ecosystem services, but change must be accompanied by adequate ‘just transition’ funding to reduce risk and provide farmers with a pathway to diversify into other forms of food production and/or move into carbon farming opportunities through woodland creation, peatland restoration or bioenergy production.

The western diet is changing, and farming should adapt to meet the needs of consumers. However, food is increasingly a complex global market, with meat and dairy demand continuing to grow in developing parts of the world and NI is suited to pasture-based production systems due to its mild and wet climate. Upland and marginal areas have limited alternative options to livestock as a farming system.

Maintenance of species-rich grassland and peatland require extensive grazing by large herbivores, of which light traditional cattle provide the best fit. Many of these areas are not suitable for tree planting due to the presence of peat, or important priority habitats. We currently invest considerable resources in assisting farmers manage this type of land for wildlife due to its high nature value.

A level of destocking in line with the Speculative option could put pressure on these biodiverse low input, extensive farms that currently deliver the most for biodiversity, rather than the larger beef and dairy units which measure favourably under efficiency metrics and rely on export markets.

DAERA and the agricultural industry needs to meaningfully look beyond the first carbon budget and take a longer-term view on how to balance food production to balance export and local demand, minimise emissions and maximise biodiversity to deliver a viable and sustainable industry. The CCC

recommendations do not appear to support the continuation of the industry in its current form. With around 80% of dairy production currently exported, the balance between trying to reduce the emissions of an export market (that requires current scale to compete) or find alternative uses for this productive land that delivers financially for rural communities, the climate and biodiversity, needs to be addressed. Additionally, the balance sheet for agricultural emissions is not yet fully understood and there are elements of methane from ruminants and LULUCF (grasslands, hedges and peatland soils) that are not yet quantified and will alter the current emissions assessment (both positively and negatively) of the sector which could reduce (or increase) the pressure on livestock numbers.

There should also be a focus on supply chain efficiency and social behaviour with respect to food waste. Currently, around a quarter of food (post farm-gate) is wasted, with 70% of this wasted by households. A reduction in waste through more efficient usage may reduce production demand and will reduce emissions across the supply chain and the methane from the waste.

Question 9 (c). Other Speculative Options:

Do you think that the Northern Ireland Executive should consider other speculative options such as (1) enhanced rock weathering and (2) addition of biochar to agricultural land?

CCNI would support the principle of NI Executive considering other options to reduce emissions to ensure NI meets its net zero targets, but not the two options suggested in the consultation of enhanced rock weathering and the addition of biochar to agricultural land.

As regards enhanced rock weathering the CCC said that

“It is therefore not yet possible to estimate how much CO₂ could be sequestered. There are also potential negative environmental impacts to consider, such as contamination of soils, water and crops with hazardous trace metals, and rock dust in the air”

In addition to the fact that the potential for emissions reductions from enhanced rock weathering is unclear, the overall ecological impact of producing large quantities of crushed basalt is likely to be very negative and very high. For example, it is not clear if this process would require additional amounts of basalt to be mined in NI and given the significant negative impacts of mining, any additional mining for basalt would not be acceptable. Furthermore, at present, any equipment or process for mining, transporting and crushing basalt is likely to be completely or overwhelmingly powered by fossil fuels and that would not fit with the decarbonisation targets and agenda. The implications on food production of spreading crushed basalt on agricultural land must also be considered. Overall, CCNI does not see enhanced rock weathering as an appropriate or viable option for reducing emissions in NI.

The CCC said the use of biochar would be likely to reduce the contribution from BECCS and “therefore increase the gap to meeting Net Zero rather than help to close it.” On that basis the use of biochar would not be a viable option for reducing emissions in NI.

Question 10. Agriculture Sector Contribution to Net Zero:

Do you think that the Northern Ireland Executive should diverge from the CCC sector advice to deliver the required outcomes for the first carbon budget period and that these can be achieved through the actions outlined in the Agriculture sector summary?

No.

We believe the NI Executive should follow the CCC sector advice to deliver the required outcomes for the first carbon budget period. CCNI understands that the modelled impact of measures DAERA are progressing following the Minister's Future Agricultural Policy decisions in March 2022 for agriculture within the Carbon Budget 2024-2027, completed by ADAS, would only achieve emissions reductions of 12.1% by 2027, which do not align with the CCC's 21% reductions by 2030.

