Climate Division – Carbon Budgets

Department of the Environment, Climate and Communications,

29-31 Adelaide Road,

Dublin,

D02 X285

8th February 2022

Re: Public Consultation on Ireland's Carbon Budgets

Dear Minister Ryan,

Thank you for the opportunity for Irish Doctors for the Environment to provide a submission on the proposed carbon budget programme.

This submission represents the views of Irish Doctors for the Environment and is supported by the Carbon Budgets working group, our Consultant Advisory Board and other affiliated groups.

Summary of recommendations for carbon budget programme:

- All sectors need a rapid decarbonisation by the year 2030. The primary goal should be to develop zero carbon sectors as soon as possible, before 2050.
- The climate action plan needs to be treated with the urgency required to reduce our contribution to the climate emergency, with necessary system changes and financial investments ready to implement before the end of the 2022 financial year, as there are less than 95 months remaining to design, approve, implement and achieve a 51% cut to our national emissions.
- Fossil fuels need to be phased out immediately and there is no allowance or scope for the development and extraction of new fossil fuel plants. According to the International Energy Agency, the plans for the 9 new gas powered plants for Ireland which are due to be in operation by 2024 are not in alliance with the necessary action of the climate emergency. These fossil-fueled projects need to be reconsidered and redeveloped to focus instead on investing in renewable energy productions and reduced approval of energy intensive sectors such as data centres.
- The Irish agricultural system, which is Ireland's single leading source of greenhouse gases, needs to contribute fairly to the decarbonisation and reduction of greenhouse gas emissions. A restructuring of food production systems and agricultural subsidies is required, including increased financial incentives and supports for Irish farmers to shift away from livestock farming, to increase uptake of crop production and to increase participation in the protein aid scheme to produce legumes and pulses for livestock and human consumption. Ireland needs to uphold its signed agreement to reduce methane emissions by 30% by the year 2030, and the agricultural system needs to abide by these targets.
- While electric vehicles are an important source of decarbonisation within the transport sector, a greater focus should be shifted to prioritising an increase in investment in active travel, active transport, an improved public transport infrastructure and services, and a reduced reliance on private vehicles.

- Ireland needs to implement immediate and significant protections for our remaining carbon sinks, including our mature trees and forests, peatlands and our ocean. There should be a significant roll out of financial incentives for all sectors to become involved in reforestation and afforestation projects, particularly in the agricultural sector.
- All sectors need to contribute fairly to decarbonisation, with zero carbon systems and sectors being the goal.
- As the Irish Climate Action Delivery Board only met once between 2020 and 2022 to review climate action progress in Ireland, this group needs to increase urgency by holding regular meetings and consultations to ensure rapid and efficient implementation of the Climate Action Plan and to hold all sectors and departments accountable if their climate actions and designated targets are not met.
- Due attention should be given to the fact that Ireland is an historical high emitter of greenhouse gases, and has the moral obligation to decarbonise all sectors in an effective and sufficient manner as quickly as possible in order to reduce the environmental burden of less developed countries and play our role in achieving climate justice for the global south.

Introduction:

Irish Doctors for Environment is an NGO and registered charity consisting of doctors, medical students and allied healthcare professionals in Ireland who aim to create awareness, interest and implement action around environment health and the impact it has on our patients' health.

The Lancet has described the climate crisis as "the biggest global health threat of the 21st century" (Costello et al). The Intergovernmental Panel on Climate Change (IPCC) has warned that limiting global warming to 1.5°C above pre-industrial levels is crucial (IPCC, 2018). UN Secretary-General António Guterres described the most recent IPCC report as a "code red for humanity" (United Nations, 2021). In addition, the crossing of several planetary boundaries, potential tipping points of ecosystems and a global crash in biodiversity means a concerted global response is required (Lenton et al). This is the context for Ireland's legally binding 2030 commitment to reduce carbon emissions by 51% by 2030, an average reduction in total emissions of 7% per year (Climate Action Plan, 2021).

The Irish government is not treating the climate crisis as the emergency that it is. The government's response to the global climate emergency, in which Ireland is a historical contributor, has aptly been described, by its own leader, as *laggard* like. Ireland is still not on the pathway required to meet future targets and a climate neutral economy. Existing policies in a number of key domains have resulted in a failure to sufficiently reduce our greenhouse gas emissions, failure to protect our biodiversity, and failure to secure our climate targets of keeping within a 1.5-degree temperature increase. It is important to remember that the current climate action plan merely draws a roadmap for action, without actually implementing the necessary action. With a reduction of at-least 51% required by 2030, we now have less than 8 years to achieve this. As of February 2022, this leaves 95 months to design, implement, and achieve this rapid decarbonisation and reduction of emissions. This means systemic changes need to occur now, and be included in the financial budget of 2022. We must focus on achieving 51% reduction in greenhouse gases by 2030 as a bare minimum, with the optimal goal of achieving a zero carbon nation as soon as possible, with concrete targets.

