Stop Climate Chaos Coalition and the Environmental Pillar

Joint-submission to

Ag-Climatise' – A Draft National Climate & Air Roadmap for the Agriculture Sector to 2030 and Beyond

January 2020

This joint-submission was compiled by the Stop Climate Chaos Coalition and the Environmental Pillar. Specific content on ammonia and water quality was contributed by An Taisce.

Stop Climate Chaos (SCC) is a coalition of over thirty civil society organisations campaigning to ensure Ireland plays its part in preventing runaway climate change. It was launched in 2007 and is the largest network of organisations campaigning for action on climate change in Ireland. Its membership includes development, environmental, youth and faith-based organisations. It's members are: Afri, BirdWatch Ireland, Christian Aid Ireland, Comhlámh, Community Work Ireland, Concern Worldwide, Cultivate, Cyclist.ie, Dublin Friends of the Earth, Eco Congregation Ireland, ECO UNESCO, Feasta, Fossil Free TCD, Friends of the Earth, Friends of the Irish Environment, Goal, Good Energies Alliance Ireland, Self Help Africa, Jesuit Centre for Faith and Justice, Just Forests, Kimmage Development Studies Centre, Latin America Solidarity Centre (LASC), Liberia Solidarity Group, Methodist Church of Ireland – Council of Social Responsibility, Mountmellick Environmental Group, National Youth Council of Ireland, Oxfam Ireland, Peoples' Climate Ireland, Presentation Ireland, Tearfund Ireland, Trócaire, An Taisce, VITA, VOICE., and Young Friends of the Earth.

The Environmental Pillar is made up of 28 national environmental non-governmental organisations (NGOs) who work together to represent the views of the Irish environmental sector. The Environmental Pillar creates and promotes policies that advance sustainable development and acts as an advocacy coalition promoting sustainable solutions in areas such as climate change, biodiversity, tree-cover, resource efficiency, transport, planning and water. It's members are: An Taisce, Bat Conservation Ireland, BirdWatch Ireland, CELT (Centre for Environmental Living and Training), Coastwatch, Coomhola Salmon Trust, ECO-UNESCO, FEASTA, Forest Friends, Friends of the Earth, Global Action Plan Ireland, Gluaiseacht, Good Energies Alliance Ireland, Green Economy Foundation, Green Foundation Ireland, Hedge Laying Association of Ireland, Irish Peatland Conservation Council, Irish Seed Savers Association, Irish Whale & Dolphin Group, Irish Wildlife Trust, Native Woodland Trust, The Organic Centre, The Rediscovery Centre Ireland, Sonairte, Sustainable Ireland Cooperative (Cultivate), Sustainable Projects Ireland (The Village), Vincent Wildlife Trust, VOICE, Wildlife Rehabilitation Ireland, and Zero Waste Alliance Ireland.

Freedom of Information: This submission may be released in total under the provisions of the Freedom of Information Acts.

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Introduction

With a particular focus on the importance of timely and robust mitigation and environmental action at national level, the Stop Climate Chaos Coalition and the Environmental Pillar seeks to ensure that Irish climate policy, and underpinning strategies, is based on scientific assessment, and the principles of climate justice.

As we enter into a new decade where climate action must be significantly ramped up to avert worsening climate breakdown, this consultation opportunity to address the particular challenges within the agricultural sector is, indeed, timely. Agricultural emissions have risen by 11% (2.0Mt CO2 eq) since 2010 (when Food Harvest 2020 was published).[1] The agri-food sector now finds itself with worsening environmental indicators, a rising emissions trajectory over the next decade, and lock-in on an unsustainable pathway dependent on increased inputs of imported fertiliser and imported animal feed.[2] Stop Climate Chaos has consistently 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.

In March 2019, the all-party Joint Oireachtas Committee on Climate Action 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's commitments under the Paris Agreement. In light of the rising emissions trajectory projected for the sector, multi-stakeholder engagement is an essential initial step to help shift the direction of the sector to align with Ireland's climate and other environmental obligations.