While we agree that reductions in agricultural emissions can be achieved through a range of changes, including nature friendly farming practices, greater use of nature based solutions where possible, improvements in genetics and diet, and potential advances in science and technology, we note that this is the only sector within the consultation where it is proposed that the Northern Ireland Executive diverges from the CCC's advice. The current proposed future agriculture policy, referred to in DAERA's observations in the consultation document, does not go far enough fast enough in order to tackle the nature and climate crises.

We are concerned that carbon calculators – including AgriCalc – tend not to factor in positive nature benefits and this is a challenge which needs to be overcome as tools are developed. It is important that there's a balanced approach which drives positive outcomes for both carbon and nature.

As the consultation document acknowledges, immediate changes must be made across all areas to achieve the Carbon Budget 2023-2027 and subsequent targets. Choosing to rely on technologies and research that is not yet proven, is risky at this early stage in the path to net zero. Action to tackle the climate emergency cannot be delayed any longer. The rate at which decarbonisation occurs will affect the cumulative emissions in the atmosphere. The biggest changes need to be made early in the transition, in order to minimise the cumulative emissions, and prevent larger cuts being needed late to achieve the same long-term goal.

Potentially NI will need to diverge from the CCC advice in relation to agriculture because NI may well need to be more ambitious in reducing the greenhouse gas emissions from agriculture, particularly methane. Methane is a short lived but very potent greenhouse gas. Over a 100 year period it is around 28 times as potent as Carbon Dioxide (CO₂) but over a 20 year period, it is around 84 times as potent as Carbon Dioxide. In a letter to the AERA Minister dated 24th March, the Chair of the CCC, Lord Deben, said the potential to bridge the gap to net zero "has been significantly inhibited by the clause in the Bill that limits methane reductions to 46% against 1990 levels". According to the Climate and Clean Air Coalition, a 45% reduction in methane this decade would avoid nearly 0.3°C of global warming by 2045 and would be consistent with keeping the Paris Climate Agreement's goal to limit global temperature rise to 1.5 degrees Celsius (1.5°C) within reach, which is the basis of the UK's net zero target.

In the [Sixth Carbon Budget methodology report](#), the CCC refers to a 2013 report the CCC commissioned from Ricardo which indicated that the health impacts of reducing red meat consumption by 50% amounted to an annual monetised benefit of 0.5% of GDP. The CCC also refers a report from [Scarborough et al](#) (2010) which says that a reduction in meat and dairy consumption by 83% by 2050 could mean 45,000 deaths avoided or delayed each year and a reduction in costs to the NHS of £1.2 billion per year. In summary, according to the CCC, reducing our levels of meat consumption could enable NI to achieve net zero by 2050 while boosting GDP, saving lives, improving citizen health and reducing NHS costs. On the basis that the Eatwell Guide has a more ambitious level of reduction in meat consumption in our diet in order to improve our health, and the recent trend of declining demand for beef, CCNI believes that it would be appropriate for NI to be more ambitious in terms of reducing the GHG emissions from the agriculture sector.

The evidence illustrates that we need to reduce emissions from livestock in order to meet our interim and long term targets in Northern Ireland.. The future of farming is closely connected to the future of nature and climate, and change is needed now in order to respond to these deepening crises. A managed, phased reduction will bring livestock numbers to more sustainable levels, within the carrying capacity of the land. A phased reduction should also be done in a fair way, ensuring that farm businesses remain profitable with farmers being rewarded for delivering environmental public goods on their land. Achieving ambitious GHG reductions from agriculture remains a significant challenge, but one that must be overcome. Government needs to work with farmers to protect, enhance and extend the natural assets they care for, find ways to incentivise and reward them for the benefits they produce, and ensure a fair transition for farming communities.

Farmers' knowledge, skills and experience will be critical to the success of Northern Ireland's transition to net zero, and they should be justly and fairly supported on that journey through the agricultural transition by a Just Transition Fund, as set out in the Climate Act for Northern Ireland to enable farmers to provide food, while also delivering for nature and climate, ensuring a just transition to net zero.