In a recent global research report by Sustainable Development Index, Ireland was ranked 141st worst country for achieving sustainable development, out of the 165 countries reviewed, due to Ireland's high consumption patterns, consumerist societies, and overproduction of greenhouse gases per capita (Sustainable Development Index, 2021). This highlights the current failures of Irish sectors and climate policies to prioritise achieving national development within planetary boundaries, and shows the urgent need to immediately finalise and implement sufficient, just, and effective system changes which achieves the necessary greenhouse gas reductions in every sector.

Fossil fuels:

Energy production is currently responsible for 15% of Ireland's GHG production. A rapid shift away from all fossil fuels is vital to achieving our climate targets and remaining within our carbon budget. According to the CSO, in 2019, the Irish government paid €2.4 billion of taxpayers money to subsidise fossil fuel companies. Our over-reliance of fossil fuels has been reflected in the current energy price crisis. The solution strategies to alleviate the increasing cost burden of oil and gas should not focus on increased extraction, but instead focus on the development of improved renewable infrastructure and shifting subsidies to support renewable energy to make renewable energy more affordable and viable to consumers. The increasing cost of oil and gas prices should also not be placed on the already struggling consumer, but should be reflected with an increase in tax on large fossil fuel corporations. Last week, Shell, a major oil giant, announced that in 2021 alone, they made $19.3 billion in profit, and BP, another oil giant, announced their highest annual profit in eight years of $12.8 billion in 2021 alone, while costs soared for the average consumer and over 17% of Irish households experience or are at risk of energy poverty. Ireland needs to implement an immediate shift away from financially supporting fossil fuels (coal, oil, gas), and instead shift the taxpayers energy subsidies into supporting a rapid investment in self-sufficient, affordable renewable energy for widespread roll out.

Despite acknowledging the climate impact of fossil fuels and agreeing to a phase down of fossil fuels after COP26 negotiations, the Irish government has since approved the construction of 9 new gas-fired power plants, which will be in operation by 2024. In 2021, the International Energy Agency (IEA) confirmed that in order to reach the global target of net zero carbon emissions by 2050, the exploitation and development of new gas fields must stop this year, as there is no allowance in the carbon budget for new oil or gas fields if we wish to achieve our climate targets (International Energy Agency, 2021). These plans for 9 new gas fields which were approved by the Republic of Ireland are completely unaligned with climate goals, and need to be immediately reconsidered and abolished. Now, more than ever, it is essential that we accelerate the elimination of fossil fuel extraction and shift to a rapid increase in renewable and sustainable energy practises across all sectors.

IDE recognises the national grid is currently under strain and the number of warnings of potential blackouts have become alarmingly frequent. IDE are also aware that in the near-term Ireland’s energy needs will continue to increase and that energy dense industries, such as data centres, bring huge potential employment and inward investment opportunities. However this is where IDE ask the government to show leadership and draw a line in the sand with new fossil fuel based projects, instead focusing on the rapid development of renewable alternatives, investment away from fossil fueled projects and saying “we will find another way”.

Transport:

Transport is currently responsible for 17.9% of Ireland's GHG emissions, before accounting for shipping and air travel. The unavoidable issue here is the government and public's over-reliance on cars, and in recent years emission-heavy SUVs. While EV's are an undoubted component of the solution, transitioning 20% of all cars has a huge carbon footprint of its own and will place an undue burden on an already fragile power grid. Instead of tunnel-vision solutions to transport emissions such as the heavy promotion to consumers to shift to electrified vehicles, there needs to be a focus on increased financing, active transport, financial incentives for public transport, safe cycle lanes, pedestrianised cities and urban spaces. There is a wealth of literature that informs us that every mode of transport away from the car is associated with better health outcomes (Panter, et al). There is an urgent need for rapid investment in improved national and local active and public transport networks, twinned financial incentives to use them and impediments for using emission heavy vehicles.

