Stop Climate Chaos Coalition submission to Ireland's Long-Term Strategy

December 2019

The Stop Climate Chaos Coalition welcomes the opportunity to inform the preparation of Ireland's Long-term strategy required under the Regulation on the Governance of the Energy Union.[1]

The EU Regulation on the Governance of the Energy Union Regulation, adopted in December 2018, obliges all European Member States to prepare long-term climate strategies with a perspective of at least 30 years by January 1st 2020. The Long-term strategy (LTS) must set out how Ireland intends to scale up transformational climate action across all sectors of society and outline the pathway Ireland intends to follow over the next thirty years to deliver on its long-term contribution to achieving the objectives of the Paris Agreement. The LTS should include:

- Sector-specific emission reductions and sink enhancements, incl. Electricity, industry, transport, heating and cooling/buildings (residential and tertiary), agriculture, waste, and LULUCF (land use, land use change and forestry)
- Expected progress on transition to a low greenhouse gas emission economy (incl. GHG intensity, CO_2 intensity of GDP, related estimates of long-term investment, and strategies for related research, development and innovation)
- Impact assessment, including macro-economic and social development, health risks and benefits and environmental protection.

Science is now clearly telling us that a rapid and deep, transformative and fair transition to a fully decarbonised economy is urgently required. **If the current rate of increase in emissions continues, we are on a pathway of global warming of 1.5°C by 2033, and based on current projections, we will reach 3-4°C warming before 2100. The climate impacts across the world we are witnessing today are a result of 1.1°C of warming, and these impacts increase and are amplified with every fraction of a degree added.** Ireland's weak response so far is consistent with a pathway that leads to catastrophic climate breakdown, unless there is a radical and immediate shift in Government ambition and urgency.

[1] Stop Climate Chaos is the civil society coalition campaigning for Ireland to do its fair share to tackle climate change. The Coalition's 35 members include many of Ireland's leading international development, environmental, youth and faith-based organisations. Stop Climate Chaos (SCC) was launched in 2007 based on a recognition by members that the objectives which our organisations serve are under significant threat from the global advance of disastrous climate change.

Both the United Nations Framework Convention on Climate Change and the Paris Agreement emphasise the need for countries to act faster based on their historic responsibility for past greenhouse gas emissions and their economic capabilities to act. It is clear that as a relatively wealthy country with a high emissions per capita profile, Ireland must accept that it needs to act much faster on reducing its greenhouse gas emissions. This is both an intrinsic global ethical imperative and an essential pragmatic requirement for Ireland's own self-interest, so as to be able to exert any effective influence on other, much larger, countries to take commensurate action. To have a good chance of limiting temperature rise to 1.5°C, while limiting high risk reliance on unproven and uncosted carbon removal techniques, Ireland needs to radically reduce **gross**, economy-wide, GHG emissions over the next two decades.

We consider the development of Ireland's first Long-term strategy (LTS) to be an important opportunity to ratchet up its response to averting climate breakdown, align Ireland's long term mitigation efforts with Paris Agreement obligations, and set a clear long term goal that can be operationalised into near-term climate action to deliver deep and sustained emissions reductions in the next decade.

We do not respond to all 26 questions in the consultation, and instead focus on Question 1, 10, 18 and 19, 24 and question 26. Important in Ireland's LTS is the acknowledgement that current levels of domestic ambition and action on climate change fall far short of what is needed to deliver on the temperature limits set by the Paris Agreement, and that Ireland must be ready and willing to ratchet up immediate near-term mitigation in the next decade to align with a revised national policy position of **net zero annual emissions by 2040 by the very latest**. Achieving this goal will not come about by chance: dedicated focus and planning, and consistent political leadership is crucial.

Question 1: What are the appropriate 2050 targets for Ireland to set in the context of supporting a net Zero target at EU level?

The Government's announcement at COP25 in Madrid, December 2019, of Ireland membership of the Carbon Neutrality Coalition (which commits the country to develop a roadmap for 2050), and the intent to embed the carbon neutrality goal in every element of policy is a positive move. The Government has also made explicit its commitment to support an EU net zero target by 2050 and has indicated that the 2019 Climate Action Plan could be in line with a trajectory to be net zero emissions by 2050, albeit with much the greatest effort unjustly and dangerously "backloaded" to be undertaken *only after* 2030.

While these statements are a welcome improvement upon the now out of date National Policy Position (2014) and the National Mitigation Plan (2017), they still lag far behind the temperature and equity commitments of the Paris Agreement and the most recent science dealing with the very severe additional risks associated with a global temperature rise of 2°C relative to 1.5°C. 2050 is a much needed long-term goal; if the mitigation policy destination is not clearly and unambiguously identified, there can be little serious hope of charting an early course toward it. However, the 2050 commitment is not the same as limiting warming to 1.5°C. Opting for net zero by 2050 brings the EU, for example, slightly closer to its obligations under the goal to keep temperature rise well below 2°C. But in order to be plausibly compatible with an equitable, good faith commitment to the 1.5°C limit, the EU as a whole needs to achieve net zero emissions by 2040 at the latest (and preferably even earlier still).[2] **The IPCC also clearly indicates that whatever the level of ambition in the longer term, if high emitting countries do not substantially increase their 2030 targets, the 1.5°C threshold will be put permanently out of reach.**

It is now essential to adopt an LTS that is genuinely and demonstrably consistent with Ireland's equitable share of the global cumulative carbon budget as implied by the temperature goals of the Paris Agreement.