We welcome the opportunity to make this submission. Nevertheless, we urge the Department of Agriculture, Food and the Marine to go beyond an online survey to engage more directly and comprehensively with all relevant stakeholders, including civil society groups advocating for science-based policy making and ensuring Ireland fulfills its commitment to climate justice and its climate and broader environmental obligations. <u>This engagement must include fair and equal representation of civil society in the respective committees that underpin the formulation of policy and strategy for the agricultural sector going forward, namely, the CAP Consultative Committee and the Agri-Food strategy Committee.</u> Failure to do so undermines the legitimacy and credibility of policy decisions at a

1 EPA (2019) Provisional GHG Emissions https://www.epa.ie/pubs/reports/air/airemissions/ghgprovemissions2018/

2 EPA (2019) Ireland National Inventory Report 2019

time when the science and worsening evidence of ecological breakdown is demanding transformative change.

The following submission responds to some of the additional open ended questions, under the following sections, that accompanied the survey, rank-based questions

Reduce agriculture emissions to at least 19 Mt CO2eq by 2030

The introduction to 'Ag-Climatise' states a requirement for the agriculture sector to cut emissions by 10 to 15% by 2030. The Climate Action Plan states a required emission reduction for the sector of 5% to 12.5% by 2030 (Table 11.4). **Stop Climate Chaos asks: Why is the Department choosing to target only the lowest ambition end of the stated ranges?**

Moreover, the 1.5ºC pathways highlighted by IPCC SR15 (SPM Figure 3a.) indicates a total global methane reduction of 50% by 2050 (an average annual reduction of -2.3% per year every year) and a total nitrous oxide reduction of 20% by 2050 (an average annual reduction of -0.7% per year every year). SR15 states that a 2ºC target requires similar reductions. For climate justice and equity under the UNFCCC, developed nations have agreed to act first, fastest and more deeply. **On what basis does the Department align Ireland's methane and nitrous oxide reductions with IPCC advice and UNFCCC agreement?**

The introduction also outlines that:

> *'Ireland faces significant challenges to meeting its climate change and air quality targets (as well as biodiversity and water quality targets). This challenge is replicated across all other sectors of the economy including transport and residential.'*

However, while other sectors are indeed problematic, it is disingenuous to conflate the impact of agriculture with those of other sectors, particularly in regard to ammonia emissions, biodiversity and water quality. Agriculture is responsible for 99.1% of all ammonia emissions in Ireland, 70% of protected habitats are impacted by agriculture,[3] and agriculture is the single largest pressure for water quality, affecting 53% of water bodies.[4] While other sectors do face their own environmental challenges, agriculture is by far the most frequent ecological threat, and must be held accountable as such. Further to that, in regard to the comment regarding water quality being

[3] https://www.npws.ie/publications/article-17-reports/article-17-reports-2019

[4] https://www.epa.ie/pubs/reports/water/waterqua/Water%20Quality%20in%20Ireland%202013-2018%20(web).pdf

good compared with other European countries, this is not something to be lauded given that 50% of our water bodies are polluted, regardless of the situation in other European countries.

Question 1: Are there other actions that could be considered for inclusion to further enhance progress and credibility of agricultural actions? Is there more that farmers and the food industry itself can do?

The latest Intergovernmental Panel on Climate Change (IPCC) assessment 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.[5] The report delivers unequivocal evidence:

- 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. Exceeding the temperature thresholds of the Paris Agreement will inevitably decrease crop and livestock productivity, reduce the nutrient content of crops, and contribute to food insecurity. Rising temperatures and changing weather patterns are already undermining availability and access to food, as well as agricultural stability and productivity.
- If we are to avert catastrophic environmental breakdown, we must transform how we produce and consume food, and how we use and manage land.
- It is only by implementing actions across both the production and consumption sides that we can transform the sector's contribution to mitigation efforts. This includes producing food in a way that protects nature, diversifying our diets and eliminating food waste, and ramping up climate action across all sectors to ensure future food security and climate justice.

The list of on-farm oriented actions included in Question 1 may offer some mitigation potential, however the sectoral projections for the next decade clearly suggest that on-farm behavioural change (which takes time in addition to understanding farmer attitudes, motivations and barriers to change) cannot deliver the scale of emissions reductions required without a purposeful and transformative policy shift at Government and industry level.

- Over the next decade, emissions from the agri-food sector are projected to increase still further due to growing cattle numbers (increase of 11% between 2020 and 2030), increased fertiliser use (by 5% between 2018 - 2020 and by 6% between 2020-2030) and ongoing carbon losses from land.
- Under the 'with existing measures' scenario, the latest projections from the EPA indicate a 4% increase in emissions ;on 2018 levels by 2030 (from 34% to 38%). With Additional Measures, emissions are expected to rise by between 1-3%.