Question 11. LULUCF Sector Contribution to Net Zero:

Do you think that the Northern Ireland Executive should follow the LULUCF sector advice provided by the CCC?

Yes.

However, CCNI is concerned that DAERA will not achieve the target set by the CCC. As the consultation document says on page 35, the CCC advice is that "By 2030, more than half of peatland in Northern Ireland should be under restoration in addition to that already under sympathetic management."

On page 36 of the consultation document it says

“In line with this, DAERA is developing proposals to put on the road to recovery over 23,000 hectares of peatland habitat by 2027.”

According to Ulster Wildlife there are 242,600 hectares of peatlands in Northern Ireland, and according to the RSPB, 86% of our peatlands have been damaged by pressures including drainage, overgrazing, afforestation, burning and extraction in lowland areas. This then means that approximately 208,636 ha of peatland in NI (86% of 242,600) are degraded. This also means that the DAERA target on page 36 of the consultation is to “put on the road to recovery” only around 11% of NI’s degraded peatland habitat (23,000 ha out of 208,636 ha of degraded peatland). It would appear that DAERA will therefore fall well short of the target recommended by the CCC unless DAERA sets much higher targets for peatland restoration.

In addition to an ambitious programme of large-scale peatland restoration, DAERA should explicitly adopt the CCC recommendation that all peatland extraction sites must be restored by 2035. This requires an immediate phasing out of all peat extraction in Northern Ireland. No new licenses for peat extraction should be granted or extended and any existing licenses should be revoked and action should be included towards a clear target date of 2025 for ending commercial peat extraction on publicly and privately owned land.

In the 2019 CCC report “Land Use: Policies for a Net Zero UK” (page 15), the CCC recommends the UK “Ban peat extraction and its sale, including of imports Before 2023”. However, the draft Peatland Strategy suggests only reviewing the use of peat products which is not in line with CCC’s recommendation. NI needs to do much more and follow CCC advice in order to better protect our peatlands in line with the rate of progress of peatland protection in other parts of the UK.

Forests should be removed from areas of deep peat and the restocking of forestry on peatland sites should be halted. Research indicates that restocking on deep peat soils (>50cm) has a significant negative effect on both biodiversity and the long-term net greenhouse gas balances. The current proposal in the consultation to restore ‘some’ afforested peatland sites on Forest Service land is vague and unclear. More clarity and detail is required. Previous correspondence suggests Forest Service is minded to re-plant 90% of existing stock which is on deep peat, with only 2% earmarked for restoration and 8% not to be replanted nor actively restored. This approach will not be enough to restore afforested peatlands. Restocking on peat soils must end immediately and an ambitious timeframe should be set for restoring these sites.

An ambitious Peatland Strategy is desperately needed alongside adequate funding, to deliver landscape-scale peatland restoration and keep pace with neighbouring jurisdictions which have already pledged funding for restoring peatlands.

Question 12 (a). Buildings Sector Contribution to Net Zero:

Do you think that the Northern Ireland Executive should consider the CCC advice on residential buildings, and develop a plan to improve energy efficiency and reduce reliance on fossil fuels, taking account of the capacity and capability of the low-carbon heating sector in Northern Ireland?

Yes.

If Northern Ireland is to fully play its part in tackling climate breakdown and comply with the Climate Change Act (Northern Ireland) 2022, then our housing sector needs to be low or zero carbon and as insulated and energy efficient as possible. Investment in capacity building and expertise for green and low carbon jobs and supply chains is needed, so that NI's economy possesses the necessary skills, leadership and technology to transition to a net zero, climate resilient future. This includes providing the policy, funding and skills across the private and public sector to facilitate the retrofit and reuse of historic buildings.

NI needs a programme of public works to improve the energy efficiency of homes and public buildings for example, through better insulation. This would stimulate the market in low- and zero carbon technologies, create thousands of good quality jobs, reduce fuel bills and cut emissions.

The NI housing sector needs to be better adapted to the risks from a changing climate including for example, flooding and overheating. Amending building regulations and other planning regulations will be an important part of that adaptation planning.

A key means by which NI government could reduce domestic energy waste is by implementing a zero carbon standard for all new homes and buildings, which would have significant co-benefits, including reduced fuel use and associated public health benefits.