> **Stop Climate Chaos welcomes commitment from the Government <u>to enshrine in law</u> in early 2020 a new 2050-based target. This legally binding target must define an envelope for maximum annual whole-economy emissions (all GHGs), and an associated total cumulative nett emissions constraint, over the full period 2020-2030, consistent with an articulated equitable share of the prudent global climate forcing. What is key here is that Ireland will have a legally binding target for 2050 that will lock in sustained policy delivery in the coming decades. This is a much needed step forward from the current National Policy Position for 2050.**
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> **If we are to effectively limit the risk of globally cascading impacts of climate change, the lower end of the long-term temperature objectives of the Paris Agreement must be what we should aim for.[3] On ethical, environmental, economic and political bases, limiting warming to 1.5°C above pre-industrial levels must be the goal underpinning all national targets and policies, concluding that, at the latest, global average emissions must be net zero by 2050.[4] This necessarily requires wealthy**

[2] CAN Europe 2019 How Is The Transition To A Climate Neutral Economy Made Just? http://www.caneurope.org/docman/coal-phase-out/3571-how-is-transition-to-a-climate-neutral-economy-made-just

[3] In Paris in 2015, 196 countries committed to both keep global average temperature rise well below 2°C above pre-industrial levels, as well as to pursue efforts to limit temperature increase to 1.5°C, while recognizing that a 1.5°C limit would significantly reduce the risks and impacts of climate change.

[4] IPCC Special Report on 1.5°C (2018). Report available at: https://www.ipcc.ch/sr15/chapter/spm/

countries, with very high per capita emissions (such as Ireland) to reach net zero emissions much sooner than 2050.

It is SCC's assessment, based on the most recent science and the requirements of global and intergenerational equity that this envelope must fix a minimum reduction of nett annual emissions of 54% by 2030 (relative to 1990), nett zero no later than 2040, and significant, verified, and secure, nett negative emissions by 2050.[5] The ability to bring about these legislative changes with the urgency that they require will necessitate strong and consistent political leadership, commitment to public engagement to build wide support for the equitable societal change, as well as the necessary capacity and resources within Government Departments.

Achieving net zero emissions well before 2050 not only increases the chances to avert the most severe impacts of climate change, but also allow Ireland to reap numerous co-benefits ranging from billions of savings in public health costs to boosting our competitiveness in a decarbonized global economy. Early and deep mitigation is likely to be far less costly in the long-term and has many co-benefits including increased energy security by reducing our reliance on fossil fuels, including oil and gas, and reducing the serious negative pollution impacts on climate and biodiversity from overuse of nitrogen fertilisers.

To stand any chance of limiting warming to 1.5°C, the next decade will be absolutely crucial.[6] Delivering on the 1.5°C limit demands steep near-term cuts in emissions, and frontloading of policy measures rather than delaying adequate mitigation to 2030 and beyond. It is within this context that **Member States must ensure that Long-term strategies are consistent with their ten year National Energy and Climate Plans (NECP)**. Both the NECP and the LTS are the main tools for delivering on the EU's climate and energy targets in accordance with the Paris Agreement.[7]

An effective and equitably directed effort in cutting emissions within *any* stated cumulative carbon budget for a stringent temperature limit requires <u>immediate</u>,

[5] Höhne and Villafranca 2019 A possible 2050 climate target for the EU https://newclimate.org/wp-content/uploads/2019/09/EU2050_Target_Adequacy.pdf

[6] According to the recently published United Nations Environment Programme report, global emissions must be reduced by 55% on 2018 levels within ten years if we are to stand a chance of limiting warming to 1.5°C. This equates to cuts in global emissions of 7.6% per annum over the next decade, a rate that increases for every year it is not met.

[7] On the 31st of December 2019, Ireland is required to submit to the European Commission a plan which outlines climate and energy objectives, targets, policies and measures for the 6 next ten years (called the National Energy and Climate Plan (NECP), for the period 2021 to 2030. Member states will have to update their plans in 2023. The NECP is required under EU legislation, and the development of Long-term strategies is a legal obligation for all member states. All Parties to the Paris Agreement are obliged to submit mid-century strategies by 2020.

radical and sustained reduction rates. In other words: early, deep and sustained mitigation response, not shallow and then "hopefully" steep later as proposed in the 2019 Climate Action Plan.[8]

To limit warming to 1.5ºC in line with science and equity, already requires Ireland sustaining CO_2 cuts from energy, cement and land use of above 7% emissions reductions per year, steady and permanent cuts in methane and nitrous oxide, and reducing emissions by over 50% by 2030. In addition, steady and permanent reductions in methane emissions (primarily from agriculture) of at least 2% to 3% per year, every year, will be essential to achieving net zero and limiting warming-equivalent overshoot of a Paris-aligned cumulative emissions budget.[9]

RECOMMENDATIONS:

It is within this context that we recommend that the LTS address and include the following:

1. The **adoption of an economy-wide net zero target to be achieved no later than 2040** with accompanying whole economy and sectoral carbon budgets for the period covered.