5 IPCC 2019 Special Report on Climate Change and Land https://www.ipcc.ch/srccl/

- Assumptions about the impact of on-farm efficiency explains the difference between these two scenarios. Intensive beef and dairy cattle are already at near maximum efficiency in Ireland, and contrary to assertions from Teagasc and the Government, improving 'efficiency' is not climate mitigation unless total agricultural emissions fall.
- Ireland will be non-compliant with ammonia emission levels under the National Emissions Ceiling Directive beyond 2030.[6]

If allowed to proceed unchecked, and as acknowledged by the Climate Change Advisory Council, the current situation of rising emissions from the sector will seriously limit any ability Ireland may have in achieving its 2030 emissions reduction target (current and revised under greater EU collective ambition) and the longer-term net zero objective.

Credibility of the roadmap for water quality and ammonia reduction: The roadmap clearly recognises the risks posed by nitrogen loss:

> 'The sector must find a way to reduce nitrogen losses to both water and air. The importance of nutrient management planning cannot be overstated, the sector must find a way to use nutrients in a more effective manner'

It outlines that by adopting the GHG MACC curve, water quality and ammonia emissions can also be addressed, in addition to GHG reduction. This is primarily by measures outlined in Action 1 and 2 of the Plan. However, relying on these measures will not realise this objective. The shortcomings in both the Code of Good Practice to Reduce Ammonia Emissions, and the 2019 Nitrates Derogation Review have been elucidated in detailed critiques by An Taisce.[7] The failings in regard to ammonia are particularly pertinent given the premise of the Plan is to address agriculturally derived air pollution. Based on our research, and on documents produced by Teagasc, even with the implementation of every possible abatement measure, Ireland will still breach its ammonia limits for both 2020 and 2030. As such, the measures outlined within the Code of Good Agricultural practice, and reiterated under Action 1 and 2, will do little to address Ireland's excessive ammonia emissions. As recognised by Teagasc (2015)[8] significant policy measures would be necessary to implement uptake of ammonia abatement measures, and many

[6] Agriculture is responsible for 99% of Ireland's ammonia emissions, which currently are in breach of legislative targets. (David B. Kelleghan, Enda T. Hayes, Mark Everard, Thomas P. Curran (2019) Mapping ammonia risk on sensitive habitats in Ireland. Science of The Total Environment, Volume 649, 1580-1589.)

[7] https://www.antaisce.org/publications/an-taisce-submission-on-code-of-good-agricultural-practice-for-reducing-ammonia and https://www.antaisce.org/articles/2019-nitrates-derogation-review

[8] Gary J. Lanigan, Trevor Donnellan, Kevin Hanrahan, William Burchill, Patrick Forrestal, Gerard McCutcheon, Paul Crosson, Pat Murphy, Rogier Schulte, Karl Richards, Paddy Browne (2015). An Analysis of the Cost of the Abatement of Ammonia Emissions in Irish Agriculture to 2030. Teagasc.

could only be implemented at huge cost. If the Government are serious about reducing our ammonia emissions, mandatory implementation of measures combined with rigorous policy changes, and substantial funding for specific measures will be necessary, in addition to herd reduction.

Further, nutrient management plans will not be effective in protecting water quality until there is a policy change within the DAFM to recognise what both Teagasc and the EPA research has highlighted, which is to reduce nutrient runoff to water the pathway must be intercepted, and this will require site specific on farm assessments to identify and break these nutrient transfer pathways. Currently all DAFM nitrate reduction measures are dependant on generic one size fits all measures, which do not account for this site specific reality. Fertiliser 'efficiency' cannot be calculated if the requirement for fertiliser is based on flawed methodology.