To this end, we recommend that Building Regulations should be amended to require new housing to achieve net zero and ensure all new builds have rooftop solar and ground/air source heat pumps where appropriate. This could be complimented with a planning requirement for installation of solar (PV and solar thermal) in new buildings, domestic and commercial, to be maximised. This could be achieved through a general requirement for installation of solar rooftop technologies to be 'maximised', or a requirement that a specific minimum percentage e.g. 50% of suitable roof-space must be used for solar panels or green roofs unless there is a clear justification why this is not needed (e.g. because there is alternative low carbon energy supply such as renewable energy in harmony with nature).

Solar panels are a reliable, established method of generating electricity and heat and enjoy significant public support. They need daylight, not sunshine or high temperatures, and are suitable for a vast number of properties in Northern Ireland.

This policy would have many cross-sectoral benefits. The policy would create a clear, positive framework for investment in the industry; jobs would be created throughout Northern Ireland given the distributed nature of the technology; the policy would ensure all new homes, including affordable homes, maximise opportunities for low carbon energy and save consumers money on their energy bills. Consumer-led installation has been criticised for not spreading benefits equitably. Solar panels can also be used by social landlords to meet energy standards cost-effectively.

Policies should also be adopted that enable the energy demand side to compete more equally with energy supply, for example by better incentivising energy storage and demand-side response through capacity market mechanisms.

Our heritage buildings are an important part of our environment, culturally, visually and economically. Northern Ireland's transition to net zero should include making the best possible use of our historic buildings so that they can retain embodied carbon and reduce emissions, support regeneration of towns, cities and high streets, generate tourism and local economic activity, and offer spaces for shared cultural experience.

Question 12 (b). Buildings Sector Contribution to Net Zero:

Do you think that the Northern Ireland Civil Service (NICS) should lead by example in the government estate and phase out the use of fossil fuel boilers as per the CCC advice?

Yes.

The NI Administration needs to lead by example. The public sector is a significant user of energy, and has considerable spending power. At COP27 the UK government signed up to the Net-Zero Government Initiative which aims to achieve net zero emissions from national government operations by no later than 2050. This should be extended to government procurement policy. As the UK Climate Change Committee (CCC) said in its 2020 report "Reducing UK emissions Progress Report to Parliament", a priority for government departments is to

"Integrate Net Zero into all policy making, and ensure procurement strategies are consistent with the UK's climate objectives"

Question 13. Energy Sector Contribution to Net Zero:

Do you think that additional measures (over and above those in the Energy Strategy) should be taken to ensure alignment with the CCC's advice?

Yes.

This is another example of where the wording of the question is poor and potentially confusing. CCNI believes that the priority for NI is to align with actions that will ensure NI meets its Net Zero GHG emissions by 2050 target, not to ensure NI aligns only with the CCC advice. The NI administration should ensure that NI can achieve net zero by 2050, which may require additional measures over and above those in the strategy and/or over and above the advice of the CCC. While the overall ambition of the strategy is to achieve a net zero carbon energy sector by 2050, the strategy may need to be updated to ensure it aligns with the pace of the emissions reductions required over the next decade.

Deployment of new renewable electricity generation will be required at scale in order to decarbonise the energy sector by 2050. The [Energy Strategy](#) was published in December 2021, with a target to meet at least 70% of electricity consumption from renewable sources by 2030. However, the Climate Change Act 2022 has since revised that target to 80%. The Northern Ireland Executive will need to consider what additional measures may be needed, over and above those included in the Energy Strategy, in order to meet the revised target. In particular, investment will be needed in order to upgrade the energy grid, which currently presents a significant barrier to the role of out of renewable energy at the scale required.

Some additional measures that could be taken to ensure alignment with the CCC's advice include the development of a clear overarching vision which maps out the just transition to a sustainable, low carbon energy future, to the benefit of communities and the environment (including species and habitats) and which strategically guides the development of renewable energy to the least ecologically sensitive sites. The NI Executive and local authorities should work together to ensure renewable energy development happens in the right places, avoiding the most important wildlife sites, by identifying suitable sites through the terrestrial and marine planning system. A plan-led approach, informed by strategic spatial planning, will help to minimise conflict and delays in the planning system, leading to lower costs and faster progress; giving developers more certainty, and supporting the growth of local supply chains. As part of this improved strategic planning, the NI Executive should invest in closing ecological data gaps, especially in the marine environment (e.g. through seabird tracking studies research and monitoring). This should help industries involved in producing energy from waves and tides and floating wind platforms to move forward more cost-effectively. Robust and comprehensive post-construction monitoring in onshore wind projects would also help with streamlining the consenting of repowered windfarm sites. It is important to recognise that there are limits to the amount of each renewable technology that Northern Ireland can accommodate without harming nature.