2. An indication of **what sectoral annual emissions pathways towards full decarbonisation will look like** over the next thirty years. On an economy-wide (all GHG) basis this pathway should fix a minimum reduction of nett annual emissions of 54% by 2030 (relative to 1990), nett zero no later than 2040, and significant, verified, and secure, nett negative emissions by 2050. This should be accompanied with interim milestones and targets expressed as steadily declining five year cumulative GHG budgets to ensure immediate short-term, and consistent long-term, achievement.

3. A clear acknowledgment that although a formal commitment to net zero emissions by 2050 at EU and domestic level is an important step forward, **it is far from enough to achieve the Paris Agreement's goal to limit global temperature rise to 1.5°C, and that ambition and response will have to be ratcheted up** to keep within the 1.5°C threshold.

[8] Although the 2019 Climate Action Plan rightly acknowledged that "the earlier we act, the less dramatic and costly it will ultimately be for Ireland, the Government proposed only a 2% decline in emissions per annum from 2021 to 2030 to meet current 2030 targets, and to a steeper decline of 7% per annum to achieve a minimum 80% emissions reduction by 2050, relative to 1990 levels.

[9] Cain (2019) shows the importance of sustained, permanent methane emissions reduction to enable substantial warming-equivalent reduction: https://www.nature.com/articles/s41612-019-0086-4

4. **Clear, explicit commitment to the Paris Agreement** and its objectives (including identifying key transformation decision points), and presenting a clear specification of how the direction and the actions included in the LTS, in addition to delivering towards the dimensions of the Energy Union, are contributing to the Ireland's fulfilment of the Paris Agreement's long term temperature and equity objectives. As part of this, Ireland's LTS must acknowledge the growing and significant gap between Ireland's commitment to the Paris Agreement and what is needed to deliver on Ireland's obligations under the Agreement, across all sectors of society and economy.

5. An outline of **a robust and specific process for how ambition will be scaled up** in the near term and over time in accordance with the Paris Agreement, European statutory policy process (namely the NECP which will be revised in 2025), the State's existing commitments under the 2015 Act, and closing Ireland's emissions gap.

6. A **commitment to achieving deep, year-on-year reductions in fossil carbon combustion within a stated Paris-aligned limit on <u>total</u> future Irish CO_2 emissions,** to be achieved *no matter what* economic growth occurs.[10] This commitment must be based on the acknowledgement that it is **near-term, deep, rapid and sustained emission cuts over the next decade that will make or break the global and domestic response to climate change.** The long term vision of the LTS must be consistent with the near term vision of Ireland's ten year National Energy and Climate Plan (which must be submitted to the European Commission on December 31st 2019). Without a clear picture of what is required within an immediate timeframe to deliver on the longer term goal, measures may have weak mitigation potential and short-term policy measures risk locking-in high carbon energy and infrastructure choices, creating stranded assets and ultimately requiring more stringent, faster and costly action at a later stage. For consistency with the NECP, the LTS should also incorporate:
    - How the Government intends to realise the full potential of energy efficiency for both primary and final energy consumption, and implement energy *efficiency first principle* in order to avoid over-investment in supply-side and network infrastructure and ultimately, reduce the risk of stranded assets and fossil fuel lock-in. This must also explicitly address how both local and system-wide efficiency rebound effects ("Jevons' Paradox") will be actively constrained.
    - An outline of the full details and national trajectories for renewable energy and energy storage deployment (as opposed to just electricity) beyond 2030, including details on how Ireland will develop the necessary infrastructure and capacity, and facilitate greater citizens' participation in energy production for self-consumption

[10] A declining cap on fossil carbon is a prerequisite to ensure that all other climate solutions and policies – including carbon pricing, energy efficiency or renewables penetration – *add up* to sustained reductions in absolute emissions.

and injection into the grid.[11] This will be essential for when Ireland ends the use of coal and peat for electricity generation over the coming decade, and to ensure long term domestic energy security that is aligned with Ireland's obligations under the Paris Agreement.

- Clarification of the policies and plans to phase out all direct and indirect fossil fuels subsidies[12], as well as subsidies to other unsustainable activities in the field of climate and energy.[13]
- Urgent re-consideration of policy commitments such as to growth in data centres[14] that, contrary to effective climate action, may annex large amounts of renewable energy capacity that could otherwise be used in decarbonising sectors more essential to society such as heating and transport.
- Urgent changes in land use are needed to leave more carbon budget time for energy decarbonisation. This requires: immediate reductions in land use emissions, by ceasing all commercial peat extraction and rewetting organic soils; and reversing the current decline in forest sequestration, by limiting harvest. Just transition interventions will be needed to support those affected by such measures.

