

**Institute of
Public Health**



**IPH response to Consultation on Northern Ireland's
2030 & 2040 Emissions Reduction Targets, First
Three Carbon Budgets, and Climate Change
Committee Advice Report: The path to a Net Zero
Northern Ireland**

11 October 2023

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Synopsis of IPH submission

Introduction

The Institute of Public Health (IPH) informs public policy across the island of Ireland to support a healthier population.

We work with a variety of stakeholders at local and national level to ensure that public health policies are equitable and based on the best available evidence. IPH is jointly funded by the Departments of Health in Ireland and Northern Ireland.

The Institute responded to a recent [consultation](#) on Northern Ireland's 2030 & 2040 Emissions Reduction Targets, First Three Carbon Budgets, and Climate Change Committee Advice Report: 'The path to a Net Zero Northern Ireland', published by the Department of Agriculture, Environment and Rural Affairs (DAERA) on behalf of the Northern Ireland Executive.

Key Observations

The Institute made a series of recommendations, including the following:

- The Department of Agriculture, Environment and Rural Affairs (DAERA) follows the advice provided by the UK Climate Change Committee on 2030 and 2040 emissions reduction targets to ensure that Northern Ireland reaches net zero by no later than 2050
- There is an increase in ambition of targets and budgets, to at least those set by Ireland, in order to support transboundary collaboration
- There is no further delay to the publication and implementation of the new Environment Strategy / Environmental Improvement Plan for Northern Ireland
- Health Impact Assessment (HIA) of climate change in Northern Ireland is conducted to inform the development of Climate Action Plans
- The 'Speculative Agriculture' option (halving livestock numbers by 2050, significant technology and efficiency improvements in the sector, and reduction in meat and dairy consumption) is prioritised due to the co-benefits for population health and wellbeing associated with a population-wide shift towards a sustainable, healthy diet.

IPH Response / Submission

Question 1. 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

No

If no, please provide your reasons and any suggested alternative (Noting, that if the target is to be changed, that the Act only allows it to be changed to a higher percentage)

The Institute supports the advice provided by the CCC on 2030 emissions reduction targets to ensure that Northern Ireland (NI) reaches net zero by no later than 2050. However, from a population health perspective, we would welcome a further increase in these targets and for NI to show a similar level of ambition to the other devolved nations. The 2030 emissions reduction target for NI (48%) is substantially lower than that for Scotland (75% by 2030)ⁱ, Wales (63% by 2030)ⁱⁱ, Ireland (51% by 2030)ⁱⁱⁱ and the European Union (55% by 2030)^{iv}. If targets for NI are not increased, it will be important to ensure the target of 48% is reached given the urgency of addressing the climate emergency from a public health perspective. Similar to the COVID-19 pandemic, climate change is a transboundary public health challenge and so policy coordination and collaboration between NI and Ireland will be essential going forward. Increasing the NI carbon reduction targets to align with those in Ireland could support harmonised and economical approaches to implementation and monitoring, capitalising on economies of scale and sharing resources in these activities.

The Institute take this view from a public health perspective, with the overall aim of protecting health and reducing health inequalities relating to climate change. Population health in NI is already adversely impacted by climate change, most notably through the direct impacts of heat waves and air pollution. Whilst data is not available for NI, there were 2,227 excess deaths (over 10% above average) associated with a single heatwave between 10th and 25 July 2022 in England and Wales, with more excess deaths in females and in those aged over 70^v. Climate processes also contribute to an increase in the frequency and severity of air pollution episodes. In NI, air pollution is

contributing to substantial mortality and morbidity, with 900 deaths attributed to PM2.5 pollution in 2019^{vi}. Climate change also impacts health through the effects of storms and floods, disruption of food systems, increases in zoonoses (infectious diseases that can jump from animals to humans), food-, water- and vector-borne diseases and mental health issues; as well as impacting livelihoods, equality, access to health care and access to social support structures^{vii}.

These are known as ‘climate-sensitive health risks’ and are disproportionately felt by the most vulnerable and disadvantaged people in society, including women, children, ethnic minorities, poor communities, migrants or displaced persons, older people, and those with underlying health conditions^{vii}. From a public health perspective, there is an urgent need to mitigate against the widening of health inequalities and for upstream policy measures to address the social and environmental conditions which perpetuate and directly contribute to climate change; including the reliance on fossil fuel consumption, emissions from industry and agriculture, reliance on private vehicles, insufficient active travel infrastructure or safe, accessible public transport networks, to name a few.