General Recommendations

1. We recommend that the Department of Agriculture, Food and the Marine follow the recommendation of the Joint Oireachtas Committee on Climate Action by promptly engaging with other Departments, with the farming, environmental and scientific communities to develop a plan for the agricultural sector to align it with meeting Ireland's Paris Agreement commitments. The current consultation document to aid the development of the sector's climate and air roadmap does not satisfy this recommendation.
2. In developing a clear roadmap to address air and climate challenges, we recommend that the Department of Agriculture, Food and the Marine undertake a critical review of current national land-use policy and agricultural schemes to determine effectiveness in genuinely contributing to the Paris Agreement. This review should contribute to policy design and delivery going forward.
3. It is imperative that the direction this roadmap facilitates is one that aligns the sector with Ireland's climate obligations under the Paris Agreement, and with Ireland's legal requirements under the NEC Directive. Ensuring biosphere resilience, and deep reductions in all greenhouse gases (including methane and nitrous oxide emissions) and air pollution must form an integral part of all policy approaches in the sector between now and 2030. This roadmap must ensure policy coherence with biodiversity and water quality obligations, and underpinned with clear targets and timelines for delivery, detailed measures, and measurable outcomes for monitoring and reporting.

As demonstrated by the IPCC (2019) and proposed by the European Climate Foundation in their work on a net zero target for agriculture, there is a very clear and quantifiable hierarchy

in the effectiveness of actions to cut emissions. **We recommend that the roadmap for the sector adopts these high-level principles to underpin a programme of policy measures aimed at reducing emissions within the sector and improving land sequestration capacity:**

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, and organic soils);**
3. **Restore lost land carbon stocks.**

Specific Recommendations: We recommend that the roadmap:

1. **Assess and measure the overall environmental impacts of agri-food practices in Ireland in light of the assessment and recommendations of the IPCC on land use and climate change.** In their cross-party report (March 2019), the Joint Oireachtas Committee on Climate Action recommended that land use policy in Ireland take account of the results and conclusions of the IPCC report.
2. As also recommended by the Oireachtas Committee on Climate Action, **demonstrate stronger policy coherence between climate and biodiversity policy objectives.** This can be achieved by encouraging High Nature Value farming, incentivising low carbon farming, diversification, and promoting and supporting healthier and less ecologically damaging human diets.
3. **Establish an inclusive multi-stakeholder taskforce on diversification within the sector, in line with the recommendation of the IPCC on land use and climate change.**
4. **Put in place 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 fertiliser 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.

5. **A full life cycle analysis of ammonia emissions is necessary, which links back to the effectiveness of the ammonia abatement potential.** Any proposed measures must consider the trade-offs of using certain methodologies should be clearly highlighted, e.g. soil compaction associated with certain low emission slurry spreading methods. Most importantly, a clear funding mechanism should be identified, as without additional funding many of ammonia abatement measures will be unfeasible for farmers already under significant financial pressure. The cost of ammonia abatement will rarely prove cost negative to farmers, and as such sufficient financing is imperative.
6. **Acknowledge the failings in current nutrient management plans.** If further water pollution from agriculture is to be prevented, it is imperative that the results of recent research be implemented, with field scale models which take account of critical source areas and nutrient transport pathways, in addition to soil type, geology and precipitation mapping. Any meaningful changes can only be achieved by means of a rapid move away from the reliance on the flawed soil phosphorus test, and a focus which is primarily on the farmyard as opposed to the land itself.
7. **Facilitate early, steady and permanent cuts in methane.** 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]
8. **Prioritise ecosystem resilience, including ensuring adequate levels of soil health, 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.** Careful assessment and mitigation of the impacts on carbon sequestration and biodiversity will be required.
9. **Support a ring-fenced fund for climate mitigation, sequestration and biodiversity measures in the future CAP**, to ensure robust regulations and accountability to future CAP payments.
10. **Ireland has committed to the implementation of the Sustainable Development Goals by 2030, and this commitment must be demonstrated in the next strategy with credible and coherent measures that recognises the relationship between climate stability and food security**.[10] Food security is not simply a matter of food

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

[10] The Sustainable Development Goal to "End hunger, achieve food security and improved nutrition and promote sustainable agriculture" (SDG2) acknowledges the relationship among supporting sustainable agriculture, empowering small farmers, promoting gender equality, ending rural poverty, ensuring healthy lifestyles, tackling climate change, and other issues addressed within the full set of Sustainable Development Goals in the Post-2015 Development Agenda.

production and exports, it also has to take note of food and land impacts due to feed use, and climate impacts due to emissions from livestock and fertiliser-use. Above all, food security is determined by complex issues of access to food for people in poverty. Ireland's major food exports are products like beef, dairy products and infant formula. These food items do not provide any meaningful contribution to food security, and exploitation by food multinationals, is seriously undermining sustainable food production in vulnerable regions of the world where the impacts of climate breakdown are already being widely experienced. Failing to curb emissions from the agri-food sector here, we are amplifying the risks to food security and farmers livelihoods elsewhere. To allow this to happen with intentional policy decisions pulls into critical focus and considerably undermines our positive reputation on international development.