Question 10: What is the future of the national gas grid in a net-zero emissions pathway?

There is widespread scientific consensus that on-going investment in fossil fuel exploration, extraction, and delivery infrastructure is incompatible with global and domestic climate objectives. In their testimony to the Committee on Climate Action in November 2018, IPCC authors agreed that measures to prevent the opening up of new reserves would serve the goal of limiting warming to the 1.5 °C limit. Not only do historical emissions from existing energy infrastructure already jeopardize the 1.5 °C climate objective, but that to keep within this temperature limit, existing infrastructure may need to be retired early. In light of these scenarios, the key recommendations are that governments should not grant new permits for all fossil fuel extraction, or invest in new infrastructure, and that a managed decline in fossil fuel infrastructure be put in place.

[11] The European Commission concluded that Ireland's renewable energy plans with a target range of 16 to 28% lack adequate specificity and in any case fall below the indicative target of 31% for Ireland, derived from the Governance Regulation.

[12] IISD 2019 Zombie Energy: Climate benefits of ending subsidies to fossil fuel production https://www.iisd.org/sites/default/files/publications/zombie-energy-climate-benefits-ending-subsidies-fossil-fuel-production.pdf

[13] The Paris Agreement's long term objective to bring global emissions down to zero in the second half of the century puts a specific requirement on the NECPs to clarify pathways for the phase out fossil fuels in the near-term.

[14] Eirgrid 2017 All-Island Generation Capacity Statement 2018-2027. Figure 2.2. http://www.eirgridgroup.com/site-files/library/EirGrid/Generation_Capacity_Statement_2018.pdf

Even with a managed phase-out, fossil fuels including natural gas, can have no substantial role beyond 2035 in an EU energy system compatible with 2°C. For 1.5°C, natural gas and other fossil fuels would need to be phased-out even faster.[15] Delaying mitigation until 2030 considerably minimises the likelihood of attaining 1.5 °C, even if the current rate of retirement of existing fossil fuel infrastructure is accelerated. Arguments that increased investment in fossil fuel capacity is required even under ambitious scenarios are based on ambitious assumptions in relation to Carbon Capture and Storage Technology, and conservative assumptions about the competitiveness of renewables combined with storage. Investments in new infrastructure, especially those designed to accommodate imported fracked natural gas will also result in emissions levels not consistent with the scale of reductions required.

Pertaining to the Irish situation, an independent expert peer review commissioned by this Coalition (McMullin et al. 2018)[16], found that scaling up dependency even on a "transitional" basis on a natural gas supply would present very serious security-of-supply concerns for Ireland's energy system, amplifying the risk of stranded assets, while simultaneously inhibiting the necessary scale and speed of decarbonisation of the energy system.[17] This evaluation concluded that based on Ireland's large natural resource of variable renewable energy coupled with the use of synthetic chemical fuels ("electrofuels") for very large scale energy storage, rapid fossil fuel phase out is not only technically feasible, but can progressively eliminate the security-of-supply risks associated with all imported fossil fuels, while simultaneously decarbonising with the scale and urgency demanded by good faith participation in the Paris Agreement. Wind and solar are already cheaper to build and operate than coal and gas in most markets. Cost is clearly not a prohibitive factor to adding renewable generation capacity, whether to replace fossil fuel capacity or to meet rising demand.

> **We consider the LTS to be an opportunity to integrate Ireland's energy security objectives (and associated analysis) with its long-term decarbonisation obligations. No expansion of the national gas grid should be considered unless and until its uses have been *fully* and verifiably decarbonised (nett-zero CO_2 emissions, including accounting of upstream emissions, territorial or otherwise). In the case of biomethane deployment (if any), this must also achieve net zero (or, preferably, net**

[15] See: https://www.foeeurope.org/new-study-incompatability-climate-safety-gas-071117

[16] McMullin et al. 2018 Is Natural Gas "Essential for Ireland's Future Energy Security"? https://www.stopclimatechaos.ie/download/pdf/is_natural_gas_essential_for_irelands_future_energy_security_scc_study_november_2018.pdf

[17] The risk of 'stranded assets' (where market developments and increasing climate regulation result in fossil fuel assets becoming commercially un-viable before the end of their intended life cycle) and their impact on the financial system is a concern that has been emphasised by a wide array of expert financial commentators over recent years, including the Governor of the Bank of England and Chair of the G20 Financial Stability Board Mark Carney, and former Governor of Ireland's Central Bank, Philip Lane.

negative) emissions, with full accounting of N_2O and CH_4 effects, excluding "counterfactual" (as opposed to absolute) emissions reductions.

RECOMMENDATIONS:

1. It is essential that included in the LTS is **an acknowledgment that a failure to decarbonise, coupled with a business-as-usual approach rooted in speculative new and additional natural gas sources for electricity generation, is itself a policy for recklessly increasing national energy security risk.**

2. The LTS must instead ensure **a pathway that facilitates an urgent phase out of existing and proposed natural gas and other fossil fuel use as an imperative of any scientifically informed and equity-based policies designed to deliver on the Paris Agreement**. Ireland, along with all EU Member States, must stop building new fossil fuel infrastructure, including natural gas pipelines, now. There should be no further exploration for natural gas in Irish waters, and undeveloped licences should be revoked. In view of the reported high methane leakage rates associated with fracking, as well as its detrimental impact on communities around the world, Ireland should not import gas from fracked sources, including in the form of Liquified Natural Gas.