Furthermore, we note DAERA’s recent decision to defer the publication of a new Environment Strategy and a new Environmental Improvement Plan for NI. Whilst we acknowledge the challenging political circumstances, it must be noted that NI is already behind other nations in relation to strategies and legislation to protect the environment and health. The absence of an environmental strategy is in addition to the absence of an air quality strategy, absence of a heat wave plan and absence of a strategy on climate change and health, for example. It will be very challenging to meet net zero targets without the required strategic direction and leadership. The Institute recommends that there is no further delay to the publication and implementation of the new Environment Strategy / Environmental Improvement Plan, and urgent work is commenced to develop other complementary strategies and plans listed above.

Question 2. 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

No

If no, please provide your reasons and any suggested alternative.

The Institute supports the advice provided by the CCC on 2040 emissions reduction targets, to ensure NI reaches net zero by no later than 2050. However, similarly to the 2030 targets, we would welcome a commitment from the NI government to show similar ambition to the other devolved nations who have set higher targets. The 2040 emissions reduction target for Northern Ireland (77%) is substantially lower than that in Scotland (90%) and Wales (89%)^{viii}. Again, this view is taken from a population health perspective with the intention of mitigating against climate-related health harms and health inequalities.

Question 3. 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

No

If no, please provide your reasons and any suggested alternative.

The Institute supports the advice provided by the CCC to set the first carbon budget at a level that has a 33% average annual reduction in emissions compared to the baseline, in order to ensure NI reaches net zero by no later than 2050. We note the consultation document states that *‘a slightly less ambitious first carbon budget may be appropriate to account for a slower start in the first two years of the carbon budget period’*. The Institute do not support any reduction in ambition to this target given the evidence (referenced above) of substantial population health harms posed by climate change.

Question 4. 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

No

The Institute supports the advice provided by the CCC to set the second carbon budget at a level that has a 48% average annual reduction in emissions compared to the baseline, to ensure NI reaches net zero by no later than 2050.

If no, please provide your reasons and any suggested alternative.

Question 5. 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

No

The Institute supports the advice provided by the CCC to set the third carbon budget at a level that has a 62% average annual reduction in emissions compared to the baseline, to ensure NI reaches net zero by no later than 2050.

If no, please provide your reasons and any suggested alternative.

Question 6. 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

No

If no, please provide your reasons.

The Institute supports DAERA to follow any updated CCC advice provided that the advice does not seek to reduce emissions targets or reduce the ambition of carbon budgets. The Institute note that the consultation document states: *‘a slightly less ambitious first carbon budget may be appropriate to account for a slower start in the first two years of the carbon budget period’*. The Institute does not support any reduction in ambition given the evidence (referenced above) of substantial population health harms posed by climate change.

We would also welcome a commitment from DAERA to ensure that guidance and scientific evidence from the Intergovernmental Panel on Climate Change is integrated into government policies.

Question 7. 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 Institute recommends that a Health Impact Assessment (HIA) of climate change in NI is conducted to support the development of Climate Action Plans. HIA is a process used to determine the impact of proposed policies, laws, programmes or plans on the health of communities to ensure they are inclusive, equitable, and sustainable. The HIA process can be used at a national, regional or local level and supports government strategies to improve population health and reduce health inequalities. HIA would comprehensively assess the likely extent and nature of health impacts from climate change at a population level, support the integration of health within climate change mitigation and adaptation policies of other departments and ensure that the needs of health-vulnerable citizens are recognised and addressed within policy making and development. The Institute have developed a free learning module on HIA, as well as detailed guidance which can be accessed on our website: [Health Impact Assessment | Institute of Public Health](#).

For example, Public Health Wales recently published a HIA for climate change in Wales^{ix}, which identified the following key impacts of climate change on population health and equity:

- Climate change may have major inequitable impacts across the determinants of health including nutrition and food security, community resilience and cohesion, displacement of people, access to healthcare, damage to housing, transport and infrastructure and environmental determinants including water supply, biodiversity and the economy;
- Some populations are likely to experience disproportionate negative impacts, including those on low incomes, children and young people, older adults, farmers, fisherman and those who live in coastal areas;
- Health harms are likely to be compounded by other crises including Brexit, COVID-19 pandemic and the cost-of-living crisis.

