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18<sup>th</sup> May 2021

EPA Reference: EPAC-1121.01

### **Re: Climate Action Plan 2021 Call for Evidence**

Dear Brian,

The EPA welcomes the opportunity to input to the preparation of the 2021 Climate Action Plan.

In February 2021 the EPA responded to a request from Minister Ryan to input to the preparation of the 2021 Climate Action Plan. Having reviewed the questions posed by the current call for expert evidence the EPA considers that the previous submission addresses the questions of relevance to the expertise of the EPA. Therefore, I am attaching the EPA's correspondence of February 2021 as the EPA's submission to the call for expert evidence.

Additionally, to be considered part of this submission, the EPA makes the following points regarding **Strategic Environmental Assessment**:

You should fully consider, as appropriate, the requirements of the Strategic Environmental Assessment Regulations (S.I. 435 of 2004, as amended) and the Habitats Directive, early in the plan-preparation process.

We also refer you to the EPA Synthesis Report on Developing A Strategic Environmental Assessment (SEA) Methodologies For Plans And Programmes In Ireland (and the pre-screening check contained within) to assist you in considering whether SEA is required for the Plan.

<http://www.epa.ie/pubs/advice/ea/developmentofseamethodologiesforplansandprogrammesinireland.html>

The EPA is happy to discuss all aspects of this submission and looks forward to working with you on the implementation of the forthcoming plan.

Yours sincerely,

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Director,  
Office of Environmental Sustainability



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17<sup>th</sup> February 2021

Re: Preparation of Climate Action Plan 2021

Dear Minister

The Environmental Protection Agency (EPA) welcomes this opportunity to input to the upcoming 2021 Climate Action Plan.

In 2020, the EPA published our State of the Environment Report - "Ireland's Environment - An Integrated Assessment 2020"<sup>1</sup> which provides an assessment of the overall quality of Ireland's environment, the pressures being placed on it and the societal responses to current and emerging environmental issues. The assessment found that the overall quality of Ireland's environment is not what it should be, and the outlook is not optimistic unless we accelerate action. The report, which forms the basis of this submission, has identified the need for national and sectoral action and full and early implementation of plans and programmes.

#### National Policy

The State of the Environment Report identified the need for an overarching national environmental policy position that integrates and delivers across multiple related strategies, plans and programmes. This recognises that environmental issues and challenges such as climate change, air quality, water quality and biodiversity cannot be looked at in isolation as they are complex, interconnected and need to be tackled in an integrated way. An overarching environmental policy position for Ireland should articulate our ambition to protect Ireland's environment in the short, medium and long-term and our commitment to live up to the image of a Clean Green Island. The forthcoming Climate Action Plan should seek to address the challenge of policy and sectoral integration in its preparation and implementation.

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<sup>1</sup> Ireland's Environment 2020 <https://www.epa.ie/irelandsenvironment/stateoftheenvironmentreport/>

## Climate Action

The next decade needs to be one of major developments and advances in relation to Ireland's response to climate change. Full and early implementation of ambitious policies and measures can deliver Ireland's current and future commitments to be a climate neutral economy and climate resilient society by 2050. The EPA supports the need for Ireland to increase the scale and pace of greenhouse gas emissions reductions and the ambition in the Programme for Government to achieve an average 7% per annum reduction in overall greenhouse gas emissions from 2021 to 2030 (a 51% reduction over the decade) is a key part of the overall achievement of the 2050 climate neutrality and climate resilience transition objective.

However, EPA greenhouse gas projections, published in 2020<sup>2</sup>, showed the difficulties that Ireland faces in achieving even a 3% annual reduction over the coming decade as committed in the 2019 Climate Action Plan.

In addition, in January 2021, the EPA and SEAI published an assessment of the impact of Covid-19 restrictions on Ireland's greenhouse gas emissions in 2020. These estimates for 2020<sup>3</sup> indicate a 6% reduction in greenhouse gas emissions relative to 2019. This is largely because of the dramatic changes in our economy and how we lived, worked and travelled as a result of Covid-19 restrictions and the economic rebound from the Covid-19 crisis is estimated to bring emissions back to previous levels, unless additional action is taken. This further underlines the scale of the challenge ahead of us.

Ireland, therefore, needs a 'green recovery' to rebuild our economy, generate new jobs and respond to climate change. As we emerge from the global pandemic, a 'green' stimulus and implementation of ambitious policies and measures can deliver Ireland's current and future commitments to a climate-neutral economy and climate-resilient society by 2050.