3. A **hard cap on total reactive nitrogen usage in Ireland** is also critically necessary to limiting the current nitrogen crisis because current biogas projections by Gas Networks Ireland[18] and others are predicated on increasing nitrogen fertiliser use still further to produce grass over and above the Food Wise 2025 animal projections. Unacceptably, and contrary to public spending guidelines, the pollution costs of biogas production and its negative consequences are not included in these projections that continue to be biased toward economic benefits likely to accrue to private vested interests, with the severe negative environmental consequences being tacitly socialised.

4. The LTS should **prioritise and plan for energy security that is based on reduced absolute energy demand, energy efficiency, and a predominantly indigenous decarbonised energy system** through renewable storage, demand response and efficiency ahead of more natural gas capacity.

[18] Gas Networks Ireland (2019) Vision 2050 https://www.gasnetworks.ie/vision-2050/. Also see the GNI reference, McEniry et al. 2013 https://t-stor.teagasc.ie/bitstream/handle/11019/451/ijafr_67-80.pdf?sequence=1

Question 16: How do we secure viable family farms across our regions in an environment profoundly changed by the focus of climate change?

Extreme weather events in recent years has clearly shown that farmers are at the forefront of climate impacts. Results from the latest Teagasc national farm survey show that extreme weather events had an historic impact on farm incomes in 2018, with average income down 21%, and spending on imported animal feed up 34%, despite another substantial increase in nitrogen fertiliser use (up 38% in seven years). On dairy farms specifically, feed costs increased by 43%. These domestic figures highlight the economic vulnerability to the sector to climate risks, risks which are expected to accelerate over the coming decades. Failure to recognise the responsibility to deliver a climate strategy with credible emissions reduction as its core objective will put farmers' livelihoods, farmer welfare and animal productivity, and consequently, the rural economy, at risk.

Protecting farm incomes requires improving environmental sustainability and ensuring a safe and stable climate. If the agriculture sector fails to consider the climatic constraints in which food production operates, and shift its objectives and strategic direction accordingly, the sector will fail environmentally, socially and economically, with considerable implications for farm incomes. However, as long as Irish farmers are locked into an intensification model based on declining prices and cheap commodity routes to distant export markets, they will see more animal numbers and increased production as the only response to rising farm costs and falling farm incomes.

RECOMMENDATIONS:

1. Ireland has the potential to produce a range of low-carbon plant based foods to meet domestic, EU and international market needs to address the climate and biodiversity emergency, and greatly increase Ireland's contribution to global food security. **In line with recommendations from the Joint Oireachtas Committee on Climate Action, the Government should immediately establish, as part of the LTS process, a task force on farm diversification and engage immediately with all relevant stakeholders to devise a plan that would align the sector with Ireland commitments under the Paris Agreement.** Likewise, as recommended by the Joint Committee a review of nitrogen fertiliser management and imports is needed.

2. There is a clear need to reorient **CAP payments (both at European and domestic level) away from a singular focus on dairy and beef production towards growing food which will provide multiple benefits**. Subsidies must represent money for public goods, with results based payments. Farmers should be financially rewarded for providing

spaces for nature, protection for water quality, and reductions in emissions. One size does not fit all when it comes to viable or sustainable farming practices, and this should be reflected in any future strategy, with a far greater focus on supporting extensive, lower impact agricultural practices in high nature value farmland and marginal lands, and support for agroforestry schemes.

3. **Participation in energy emissions mitigation by the agriculture sector should be fully supported, and can provide an income for farmers.** We recommend that a fair price be provided for solar electricity supplied to the grid, as well as the introduction of measures to enable community-led projects such as simplifying grid access. We welcomed the positive moves on community ownership of renewables in the Government's proposed Renewable Electricity Support Scheme (RESS), and the potential that this opens up for community energy democracy, including farmers, but were disappointed by the exclusion of small-scale rooftop solar.

4. The LTS must build resilience into the sector by developing **a Just Transition plan for those affected by the shift away from intensive beef and dairy production.**

Question 18: What type of nature-based solutions, including land use, land use change and management, could support emissions reduction and what is the associated emissions reduction potential of such solutions?

The latest Intergovernmental Panel on Climate Change (IPCC) report on land and climate change (published in August 2019) warned that intensive human activity has turned how we use our land into a major source of pollution. It delivers unequivocal evidence that radical change is now needed in how we use land for food production and energy, and that sustainable land use has huge potential for combating climate breakdown. Yet, in addition to deep and sustained cuts in fossil fuel combustion, proper land use and the use of nature-based solutions can help mitigate climate breakdown.