In Wexford, for example, the Oilgate to Rosslare harbour scheme which is under approval to be constructed is estimated to cost over €400 million and focus primarily on private vehicle transport and freight. Such project investments and financial spendings which are targeted to benefit private vehicle transport should be matched or redirected to improvements and development of increased public transport, improved public transport infrastructure, active travel infrastructure, pedestrianisation of urban spaces, and subsidising public transport to create financial incentives for increased use. All new road building projects, including the Oilgate to Rosslare harbour scheme and future projects should be halted, and funds should be diverted towards public transport spending. An example of this system being already implemented is when looking at the actions of the Welsh government, who have frozen all new road-building projects to tackle the climate emergency, and are now shifting money from new roads to maintaining existing routes and investing in public transport. The Irish government needs to adopt a similar approach in order to reduce transport emissions to within the climate targets.

Agriculture and food production:

While a rapid reduction in greenhouse gas emissions is required for climate justice, climate action and to keep global temperatures rises within 1.5 degrees, the Irish agriculture sector is not only failing to meet our 2030 targets but also 2015 baseline emissions. Our agricultural sector is Ireland's single largest contributor to climate change, at 37.1% of our national GHG emissions, yet it is proposed to be the least targeted by climate action. It is vital that the sector responsible for the largest contribution to Ireland's greenhouse gas emissions is also the sector to contribute the most substantial reductions in greenhouse gases and allocated sufficient carbon budgets to reduce its contribution to climate change.

At COP26, Ireland signed the agreement to achieve 30% reduction in methane by the year 2030. However, the current Food Vision 2030 plan states that the Irish agricultural system will aim for a mere 10% methane reduction. Not only is this not aligned with necessary climate action, but a mere 10% reduction by the agricultural system will result in a disproportionate share of the budget being aimed at other sectors and individuals.

The Irish agricultural system as a whole requires restructuring in order to provide the necessary cuts to emissions, improved protection for biodiversity, and improved income for family farms, which are currently struggling despite government subsidies. In line the Ireland's over-riding EU commitments, such as the Farm to Fork strategy, there is a need to transition to a food system that is more resilient

for future climate events, improved island food security (e.g., produce more plant based foods that we otherwise import) and a food system that encourages organic farming, with subsequent benefits for biodiversity, employment, community resilience, farmer welfare and more. Commentators at an Teagasc have admitted that achieving emission targets will not be feasible without a reduction in the national herd, which has increased dramatically since the lifting of dairy quotas in 2015. Farmers were incentivised to meet this demand and many invested heavily, and will need particular attention with respect to Just Transition.

The agricultural mitigation strategies and policies set out in the "Ag Climatise" report published by the Department of Agriculture in 2020 which focus on herd genotyping, reduced fertiliser use, and the reformulation of livestock feed to reduce methane a carbon neutral agricultural system, are insufficient and not aligned with the necessary urgency which climate action requires. Even when these mitigation measures are included, the overall reduction in Irish agricultural GHG emissions is projected to be insufficient, and therefore, additional mitigation in the sector is reported to be required to be achieved through adjustments in the level of agricultural activity in the agriculture sector in Ireland by 2030 (Donnellan and Hanrahan 2016).

Research shows that focusing on transitioning to an increasingly plant-based and crop-focused agricultural sector which reduces our national dependency on livestock farming should be prioritised as environmental strategies over further research into improvements in animal agriculture (Felby 2020). This shift away from livestock farming, if achieved by sufficient system restructuring, can also contribute to sustainable development, improved livelihoods for Irish farmers, and a more self-sufficient, climate friendly agricultural system which benefits both people and the planet.

This necessary transition should be mirrored by a restructuring of the current agricultural subsidy schemes to provide financial incentives and rewards to farmers to reduce livestock herds, financial incentives to be involved in native afforestation and reforestation projects, and financial incentives to shift production from livestock to crops and plant proteins. Current agricultural subsidies and financial supports for Irish farmers are heavily focused on livestock farming, with the average income of dairy farmers being €1,118/ha and increasing annually, while the annual income of Irish tillage farmers currently stands at €556/ha and is declining (Teagasc, 2020). Reforming our agricultural system and subsidy schemes to prioritise subsidising home-grown crops and reduce our dependence on livestock farming can result in increased productivity on Irish farms, help to improve the income of family farms, contribute to economic gains and aid in the development of a sustainable agricultural system which will allow a reduced herd size and reduced dependency on imported livestock feed. Furthermore, there are significant climate and health co-benefits from shifting to more plant-based food production and consumption that may reduce societal healthcare costs and reduce climate impact costs, resulting in economic savings which can be beneficial to economic growth.