The report also highlighted the impact climate change may have on mental health and wellbeing- from anxiety about the future, sense of control, democratic participation, and trauma from extreme weather and flooding. This may hold particular relevance to NI, which has the highest prevalence of mental health problems in the UK^x.

Based on evidence from the HIA, Public Health Wales have made several recommendations for policy makers to safeguard health and wellbeing. The

Institute would welcome a similar assessment to be carried out in NI to inform the development of Climate Action Plans, protect health and reduce health inequalities. We would be happy to support DAERA with further information and guidance relating to HIA.

Question 8. Do you think that the Northern Ireland Executive should follow the advice provided by the CCC and choose the Stretch Ambition Scenario?

Yes

No

If no, please provide your reasons and any suggested alternative.

The Institute understand that the ‘Stretch Ambition Scenario’ aims to reach a 93% reduction in emissions by 2050. Whilst we support the options proposed by the CCC within this scenario, we would encourage this to be in addition to the speculative options provided, to ensure that net zero is reached as soon as possible and no later than 2050. It should be noted that other countries are aiming to reach net zero sooner; with Scotland committing to reach net zero by 2045 at the latest^{xi}. The Welsh Government and Plaid Cymru are also exploring how Wales can speed up its transition to reach net zero by 2035^{xii}.

By implementing mitigation measures at pace and committing to reach net zero in NI before 2050, it may be possible to reduce mortality, morbidity and health inequalities stemming from the direct effects of climate change. Climate change mitigation measures are associated with co-benefits for health and the environment, with policy measures such as improving active travel / public transport infrastructure, reducing reliance on private vehicles, moving away from fossil fuel consumption and supporting a shift to a plant-based diet serving to reduce emissions but also improve physical activity levels, encourage healthier, more sustainable diets and improve air quality.

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?

Yes

No

Unsure

If no, please provide your reasons and any suggested alternative.

The Institute supports an overall goal to by 2050 at the latest. We would welcome the prioritisation of the speculative agriculture option (which could be supplemented with other measures such as DACCS to ensure net zero is reached), due to the co-benefits for population health and wellbeing associated with a population dietary shift towards a sustainable, healthy and plant-based diet.

Question 9 (b). The Speculative Agriculture Option: Do you think that the Northern Ireland Executive should choose the Speculative Agriculture option?

Yes

No

If no, please provide your reasons and any suggested alternative.

The Institute understands that the speculative agriculture option involves halving livestock numbers by 2050, significant technology and efficiency improvements in the sector, and reduction in meat and dairy consumption. Overall, the Institute supports a shift towards a healthy, sustainable and plant-based diet due to the evidence of substantial environmental and population health benefits.

The environmental impact of food products from farmed animals is substantial. In Ireland, foods with the largest contribution to greenhouse gas emissions include red meat (22.3%*), dairy products (12%), cereals (10.6%) and eggs, poultry and pork (9.5%). Fruit and vegetables contribute the least, at 1.3% and 1.2% respectively^{xiii}. In NI, agriculture is the largest emitting sector of greenhouse gas emissions (28%)^{xiv}.

Agriculture is also known to be a substantial source of air, soil and water pollution, with ammonia pollution contributing to particulate matter air pollution as well as negative impacts on biodiversity^{xv}. This ultimately impacts health from increased respiratory, dermatological and neoplastic hazards, as well as contributing to antibiotic resistance^{xvi, xvii}.

At present, approximately two thirds of land in Ireland is used for livestock pastures and growing crops to feed animals, however this provides only a quarter of dietary calories^{xiii}. Furthermore, grass-based pasture systems for

beef, lamb and dairy farming are contributing to pollution and biodiversity loss, and use land that could have otherwise provided space for forests, wetlands, wild grasslands and wildlife habitats^{xiii}.