Enhance the development of sustainable land management practices by delivering 26.8 Mt CO2eq abatement through LULUCF actions over the period 2021 to 2030.

Question 3: Are there other actions that could be considered to maximise the contribution of sustainable land management? Is there more that farmers and the food industry itself can do?
Question 4: Have you any feedback on how uptake of these actions can be encouraged and facilitated?

In the absence of rapid and sufficient emissions reductions, achieving the full potential of carbon sequestration through land use policy will do little relative to what the scale of the challenge now requires. Using land use sinks to offset rising agricultural emissions is not scientifically justifiable. In particular, selectively choosing rapid afforestation as a sequestration measure, yet failing to protect and rehabilitate Ireland's carbon-rich peatlands fails as a sequestration strategy. Halting all peat extraction, and putting in place the necessary investment and resources to support re-wetting and restoring damaged peatland should be a major priority for Irish land use policy.

The restoration of ecosystem resilience must be prioritised to preserve the critical role of ecosystems in carbon sequestration, yet **the lack of specific and detailed references included in the draft roadmap to utilising and enhancing the full potential of nature based solutions**

for climate mitigation and adaptation suggests an inability to join the dots between the biodiversity and climate emergency.

(**On Action 5 - delivering 8,000 ha of newly planted forest per annum**): While the planting of 18.6 million trees annually may appear, on the face of it, to be a positive thing, we would question what type of trees these will be (including how will they be managed, where will they be placed, how long will they be allowed to grow for, will timber production is the primary objective or the provision of long-term ecosystem services including water, soil and biodiversity protection, carbon sequestration, flood risk management). To date, the Irish forestry model has been dominated by intensively managed industrial non-native conifer plantations dependent on unsustainable chemical inputs of fertilisers and pesticides. These monoculture blocks of conifers account for 72.8 percent of the national forest estate, of this 52.4 percent is made up of just one species, sitka spruce (*Picea sitchensis*). These plantations support low levels of biodiversity, and impact negatively on water quality, particularly on our most pristine sites, where this type of industrial forestry is a significant pressure.

In addition to the ecological impacts of Ireland's forestry model, recent EPA modelling has demonstrated that forest land (including managed forest land (maturing forest), afforestation land, and deforestation land) will become a net emitter of carbon by 2030[11], and the DAFM themselves have indicated that managed forest land has already become a net emitter of carbon due to the ratio of deforestation to reafforestation.[12] Further to that, drainage of peaty soils for afforestation will release yet further carbon, and to date peaty soil are frequently afforested (excluding areas of deep peat which forest regulations disqualify for afforestation). While a hectare of *unharvested, unthinned* Sitka sequester carbon at about the highest rate possible, a landscape of *unharvested, unthinned* native woodland, say yield class YC8, will store more carbon after 50 years and double after 100 years compared to a landscape of rotation thinned and clear-felled Sitka. Slower growing native woodland would store more carbon, and would also provide ecological resilience by means of biodiversity and water quality benefits.

As such further expansion of commercial non-native forestry plantations only serves to further incentivise an unsustainable forestry model, one which has been demonstrated to be significant pressure on some of Ireland's most threatened species, terrestrial habitats,

11 https://cdr.eionet.europa.eu/ie/eu/mmr/art04-13-14_lcds_pams_projections/projections/envxlxagq/MMR_Template_IRArticle23_table1_2019IE16042019v2.xlsx/manage_document

12 https://www.agriculture.gov.ie/media/migration/ruralenvironment/climatechange/NFAP191218.pdf (Section 4.2)

and aquatic systems. This is in the face of questionable carbon sequestration potential. Forest policy needs to be equally cognisant of the far-reaching environmental implications alongside the social and economic implications. Any potential carbon sequestration provided by monoculture forestry should not be used as a substitute for the substantial and sustained reductions required in livestock emissions. The carbon sequestration potential of the national forest estate is also being undermined by premature harvesting of younger trees.[13] As acknowledged by the Climate Change Advisory Council in their 2018 annual review, there is currently no definition of 'an approach to carbon neutrality' or any indication of a pathway for achieving this element of the low-carbon transition to 2050. In Ireland, 75% of farmland is classified as disadvantaged due to poor soil and climate. This land is ideal for agroforestry systems, which improve degraded land and are recommended for marginal land.