The current protein aid scheme, which supports farmers to grow plant proteins such as beans, peas and lupins, provides a maximum allowable payment of €215 per hectare to Irish farmers. At almost €1,000 less income per hectare than dairy farm subsidies, this scheme is completely insufficient to incentivise the shift to sustainable plant protein crops, which is a huge barrier to sustainable economic development and of environmental concern. The protein aid scheme should be rapidly increased and expanded to provide Irish farmers with equal or more financial incentives to shift to the production of plant proteins for human and livestock consumption. The increase in the growth and production of legumes and pulses in Ireland can also help to improve soil fertility through their ability to increase nitrogen fixation, while nitrogen fixation can also play a role in reducing atmospheric nitrogen emissions, which is responsible for 11.9% of all irelands GHG emissions.

An increased protein aid scheme which provides significant financial incentives for irish farmers to shift to the production of legumes, pulses and plant-proteins should also be coupled with an increase in public education and consumer awareness of sustainable, healthy food and dietary practises which promote the consumption of plant-proteins such as beans, peas, and legumes. Even with the improved technological advancements and productivity improvements in the livestock sector which is listed in the Ag-Climatise report, research has shown that a sufficient reduction in greenhouse gases to keep global temperature rise below the 2 degree threshold will not be possible without also promoting structural changes in the human diet which promotes an increased consumption of plant proteins, and a reduced consumer dependency on animal products from ruminant livestock (Hedenus, Fredrik and Wirsenius 2014). Research has concluded that reforming policies regarding consumer nutritional education is a vital strategy when it comes to creating a system of sustainable food production and achieving an agricultural system which is aligned with the necessary climate action (Nicholson 1995).

Residential:

The residential sector is responsible for 12.3% of Ireland's GHG emissions, and is expected to become a dominant sector in the contribution to greenhouse gases due to the increase in hybrid working situations and working from home which requires energy and heat. We welcome the government's target of retrofitting 500,000 homes to B2 standard by 2030, and to install 400,000 heat pumps. We urge that there be an increase in scale of this target and available grants to ensure that the 2 million households across Ireland have sufficient energy ratings and can reduce their energy consumption by reduced household heating.

Increased retrofitting and shifting residential systems away from the current focus on fossil fuels is also necessary to consider when it comes to greenhouse gas reductions. According to the CSO, approximately 70% of Irish households use fossil-fuel powered heating systems including oil and gas. While gas boilers are not being fitted in new homes, it is essential that the current residential homes which use fossil-fuel powered heating and cooking systems should be phased out.

Current financial incentives for domestic and commercial settings to introduce solar panels should also be increased, including an increase in grants available for instalment and an increase in export payments benefits to consumers.

Land-use:

In order to achieve climate targets, Ireland must immediately preserve all remaining mature carbon sinks, and increase the cover of carbon sinks to ensure carbon sequestration in the future. According to the Global Forest Watch, in 2010, Ireland had 995kha of natural forest, extending over 21% of its land area (Global Forest Watch). Today, Ireland has the lowest forest cover in whole of EU at just 11%, compared to EU average of 33.5%. However, from this 11%, only 2% is native woodland and not monoculture plantations. In 2020 alone, Ireland removed 1.67kha of natural forest due to a huge lack of integrated land management which lacks environmental assessment or regulation, resulting in Irish forestry now being a leading emitter of greenhouse gas emissions, rather than an important carbon sink.

As 70% of carbon sequestered by trees is accumulated in the last half of their lives, instead of a heavy focus on increased new tree planting, we need our primary focus to be shifted to the immediate increase in protection of already existing mature trees and forestry and reduce the deforestation rates associated with all sectors, particularly agriculture, transport infrastructure, urban and rural development. Afforestation and reforestation projects of native woodland should

also be increased, with financial incentives for those working in the agricultural sector to preserve, replant, and rewild areas of land.