The speculative agriculture option may support an overall population shift towards a more sustainable, plant-based diet and lead to co-benefits for the environment, the economy and health. From an environmental perspective, this shift could support reducing greenhouse gas emissions, improvements in water and air quality, reductions in methane emissions and more sustainable land-use. Shifting towards a plant-based diet is also associated with substantial economic benefits, with a 2016 study estimating that a global switch to a plant-based diet could result in economic benefits of up to US\$ 31 trillion (up to 13% of global GDP in 2050), as well as a reduction in mortality of up to 10% and reduction of food-related GHG emissions by 70%, compared to a reference scenario^{xviii}.

Reduced consumption of red meat and processed meat is also associated with many health benefits. In 2015, the International Agency for Research on Cancer (IARC), the cancer agency of the World Health Organization, classified processed meat as 'carcinogenic to humans (group 1)' and red meat as 'probably carcinogenic to humans (group 2A)'^{xix}. The NHS recommends limiting red and processed meats to reduce the risk of bowel cancer^{xx}. A recent report 'Fixing Food Together: Transitioning Ireland to a healthy and sustainable food system' produced by the Climate and Health Alliance in Ireland summarised the evidence base on the health impacts associated with diets high in red and processed meats. It found that these diets are associated with an increased risk of type two diabetes mellitus, cardiovascular disease, cancer – in particular, colorectal cancer- and all-cause mortality. Furthermore, it found that replacing red and processed meats with plant-based protein sources, poultry and seafood had the potential to reduce the risk of chronic disease and premature death^{xiii}.

The 2019 EAT-Lancet Commission report- based on scientific evidence and produced by commissioners and experts from 16 countries worldwide- recommended the global adoption of a universal healthy reference diet to support United Nations Sustainable Development Goals and climate commitments. The reference diet is comprised of vegetables, fruits, whole grains, legumes, nuts, and unsaturated oils; a low to moderate amount of seafood and poultry, and no or a low quantity of red meat, processed meat, added sugar, refined grains, and starchy vegetables^{xxi}. The report found that global adoption of the reference dietary pattern could result in a food system that provides a healthy diet for the global population, and lead to health benefits including a large reduction in total mortality. However, it also warns

that even small increases in consumption of red meat or dairy foods could make this extremely difficult, or impossible, to achieve^{xxi}. The report suggests that a transformation to global sustainable food production and healthy diets by 2050 will require a more than 50% reduction in consumption of red meat and sugar.

* % GHG emissions (CO2 eq) of total dietary intake

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?

Yes

No

Unsure

If no, please provide your reasons and any suggested alternative.

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?

Yes

No

If no, please provide your reasons.

Based on the evidence summarised under question 9b, the Institute does not agree that the Executive should diverge from the CCC sector advice.

The agriculture sector summary does not reflect the ambition of the CCC recommendations; rather, the focus appears to be on maintaining agri-trade, and on research and development. While there is a place for research into sustainable agricultural practices, the climate and health crisis calls for urgent action and evidence points to a need for this to include a reduction of emissions from the source. The Institute recognises the significance of agri-trade in NI, however these circumstances are shared by many other countries - including Wales, where the government has commissioned the Wales Centre

for Public Policy (WCPP) to examine pathways to reach net zero by 2035. Evidence has been provided by WCPP to Welsh Government in an evidence pack, 'How could Wales feed itself in 2035?'^{xxii}, which highlights that supply-side mitigation options, such as changes to animal feed and interventions to increase livestock and pasture productivity, will not be sufficient to achieve significant reductions in agricultural emissions and that the production of inputs to facilitate production efficiency may also indirectly drive absolute emissions along the feed supply chain^{xxiii, xxiv}. Overall, the paper concludes that reducing agricultural emissions will require a reduction in livestock farming as well as changes in farming practices to mitigate livestock emissions.^{xxv,xxvi,xxvii}

Based on this evidence, we do not support any divergence from CCC advice, and do not believe that the actions outlined in the Agricultural Sector summary are sufficient from a population health perspective.

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

No

If no, please provide your reasons.

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

No

If no, please provide your reasons and any suggested alternative.

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

No

If no, please provide your reasons and any suggested alternative.

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

No

If yes, please provide examples of additional measures.

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

No

If no, please provide your reasons and any suggested alternative.

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

No

If no, please provide your reasons and any suggested alternative.

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

No

If no, please provide your reasons and any suggested alternative.

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?

Yes

No

Unsure

If no, please provide your reasons and any suggested alternative.

References

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