Because of peat extraction, disturbance, and related activities, **Ireland's 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. For this potential to be realised however, there also needs to be stronger measures put in place to protect and restore Ireland's peatlands. These peatlands are of high conservation importance and their unsustainable utilisation results in a deterioration of water and air quality. To this end, the EPA Strive Peatlands document[14] sets out management actions, which include managing of peatlands for carbon, biodiversity and water. In addition it outlines the need to manage state owned peatlands, and that the management of peatlands should involve using socio-economic instruments, and that the management should be done both for, and with the people.

We have consistently argued that if adequately managed, sequestered carbon in peatlands could provide a cheap mitigation measure, and produce 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.

[13] This was raised by the Environmental Pillar and acknowledged by the Forest Service, who admitted they were powerless to prevent this occurring once the forestry grant expired the owner can cut the trees, the old premiums were for 20 years and the new premiums since 2014 are for only 15 years. The CARBWARE project for Ireland's LULUCF reporting, in its 2012 report, warned of the consequences for the national forest Carbon accounting if this premature felling was not addressed. When combined with the low afforestation rates (new planting), down to 3,250 ha in 2019, with a COFORD recommended minimum necessity for 15,000 ha per annum to avoid deforestation, informs us that the current forestry model is completely failing to fulfill even a basic Climate change mitigation role.

[14] http://www.epa.ie/researchandeducation/research/researchpublications/strivereports/STRIVE_75_web_SC.pdf

We recommend that the roadmap:

1. **Ensure policy coherence** across all aspects of land-use policy, including the management of peat-based agricultural soils.
2. **Support a national programme of rewetting and restoration** of Ireland's peatlands based on credible carbon sinks which protect and expand peatlands, wetlands, permanent grassland on high carbon soils and native woodlands.. This should include a verifiable pathway for the rehabilitation and restoration of various peatland types in line with an established target of net sequestration. This 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. The framework for the sustainable management of Irish peatlands has already been drafted in the Strive Peatlands document, with the necessary measures already elucidated.
3. **Provide information** on how the figure of 40,000ha included in the draft roadmap was arrived at.
4. **Acknowledge and address the several flaws in the current implementation of agri-environment schemes** in Ireland (e.g. lack of ecological expertise, short-term contracts, and poor monitoring).
5. **Emphasise the role of permanent native woodland utilising continuous cover and coppice management systems** and support agroforestry policy that promotes 'the right trees in the right places', with a focus on native woodland species which have increased benefits for both agricultural and environmental outputs, including biodiversity, soil health and fertility, prevention of soil erosion, improved water quality and extended grazing seasons.
6. **Introduce a full suite of agroforestry measures** focused on native tree species to obtain the multiple known benefits, to target nutrient run off, carbon lock up, biodiversity benefits, soil and water protection, flood mitigation,and diversity of food.[15]
7. **Ensure that all afforestation should be sited and managed** so that it is not in conflict with our legal environmental obligations. Particular attention should be paid to the need to meet minimum environmental requirements ensuring no inappropriate

[15] The benefits of agroforestry include; biodiversity, water quality and soil fertility improvement, carbon sequestration, pollution prevention, stops soil erosion and improves drainage, mitigating flooding, reduction in fertiliser and pesticide runoff, reduction of fertiliser and pesticide usage. Reduction in use of fossil fuels on farms and in local community. All of these environmental benefits are measurable with no detriment to production, saving money while hitting environmental targets simultaneously. The assimilation of Agroforestry into the Irish agriculture industry will involve no great disruption or changes to the traditional way of farming in Ireland, in fact it has the potential to enhance and improve the Irish model. This will have a knock on effect of added optional incomes for farmers and sustained employment in tree nurseries and among tree planting/management contractors.

afforestation of sensitive habitats including areas where High Nature Value farming takes place, and where it may impact on high status water bodies.