> **RECOMMENDATION: The protection and restoration of ecosystem resilience must be prioritised in the LTS to preserve the critical role of ecosystems in carbon sequestration and the maintenance of biosphere resilience to help limit global temperature increase to 1.5°C.**

Our future rather depends on a transition to land stewardship that ensures long-term emission reductions and sustains the health of people and nature. Despite the Dáil declaring a climate and biodiversity emergency in May 2019, the 2019 Climate Action Plan failed to incorporate the

wide-ranging recommendations from the Joint Oireachtas Committee on Climate Action (published in March 2019) for **stronger policy coherence between climate and biodiversity policy objectives, immediate engagement between all stakeholders on developing a plan to align Ireland's agricultural sector with commitments under the Paris Agreement, and the establishment of a taskforce on diversification within the sector. These measures are essential first steps in the near term to help ensure a pathway that is consistent with the longer-term goal.**

Afforestation. In the 2019 Climate Action Plan, the Government outlined its commitment to scale up afforestation over the coming decades to make a contribution to the declared goal of carbon neutrality in the land use sector by 2050. It is likely that only a small part of agricultural greenhouse gas emissions will be offset by carbon sequestration in grasslands and forestry in the coming decades, thus leaving a glaring 'emissions gap'. Temporary carbon sequestration in monoculture forestry cannot prudently be used as a substitute for the substantial and sustained reductions required in livestock emissions. Furthermore, it is worth noting that in 2018, the Climate Change Advisory Council highlighted the absence of a clear and definite pathway for achieving carbon neutrality by 2050. If incorrectly sited, widespread afforestation, which creates fundamental changes in ecosystem function and structure, can present threats to elements of Ireland's biodiversity and aquatic systems over the long-term. Forest policy needs to be equally cognisant of the far-reaching environmental implications of afforestation alongside the social and economic impacts; structural diversity of forestry is important.

RECOMMENDATIONS:

1. To sufficiently realise the sequestration potential of land, the LTS needs to outline **what an environmentally and socially sustainable level of carbon sink is,** while giving consideration to biodiversity, recreation and food production, and rural well-being.

2. Ireland's LTS should provide evidence that targets will be met with **real policies and measures that lay out decarbonisation pathways for all sectors, rather than reliance on the use of loopholes to deliver targets in the LTS** (e.g., such as offsetting from land-use, land-use change and forestry (LULUCF). Use of loopholes slow down the transition of the sectors affected, making it more expensive to achieve emission reductions in the future.

Realising the potential of peatlands: Because of peat extraction, disturbance, and related activities (e.g., combustion, horticulture), Irish peatlands (most of which are moderately or severely damaged) have become a source of carbon emissions. In their healthy state, peatlands will not only store carbon, but also continue to absorb CO2 as they expand. In Ireland, intact

peatlands have the potential to actively sequester, on average, about 57 thousand tonnes of carbon per year. For this potential to be realised however, stronger enforcement to protect peatlands, rewetting and restoration, and using alternative non-peat sources for energy production is urgently required.

Neither Ireland nor the EU can have a credible approach to LULUCF unless peat and soil carbon sink issues are addressed. If properly acknowledged and managed, sequestered carbon could yield important income in terms of agri-climate environmental measures under the Rural Development Plan Regulations. In the UK, the recommended approach to sustainable soil carbon sequestration is to include the management and protection of carbon stocks in existing highly organic soils such as those found in the uplands, peatlands, grasslands and native forests. Such measures are complementary to obligations under the Birds Directive and commitments under the National Peatland Strategy and EU Biodiversity Strategy.

Based on the recognition of the value of peatlands as long-term carbon sinks, Scotland's Climate Change Plan (2017) includes target-driven plans for peatland restoration. A similar approach can easily be adopted in Ireland's LTS, but the Government cannot delay until after 2030 to protect, restore and rehabilitate Ireland's peatlands. Delivering on the sequestration and adaptation potential of Ireland's peatlands must be an immediate priority.

RECOMMENDATIONS:

1. We urge that the LTS adopt the recommendation of the Joint Oireachtas Committee on Climate Action of **examining now the current policy framework on peatlands for coherence and comprehensiveness and the effectiveness of peatland restoration for climate mitigation**.

2. Include a verifiable pathway for the rehabilitation and restoration of various peatland types in line with **a target of net sequestration by 2050 at the very latest.**

3. This 2050 target should include **scientifically informed interim targets and a national-scale programme of rewetting** supported by the delivery of appropriate funding programme in line with the scale of restoration required.

Question 19: What is the emissions reduction potential from GHG-efficient food production, including future production scenarios?