Immediate protections also need to be implemented for Irish peatlands. Peatlands sequester and store atmospheric carbon for thousands of years (Parish et al, 2008). The peatlands in the northern hemisphere alone store approximately 450 billion tonnes of carbon (Gorham, 1991). In Ireland peatlands are estimated to store 1085 Mega tonnes (Mt) of carbon, this corresponds to 53% of all soil carbon stored in the island of Ireland on just 16% of the land area (Tomlinson, 2005). However, this long-term carbon storage has severely diminished through domestic and mechanical peat extraction. This peat disturbance can release around 2.3 tonnes of carbon per hectare from the degraded areas of peatland. This corresponds to an annual emission of 1.25 Mt carbon from peatlands alone in the Republic of Ireland. At such levels, it will be increasingly difficult for Ireland to reach its climate targets. Despite commercial peat harvesting in Ireland being effectively banned by the High Court in 2019, the government has failed to strictly regulate this and have in turn failed to implement effective peatland restoration. According to the CSO, 919,371 tonnes of extracted peat was exported from the Republic of Ireland in 2020, and 500,000 tonnes of extracted peat was exported from the Republic of Ireland in just the first 9 months of 2021. We must implement immediate, strict regulations to halt peat extraction and restore peatlands in Ireland. Rewetting and restoring them is one of the most cost-effective ways of avoiding anthropogenic greenhouse gas emissions (Charman et al, 2008).

Marine protection:

When it comes to the carbon budget, we also need to consider protecting our ocean. The ocean is a major carbon sink, absorbing 30% of global carbon dioxide, and absorbing 90% of excess heat caused by global warming. However, the ocean is currently carrying the weight of human activity and quickly becoming oversaturated with CO2 and struggling to continue operating as a carbon sink. The Irish government promised 10% of our waters to be Marine Protected Areas by the year 2020. It is now 2022, and still a mere 2.13% of our waters are protected. Industrial fishing is a major contributor to greenhouse gases, with bottom trawling not only having a detrimental impact on biodiversity, but this method of industrial fishing which disturbs important habitats and carbon stores, is responsible for emitting as much carbon dioxide as the entire aviation industry. The Irish government must commit to a rapid increase in strictly protected marine habitats and commit to at least 30% MPA's by the year 2030. There should also be an increase in financial support and rewards available to Irish fishermen to shift from pelagic fishing of endangered species to more sustainable and reliable incomes through aquaculture or seaweed harvesting.

References:

Climate Action Plan 2021, Irish Department of Environment, Climate and Communications. https://www.gov.ie/en/publication/6223e-climate-action-plan-2021/

Costello A , Abbas M, Allen A et al "Managing the health effects of climate change." Lancet. 2009; 373: 1693-1733

Donnellan, Trevor, and Kevin Hanrahan. 2016. "Exploring the Implications of GHG Reduction Targets for Agriculture in the United Kingdom and Ireland." Contributed Paper prepared for 9 presentation at the 90th Annual Conference of the Agricultural Economics Society, University of Warwick, England, Rural Economy and Development Programme, Teagasc.

Felby, C. 2020. Beyond 70% GHG reduction—What should be the research & development priorities? Proceedings of the CBIO Webinar, Aarhus, Denmark: Aarhus University Center for Circular Bioeconomy.

Gorham, E., Lehman, C., Dyke, A., Clymo, D. and Janssens, J., 2012. Long-term carbon sequestration in North American peatlands. Quaternary Science Reviews, 58, pp.77-82.

Hedenus, Fredrik, and Wirsenius. 2014. "The importance of reduced meat and dairy consumption for meeting stringent climate change targets." Climate Change 79-91

International Energy Agency, "Net Zero by 2050; a Roadmap for the Energy Sector", Revised version, October 2021 (4th revision)

IPCC, 2018: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press.

Lenton T, Rockström J, Gaffney O et al. "Climate tipping points — too risky to bet against" Nature 575, 592-595 (2019)

Nicholson, Charles. 1995. "Livestock, Deforestation, and Policy Making: Intensification of Cattle Production Systems in Central America Revisited." Journal of Dairy Science 719-734.

Panter J, Mytton O, Sharp S, Brage S, Cummins S, Laverty A et al. Using alternatives to the car and risk of all-cause, cardiovascular and cancer mortality. Heart. 2018;104(21):1749-1755.

Parish. F, Sirin. F, Charman. D, et al. "Assessment on peatlands, biodiversity and climate change." (2008).

Sustainable Development Index, 2021 (available from www.sustainabledevelopmentindex.org)

Teagasc, 2020. National Farm Survey, Preliminary Results. Wexford, Ireland: Teagasc.

Tomlinson, R.W., 2005. Soil carbon stocks and changes in the Republic of Ireland. Journal of Environmental Management, 76(1), pp.77-93.

United Nations, 2021, response to 2021 IPCC report. Available from: https://unric.org/en/guterres-the-ipcc-report-is-a-code-red-for-humanity/