Question 14. Transport Sector Contribution to Net Zero:

Do you think that the Northern Ireland Executive should follow the transport sector advice provided by the CCC?

Yes.

Decarbonisation of the transport sector will not only require a shift to electrification and zero-emissions vehicles, but a wider shift in travel behaviour and a reduction in the number of private vehicles through investment in active, sustainable and green transport solutions, connecting people to place, including through greenways, making it easier for them to walk, cycle or use low carbon public transport options.

New development should be located/integrated so as to enable and support the use of public transport provision and reduce dependence on the private motor vehicle. A cross departmental approach will be required to move the transport sector to net zero. Departments acting in isolation can not deliver the scale of change necessary.

CCNI agrees with the need to increase the proportion of journeys that are made by walking and cycling. We would welcome investment in the rail network and public transport more widely to make this mode of transport more sustainable and to decrease the reliance on private cars. We would be particularly supportive of the CCC's advice with regards to an increased proportion of journeys to be made by walking or cycling.

According to DAERA's [Environmental Statistics Report 2023](#), transport was the second largest emitter of greenhouse gases in Northern Ireland contributing 16% of NI's GHG emissions in 2020.

Northern Ireland has the lowest per capita spend on active travel in the UK and ROI at an average of just £7 per person. Public transport in Northern Ireland also receives the lowest funding of any UK region, £84 per capita, which represents just 27% of the average UK public transport expenditure of £311 per capita. In a survey of Belfast residents the majority (66%) wanted greater investment in public transport, walking (60%), cycling (58%), with driving just 29%.

According to the 2021 Travel Survey 69% of all journeys in Northern Ireland are made by car. More than a third - 35% - of all journeys were less than 2 miles long and 47% of these journeys were taken by car (for residents of Belfast, 43% of all journeys were less than two miles long and 33% of these were undertaken by car). These are journeys that could be easily walked or cycled.

The Walking & Cycling Index report across the UK and Ireland shows that the main barriers to active travel is poor infrastructure. The Department for Infrastructure has partnered with Sustrans since 2015 to produce the Bike Life report which then evolved to the Index to include walking. The evidence is clearly set out in the Index, from surveys every two years of Belfast residents, showing that more people would walk or cycle if it was made more attractive and feasible. The [Walking and Cycling Index, Belfast 2021](#) found that 77% of respondents want wider pavements, 73% want fewer cars parked on the pavement, 72% want more traffic-free cycle routes and 69% want more cycle tracks along roads physically separated from traffic and pedestrians

While infrastructure is crucial, changing the population's behaviour is also important. Funding cuts have seen behaviour change programmes such as on-road cycle training stopped. This situation needs to be reversed and behaviour change work respected for the impact it can make on changing people's travel habits and reducing emissions.

The CCC notes, 'There must also be an increased proportion of journeys made by walking and cycling to improve public health and air quality alongside reducing greenhouse gas emissions'. We agree but this is a very vague statement. A target for active travel is necessary.

Previous drafts of the Programme for Government in Northern Ireland suggested targets for modal shift but failed to deliver. Indicator 25 of the last (draft) Programme for Government 2016-21 framework is the proportion of all journeys which are made by walking, cycling or public transport. This was monitored using Travel Survey for Northern Ireland data for single years. In 2021, over one quarter (27%) of all journeys were taken by walking, cycling or public transport, a decrease from 2020 (33%) and only a slight increase on the baseline year (25% in 2015). So, even accounting for the pandemic and its impact on public transport, Northern Ireland has not made much progress in increasing sustainable travel.