If allowed to proceed unchecked, the increased and rising emissions from the agri-food sector will seriously undermine any ability Ireland's may have in achieving it 2030 emissions reduction target (current and revised under greater EU collective ambition) and our long-term net zero

vision. The IPCC SR15 report's 1.5ºC and 2ºC global carbon budgets for CO_2 are predicated on global reductions by 2050 of approximately 50% for methane and 20% for nitrous oxide, equating to 2.3%/year and 0.7%/year respectively.[19] The latest IPCC report on land and climate change (published in August 2019) clearly demonstrates that ramping up immediate climate action is crucial to avoid massive disruption to our food chains. Exceeding this threshold will inevitably decrease crop and livestock productivity, reduce the nutrient content of crops, and contribute to food insecurity. As demonstrated by the IPCC (2019) and proposed by the European Climate Foundation in their work on a net zero vision for agriculture, **there is a very clear and quantifiable hierarchy in the effectiveness of actions to cut emissions:**

1. **Go further, faster and deeper to cut emissions over the next decade, including avoiding emissions where possible and reducing emissions where they cannot be avoided;**
2. **Protect existing land carbon stocks (for example, Ireland's bogs, wetlands, organic soils and standing forest);**
3. **Restore lost land carbon stocks.**

In the absence of rapid and sufficient emissions reductions, achieving the full potential of carbon sequestration will do little relative to what the scale of the challenge now requires.

RECOMMENDATIONS:

1. Ensuring **biosphere resilience, and deep reductions in all greenhouse gases** (including methane and nitrous oxide emissions) must form an integral part of all policy approaches that underpin the LTS.

2. In their report published in March 2019, the Joint Oireachtas Committee on Climate Action recommended that land use policy in Ireland take account of the results of the IPCC report. The **overall environmental impacts of agri-food practices in Ireland need to be measured and reviewed** in light of an assessment and recommendations of the IPCC on land use and climate change.

3. **The LTS must include a plan which aligns the agri-food sector with Ireland's international commitments, while protecting biodiversity, water quality, and livelihoods.** This strategy must be enabled with clear targets, detailed measures, and measurable outcomes for monitoring and reporting. We suggest the following approaches:

[19] IPCC 2018 SR15 Report Summary for PolicyMakers Figure SPM.3a.
https://www.ipcc.ch/site/assets/uploads/sites/2/2018/07/SR15_SPM_High_Res.pdf

1. The overall environmental impacts of agri-food practices in Ireland need to be measured and reviewed in light of the assessment and recommendations of the IPCC on land use and climate change. In their report published in March 2019, the Joint Oireachtas Committee on Climate Action (JOCCA) recommended that land use policy in Ireland take account of the results of the IPCC report. Furthermore, they recommended that the Department of Agriculture, Food and the Marine (DAFM) in collaboration with other Government Departments engage immediately with the farming, environmental, and scientific communities to devise a plan that would align the sector with Ireland commitments under the Paris Agreement. The need for stronger policy coherence between climate and biodiversity policy objectives, was also emphasised, as well as the establishment of a taskforce on diversification within the sector.
2. Stop Climate Chaos has argued that Ireland's current agriculture and land use policy is neither 'climate-smart' nor sustainable, and Ireland should be supporting farmers to transition away from ruminant production to a more sustainable model of farming. This can be achieved by encouraging High Nature Value farming, incentivising low input, low carbon farming, diversification, and promoting and supporting healthier and less ecologically damaging human diets.
3. Increasingly, more specific measures have been gaining prominence as a practical solution to the challenges the sector faces. This Coalition supports the recommendation for an immediate imposition of strict limits on the import of reactive nitrogen in nitrogen fertiliser and animal feed, to bring usage down to 2011 levels in 2020, followed by a more gradual reduction. The rationale underpinning this argument is that increases in animal feed and nitrogen fertiliser from 2011 onwards have expedited intensification in the sector, growing dairy production that is is heavily reliant on large and increasing fertilizer input and imported feed with huge pollution costs to climate, water and air quality with escalating negative impacts on biodiversity. Use of nitrogen fertiliser increases nitrous oxide emissions and increases grass growth that in turn increases methane emissions from cattle. Reductions in total nitrous oxide emissions and environmental pollution can only be guaranteed by limiting the total reactive nitrogen fertiliser input into the system**.**

Question 24: What are the most important issues for the Government to consider in developing a long term strategy to 2050 in order to ensure a just transition?

The transition to a zero-carbon economy must be guided by the need to ensure a just and equitable distribution of burdens and benefits, globally and domestically. While the zero-carbon transition will bring jobs and development, the benefits will differ across sectors and regions. It

is imperative that the Government across the relevant Departments ensure the transition will be fair and just, taking into account the needs of workers and vulnerable communities and regions so as to ensure the transition will provide a better life for all. This also means the Governments needs to engage and not shy away from making necessary choices and setting targets and policies that go against certain vested interests.

RECOMMENDATIONS:

1. An **equity lens factoring in the implications of climate action and inaction for the most vulnerable in Irish society must be included in the LTS**. This should address the social and regional implications (positive and negative) arising from the rapid shift to a net zero future across the various sectors and polluting activities, i.e., the costs to vulnerable groups, workers, businesses and communities more broadly that are affected directly by the phasing out of fossil-fuel industries and GHG intensive activities, and the potential for economic and other benefits to be accrued by communities under decarbonisation measures and investment in new green infrastructure such as public transport.
2. The LTS must **integrate coordinated policy approaches to a socially just transition** to a climate neutral economy that goes beyond the development of skills to consider the full range of social and employment impacts (e.g., shifts in sectors/industries and skills impacts, distributional effects and revenue recycling, especially in relation to the transition for carbon-intensive regions).
3. The LTS should commit to structural measures to improve overall societal resilience and cohesion in the face of ongoing economic disruption: specifically including consideration of measures such as universal basic income, job guarantees, and personal carbon trading. [20]

Question 26: Are there any other comments or observations that you wish to make?