8. The **inclusion of agroforestry systems as a viable component in the 30% environmental and climate measures element of the next CAP 2021-2027**, balancing production with natural environmental controls. Scrub should be recognised as agroforestry and rewarded as part of increasing our semi natural/native woodlands targets and EU biodiversity obligations. Increased tree planting under agroforestry could be used to offset nitrogen, phosphate and carbon dioxide increases. Potential also exists to support paying carbon/ecosystem services credits to farmers for mixed native woodlands with high biodiversity value.[16]
9. **Include hedgerow management as an agroforestry** measure and reward farmers to manage this valuable resource for its multiple benefits. This will necessitate a hedgerow management standard with training provided in basic sustainable hedgerow management techniques. The inclusion of hedgerows as a potential supportable agroforestry measure, if done in tandem with either the removal of agroforestry from forestry into an agriculture remit under CAP, or separate agroforestry measures between the two, might become a more attractive option for farmers and landowners. This could be combined with consistent hedgerow management, standard with training as a key component of this proposal.[17]
10. **Support the extension of a nationwide county-based hedgerow survey** and quantify the climate mitigation and adaptation functions of this resource.
11. Ensure that the **appropriate investment, resources, and monitoring and review** architecture are in place to deliver on credible long term sequestration measures.

Acting in Partnership

While Action 15 outlines that all stakeholders will be engaged through the CAP consultative committee, we would highlight that water expertise is absent from this committee. The Sustainable Water Network have not been invited to join the committee, despite requesting a place. Indeed, even An Fóram Uisce, the only statutory body representative of all stakeholders with an interest in the quality of Ireland's water bodies, have also not been extended an invite.

[16] The inclusion of agroforestry in the greening of the next CAP can be part of permanent grassland, shrubs, and trees, and this will qualify as part of a flexible approach by the EU, while targeting pollution mitigation via creation of riparian linear woodlands. In order to avail of agroforestry benefits Ireland must reintroduce forestry into its RDP (Rural Development Programme) under Axis 2: Environment and Land Management or remove from the Forestry Programme and incorporate into CAP measures for environmental services, etc. This could remove the replanting obligation under the Forestry regulations which is a major obstacle for farmers to adopt any forestry measures.

[17] See: http://www.eurafagroforestry.eu/action/policy/Lobbying_in_Brussels_for_Agroforestry

We would highlight that this Forum have an advisory role to the Minister for Housing, Planning and Local Government in relation to Government Water Policy, and as such it follows that they should be represented on this committee. This lack of water expertise is a serious oversight given the impact of agriculture on Ireland's waters and the importance of the CAP consultative committee, and one which should be redressed.

Contribute to sustainable energy and decarbonisation of energy system

> **Question 5: Are these actions sufficient, or are there others you would suggest? Is there more that farmers and the food industry itself can do?**
> **Question 6: Have you any feedback on how uptake of these actions can be encouraged and facilitated?**

Proposing indigenous biomethane injection as an energy source cannot be justified as a viable solution to averting climate breakdown. The IPCC SR15 report (2018) emphasised that rapid reduction of methane gas is vital to keeping within 1.5°C target of the Paris Agreement. The risk of leakage in the production and transportation of biomethane means that its use at scale would necessitate extremely robust and potentially costly independent regulation and monitoring of production sites.[18] Extremely difficult to deploy at scale, the development of a biomethane industry in Ireland will likely necessitate large investment and will lock in a reliance on the extensive use of nitrogen fertiliser to grow more grass, whilst increasing nitrous oxide emissions even further - a gas that can trap heat even more efficiently than carbon dioxide or methane over a 100 year period.[19]

The additional difficulty with anaerobic digestion is that while in a tightly controlled system, it may reduce methane emissions, it does not capture ammonia emissions. As such, the promotion of the biomethane industry will further exacerbate Ireland's ammonia problem, which this roadmap aspires to address. The promotion of one undermines the objectives of the other.

We recommend:

- **A hard cap on total reactive nitrogen usage in Ireland is critically necessary to limiting the current nitrogen crisis because current biogas projections by Gas Networks Ireland and others are predicated on increasing nitrogen fertiliser use still further to produce grass over and above the Food Wise 2025 animal**

[18] Methane leakage from biogas is similar to levels found in fossil gas production leaks. See: https://www.foodandwaterwatch.org/sites/default/files/ib_1906_biogas_manure-2019-web.pdf

[19] See: https://www.tandfonline.com/doi/pdf/10.1080/10934529.2018.145907

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.