The Climate Change Act makes it a statutory obligation for DfI to invest 10% of the Transport budget on active travel. Across the border in the Republic of Ireland, the government has been spending 20% of its transport budget on active travel. There can be no shirking of the 10% commitment on active travel for Northern Ireland as we are already very far behind.

Question 15. Business and Industrial Processes Sector Contribution to Net Zero:

Do you think that the Northern Ireland Executive should follow the Business and Industrial Processes sector advice provided by the CCC?

Yes.

On balance yes but there needs to be clear guidance on what the sectoral policies and impacts will mean for businesses so that they understand what is being asked from them in relation to the carbon budgets. Businesses will be led by mandatory legislation and this will drive more ambitious climate action, rather than expecting voluntary change that is not met with adequate support (financial and technical). The incentive for businesses must be clearly communicated.

Question 16. Waste Sector Contribution to Net Zero:

Do you think that the Northern Ireland Executive should follow the Waste sector advice provided by the CCC?

Yes.

It is essential that waste is reduced through reduced consumption and increased recycling and through investment in the circular economy.

A reduction in food waste (currently 24% of domestic food is wasted) could lead to reduced agricultural and food processing emissions. The disposal and decomposition of this waste is also an emitter of

carbon and methane and this could be dealt with by composting or in digesters to capture these emissions.

This advice aligns with Northern Ireland environmental requirements, addressing the urgent need to reduce greenhouse gas emissions and combat climate change. By adhering to these recommendations, Northern Ireland can make strides toward achieving its net-zero emissions targets, mitigate the environmental impact of waste management, and stimulate economic growth through sustainable practices. However, given the potential infrastructure challenges and readiness factors, the Northern Ireland Executive should carefully evaluate and plan the implementation of the waste sector advice provided by the CCC (Committee on Climate Change). While acknowledging the environmental benefits and alignment with net-zero goals, it's crucial to assess whether the region's current waste management infrastructure is adequately prepared for the proposed changes. Conducting a feasibility assessment of the proposed ([Infrastructure-2050](#)) improvements should guide the Executive's decision-making process. This approach ensures that while striving for environmental progress, Northern Ireland also addresses any infrastructure gaps or limitations effectively.

Question 17. Fisheries Sector Contribution to Net Zero:

Do you think that the Northern Ireland Executive should follow the Fisheries sector advice provided by the CCC?

No

Decarbonising the Fleet

In relation to carbon emissions, the document provided by the CCC predominately highlights the need to decarbonise the shipping and transport elements of the NI fishing fleet. To achieve this, there needs to be a just transition from fossil fuels to the electrification of vessels.

Overall, the NI fleet is outdated. To drastically reduce emissions many vessels will require net zero technology to replace current engines. Industry have expressed it will be challenging to meet the first carbon budget (33% average annual reduction by 2027) due to the time needed for research, trials of decarbonised vessels and a rapid roll out of net-zero technology. We would therefore emphasise the need for government support to ensure industry can meet their carbon budget targets. Key areas that will require focus include:

- The need for investment into research and development of decarbonising technology which meets the demands for a variety of shipping & fisheries vessels. Significant areas of concern remain around the dependency of rolling out certain technology that is proving successful on land, but may not work in a marine context, such as electrical equipment. Other explored options such as hydrogen powered engines take up substantial room so will often be restricted to vessels over 12m. These vessel dependent variables will need to be a key consideration.
- Infrastructure supporting net zero technology to be rolled out to across all NI harbours.

- Investment in upskilling opportunities and traineeships to support mechanic and engineer capacity for net zero technology in NI.
- Fuel use, and therefore emission levels, varies depending on vessel and catch. Therefore, we should not be taking a one size fits all approach to decarbonising the overall NI fleet. For example, the Nephrops fleet makes the largest overall contribution, accounting for 52% of total fuel use and GHG emissions by the NI fleet. However, the largest carbon emitter per vessel in the NI fleet comes from the Scallop fishery (60 vessels in total) with a GHG intensity (KG CO₂e/kg of landing) of 4.61. This is due primarily to scallop degrading being a more intense extractive fishing activity which leads to increased fuel consumption. Therefore, a fishery and vessel prioritising exercise may be required to target effort and decarbonising technology roll-out towards the highest emitting fisheries and vessels. Gear alternatives that reduce fuel use alongside alleviating damage to marine habitats should be explored. For example, a recent report on the assessment of NI fleet highlights that scallops are predominately targeted with bottom-contacting mobile gear, mainly using dredges. These penetrate the seabed and so impact benthic habitats as well as being fuel intensive. To date, no commercially viable alternative gear for harvesting scallops has been available. However, a very recent finding shows that even for these fisheries alternative gears may be possible. Researchers in England initially put LED lights in pots to experiment with bait-less pots targeting crab but discovered that scallops are clearly attracted to these LED lights and are now designing a scallop-targeting pot. They are confident that this can result in a commercially viable scallop pot fishery.