Allocating a diminishing carbon budget on equitable terms: Ireland's choice of transition policies and the policy implementation timeline to a net zero target do not take place in a vacuum. Others will respond to the decisions the Irish State will take in this regard. If Ireland chooses to prioritise short term self-interest over the global good by explicitly choosing to continue policy measures that delay sufficient action and jeopardise a safe and sustainable future for all, it condones and encourages other States to do the same. Any strategy on climate policy must take into account the equity implications of business-as-usual policies for a wealthy, high

[20] McMullin, 2017, TEQs: Empowering Citizens for Radical Climate Action: https://tinyurl.com/y5oaq8uz

emitting country like Ireland. This raises important questions, according to Kartha et al. (2018)[21], about who can continue to use a quickly diminishing global carbon budget, and how can the remaining budget and sharing the costs be equitably allocated. To manage the transition to a zero carbon future equitably demands that developed countries such as Ireland that have a better capacity to adjust an**d viable alternatives to meet their economic needs, rapidly cut their emissions.**

Present a compelling long term vision for a decarbonised Ireland that ensures fairness, equity and a safe and sustainable future for all. Support for long-term climate action in Ireland risks being undermined by a political narrative and response that focuses on short term notional costs to delay action, potential "burden" for Irish society (neglecting climate impact burdens), and undermining national development plans. The scale of climate action needed requires a sea-change in thinking and practice, a paradigm-shift in ambition and a commitment to honour the entitlement of coming generations to enjoy a safe and viable future. Government response and the broader framing proposed within the LTS must be built on a transformative, compelling vision for a low carbon Ireland that is inclusive, fair and socially progressive.

Meaningful public participation for operationalising the Long-term strategy into near term policies. All stakeholders need to be involved more systematically in an ongoing coherent strategy process aligned with actually achieving near-term action and not just in a single moment in order to ensure wider public engagement. This means full access to all input assumptions, details behind the underlying data and how these will be used in modelling scenarios. Such wider public engagement should be expanded to also include issues related to policies, behaviour change and costs and mitigation impacts of protracted action or inaction. Equipped with the scientific evidence and knowledge of the implications of a failure to act, the Government must frame public participation in terms of a clear and unswerving commitment to act ambitiously and fairly on climate change. This is essential to protect society from the threat of climate change and ensure that Ireland is in a position to reap the social, health and economic opportunities offered by meaningful climate action. This will increase the credibility of long term policy measures, paving the ground for a sound political discussion and public consensus.

We recommend that:

- the Government facilitates meaningful, inclusive and timely public engagement and multi-stakeholder dialogue when operationalizing the Long-term strategy into further iterations of the Climate Action Plan and further updates of the National Energy and Climate Plan.

[21] Kartha et al. 2018 Cascading biases against poorer countries https://www.nature.com/articles/s41558-018-0152-7 Author copy: https://tinyurl.com/Kartha2018

- Adopt a new framing of the climate challenge, of Government leading system change in energy, transport, buildings and food production. This can be facilitated through a renewed and strengthened National Dialogue on Climate Action, and immediate establishment of a new National Stakeholder Forum on Climate Action (modeled on the Brexit Forum)[22].

We also recommend the development of a comprehensive and coherent strategy for stakeholder engagement and social dialogue on climate action that will adopt the core features of the Citizens' Assembly, linking public and stakeholder deliberation and participation to the near-term policy transformation required to achieve the Long-term strategy.

Participation in EU level processes and fora on the Long-term Strategy. All EU Member States must develop national long term strategies of their own, albeit unlike the NECP process, there is little central guidance on what strategies should include, and no overarching structure in place for collaboration across member states.

We recommend that the Government advocate at EU level for a clearer, more detailed process regarding the assessment of Long-term strategies by requesting a follow-up evaluation and review process between member states and the European Commission. This process should be based on structured dialogue with the Commission encompassing the provision of dedicated support and expertise to help drive strong 2050 strategies, and mechanisms for the exchange of learning, best practice and strategic alignment, and planning experience between member states. Such a process could be used to help identify where regional cooperation and coordination, coherent planning, and technical assistance would be beneficial for the development and further review of national Long-term strategies. A useful example can be found at the Intra-EU exchange on long-term climate strategies and decarbonisation scenarios "CLIMATE RECON 2050: DIALOGUES ON PATHWAYS AND POLICY" (See: https://climatedialogue.eu/about)

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Freedom of Information: This submission may be released in total under the provisions of the Freedom of Information Acts. Date of posting response: 31st December, 2019

[22] Through high-level engagement, the Brexit Forum brought together key stakeholders from business, trade unions and state agencies, policy makers and experts, and climate scientists, to help inform the Government's position.