- **A detailed explanation of how the significant projected increase in biomass use for energy will be balanced with competing land-use policy related to food production**, carbon sequestration, and biodiversity conservation, and justified on climate and environmental grounds.

Preparing for the Future

Question 11: What are your views on these six guiding principles in preparing for the future? Are they sufficiently comprehensive or are there others you would add?

Agriculture is one of the most climate-sensitive industries in Ireland, and if the 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. Climate impacts to food, fodder and feed supplies can be expected to increasingly affect farm and food supply resilience in Ireland, and around the world, in addition to the serious complications posed by pollinator and biodiversity loss. To illustrate this point, extreme weather events in recent years has clearly shown that farmers are at the forefront of climate impacts, with considerable risks for their mental health, on animal welfare and productivity, on farm output, and of course, on on-farm finances. 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%. 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 road-map with credible emissions reduction as its core objective will put farmers' livelihood, farmer welfare and animal productivity, and consequently, the rural economy, at risk. Every effort should be made to futureproof the wellbeing of Irish farmers.

Improving the resilience of the sector requires improving environmental sustainability and ensuring a safe and stable climate. 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. Stable incomes are essential to providing favourable environmental outcomes through land management. Improving resilience in the sector therefore must incorporate the establishment of a more financially viable model across the Irish farming sector, and support for a sustained transition for farmers to diversify into food crop production, agroforestry and establishing biodiverse and food productive woodland. This system would provide environmental dividends, and equity to farmers. Ireland must recognise that animal agriculture is an inherently inefficient use of agricultural land, and that Ireland needs to grow food, not grass.

We recommend:

1. An **emphasis on increasing farm-gate values and farm income**s, linking farm to product, improving supply-chain functionality, food and environmental ethics, and open communications between farmers, processors, retailers, consumers, policy makers, and environmental monitoring and advocacy groups.
2. In line with recommendations from the Joint Oireachtas Committee on Climate Action, the roadmap must also build resilience into the sector by **developing a Just Transition plan** for those affected by the shift away from intensive beef and dairy production.
3. **Top down policy supports for farm and crop diversification** to allow farmers to contribute to establishing a localised diverse and secure food production system, with a concomitant regeneration of rural societies and livelihoods
4. **Future CAP subsidies must represent money for public goods, with results based payments.** Farmers should be financially rewarded for reductions in emissions, providing spaces for nature and the protection of water quality.
5. Changing social norms, such as supporting societal shift towards organic, plant-based diets. Rather than see this as a threat to Irish agriculture, and attempt to counter this with 'enhanced environmental credentials', the sector should be tailored to accommodate changing consumer preferences.

Question 12: Innovation is now widely recognised as a key driver of long-term growth and sustainable development and addressing of challenges such as Climate Change. What type of approaches and processes could assist the Irish agri-food innovation system to address economic and societal challenges and facilitate increased networking, collaboration and investment?

In the absence of a stable climate and a healthy environment, it is unrealistic to presume that innovation can have any meaningful relevance or applicability. Ireland's "Irish agri-food innovation system" is fundamentally focused on scaling up animal food production, yet there is overwhelming evidence that the trajectory of global growth of animal food demand is environmentally unsustainable, inherently inefficient, produces net negative food calorie conversion, and negative health outcomes. All major research reviews (IPCC, the Lancet, the FAO), conclude that dietary change, particularly reducing beef and dairy consumption, is essential to reverse these trends and to support the SDGs.

As acknowledged by the IPCC, the world is best placed to tackle climate change and biosphere resilience when there is an overall focus on sustainability. If Ireland is to reduce emissions in line with our climate obligations, halt the decline of biodiversity, and soil, air and water quality, any future roadmap to address climate and air challenges must have credible and sustained emissions reductions as its overarching theme. If aligned with the aim of ensuring viable livelihoods, this overall focus is fundamental to ensuring a viable and productive agricultural and food production system. However, to hold any credibility, innovation must also be backed up with demonstrated evidence showing emissions reductions and improvements in other environmental indicators.

Stop Climate Chaos Coalition and the Environmental Pillar

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