It is also likely that biofuels will play a key role in this transition. NIMTF have explored a range of different biofuels that are currently used within the UK – including bioethanol and biodiesel. Further funding will be needed to explore how biofuels can be implemented during the transition stage, ensuring that there are no adverse impacts for the marine environment in the process. Biofuel usage may also have a positive impact economically for the industry as it would be possible to manufacture your own biofuel, making it cheaper to use by those who are living quite remotely; eliminating transport costs which can add as much as 50% onto fuel price - however a Sea Fish report in 2004 highlighted that biofuels were not proven to be more cost effective than conventional fossil fuels. Therefore, further funding and research into this topic is needed.

To successfully implement the above, the fisheries sector will require sustained government funding, alongside increased engagement with the fishing community to ensure fishers ‘take a leap of faith’ to adapt their vessels.

Nature Based Solutions

Our oceans offer a key nature-based tool for mitigating the climate crisis. We recognise the greatest challenge for the fisheries sector when addressing their carbon budget will be fleet emissions, but industry also have a responsibility to sustainably manage fishing interactions with the marine environment to ensure our seas continue to act as a healthy, well-functioning carbon store.

However, many blue carbon habitats (saltmarsh, seagrass, native oyster reefs, etc) are under threat in NI, from decades of habitat loss and unsustainable activities within our seas. Additionally, we are still lacking data on the full extent and condition of these habitats. Alongside decarbonising measures, it is now vital that industry and DAERA support further research into fisheries-blue carbon habitats interactions in NI, prioritising management practices that focus on gear type and limiting interactions with the seabed, alongside funding into the long-term monitoring and gear sustainability to reduce overall impacts. There is also an opportunity here to explore potential collaborative restoration projects between fisheries and eNGOs to restore and create further blue carbon habitats.

Incorporating blue carbon-based specific emissions into the fisheries carbon budget will be challenging as blue carbon is not yet recognised by the Greenhouse Gas Inventory. To support this progress and profile the role blue carbon can play with NI's carbon budgets, NI will need an ambitious Blue Carbon Action plan that implements the actions outlined below:

- Develop a baseline inventory of all blue carbon habitats in Northern Ireland: their extent, with local measurement of carbon sequestration rates (CSRs) and estimated total carbon storage by habitat, including understanding how the condition of habitat affects CSR.
- Protect, restore, create, and monitor blue carbon habitats, with priority given to protection and restoration of existing habitats.
- Incorporate conservation and enhancement of blue carbon habitats into the management of Northern Ireland's seas, most notably in Northern Ireland's Marine Plan, and MPA designation and management process.
- Raise public and policymakers' awareness of blue carbon as a nature-based solution to climate change, including updating the Northern Ireland Marine Plan to strengthen commitment to this approach.

We wish to emphasise the importance of protecting blue carbon habitats, not only for their potential to store carbon, but the additional nature-based solutions they provide. This includes habitats such as native oyster reefs, seagrass and saltmarsh lowering wave energy along the coast and acting as a natural flood defence, water quality improvement via native oyster reef filtration processes and providing a food source for globally important, yet declining bird populations.

Overall, it is vital that the fishing sector is supported by DAERA and has sufficient funding to progress towards a net zero sector in NI, to combat not only the climate crisis, but also the nature crisis as we know the two are intrinsically linked. To guarantee a sustainable and climate friendly fishery in NI the two main areas of focus for industry should be:

- Decarbonising the fleet via a transition to electric vessels and sustainable fuels e.g. biofuels
- Considering the impacts industry has on blue carbon habitats and mitigating against this, for example, seabed and gear interactions.