The EPA has a wide range of statutory responsibilities in climate change and sees these responsibilities and their implementation to be a cornerstone of the both current and future Climate Action Plans. These include:

- National greenhouse gas inventories and projections assessment and reporting
- Coordination of national research on climate change
- Emissions trading regulation
- Secretariat to the Climate Change Advisory Council
- Secretariat to the National Dialogue on Climate Action
- Intergovernmental climate science support to DECC
- State of the environment reporting and Strategic Environmental Assessment
- Circular economy and food waste
- Advice and assistance to Local Authorities
- Industrial and chemical regulation

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<sup>2</sup> <http://www.epa.ie/pubs/reports/air/airemissions/ghgprojections2019-2040/>

<sup>3</sup> <http://www.epa.ie/pubs/reports/air/airemissions/ghgcv-19/#d.en.70409>



This submission reflects the key findings of EPA assessments, data and insights and puts forward priority measures that have been identified as necessary supports for Ireland's climate transition. Links to these documents are included in Appendix I, which should also be considered as part of the EPA submission. The EPA's submission, from December 2020, on the interim annex of actions is included in Appendix II.

The EPA is happy to discuss all aspects of this submission and looks forward to working with you on the implementation of the forthcoming plan.

Yours sincerely,

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Laura Burke,  
Director General

CC: Mr. Brian Carroll, Assistant Secretary, Department of the Environment, Climate and Communications

## **Submission by Environmental Protection Agency on 2021 Climate Action Plan**

### **Introduction**

The national ambition to achieve an average 7% per annum reduction in overall greenhouse gas (GHG) emissions from 2021 to 2030 (a 51% reduction over the decade) is a key part of the overall achievement of the 2050 climate neutrality and climate resilience transition objective. In this regard, the EPA supports the need for Ireland to increase the scale and pace of greenhouse gas emissions reductions to achieve its objectives. However, recent EPA greenhouse gas projections, published in 2020<sup>4</sup>, show the difficulties that Ireland faces in achieving a 3% annual reduction over the coming decade which, in particular, requires full implementation and delivery of the Climate Action Plan 2019.

In addition, recently published estimates for 2020<sup>5</sup> indicate a 6% reduction in greenhouse gas emissions relative to 2019. This is largely as a consequence of the dramatic changes in our economy and how we lived, worked and travelled as a result of Covid-19 restrictions and the economic rebound from the Covid-19 crisis is estimated to bring emissions back to previous levels, unless additional action is taken. This further underlines the scale of the challenge ahead of us.

To meet this challenge, the forthcoming Climate Action Plan must focus on accelerating implementation of mitigation plans and strategies as well as identifying additional measures to meet both shorter-term international obligations and longer term (2050) targets to reduce greenhouse gas emissions.

Ireland's emergence from the pandemic crisis presents an opportunity to stimulate economic recovery through a 'green investment' lens and so avoid technical and infrastructural spend that locks us into carbon-intensive, and otherwise unsustainable, consumption and production behaviours and technologies. Full alignment between the Climate Action Plan 2021 and the forthcoming revised National Development Plan will be critical in this regard.

### **Public Engagement: The National Dialogue on Climate Action (NDCA)**

- The EPA recommends a continued strong emphasis on citizen engagement in Climate Action Plan 2021. This engagement must be targeted and evidence-based and recognise that different approaches and interventions are required for different people. The EPA, as part of the Secretariat to the National Dialogue on Climate Action (NDCA) and through the establishment of a National Climate Change Behavioural Insights and Implementation Unit, can provide this evidence.

The EPA, as part of the Secretariat to the NDCA, is establishing a National Climate Change Behavioural Insights and Implementation Unit. We have commenced work on "Climate Change in the Irish Mind" a national baseline study and reports on Irish behaviours and attitudes around climate change. This work will support national coordination, networking and capacity building across and between stakeholders. Building this capacity within the NDCA will provide a solid foundation, grounded in social science, to facilitate the changes required to effectively engage citizens and achieve a transition to a low-carbon, climate resilient future.

In terms of stimulating the public debate, the EPA will continue to host the EPA's Climate Lecture Series. These recognise that awareness, engagement and activation of the public trigger discussions and debate of the latest science, policy issues and direction of any resultant policy decisions and gives a mutual understanding of the issues at the heart of the climate debate.

<sup>4</sup> <http://www.epa.ie/pubs/reports/air/airemissions/ghgprojections2019-2040/>

<sup>5</sup> <http://www.epa.ie/pubs/reports/air/airemissions/ghgcv-19/#d.en.70409>

## Climate Adaptation

- The EPA recommends an on-going focus on good governance and integration of a wide range of actors in effective climate adaptation planning. This will be supported by Ireland's Climate Information Platform, Climate Ireland.

Key sectors and all local authorities now have climate change adaptation frameworks in place. The Climate Action Plan 2021 should continue to support effective and timely implementation of these frameworks which will need good governance and oversight supported by the availability of information and knowledge systems.

Climate Ireland is Ireland's Climate Information Platform, a central source of climate data and information for Ireland. The Platform supports local, regional and sectoral decision-makers in the development and implementation of adaptation plans and strategies. Climate Ireland recently came within the remit of the EPA. In 2021, the EPA will continue to support - through provision of information/data, decision tools and capacity building - sectors and local authorities tasked with developing and implementing adaptation strategies. We will also develop and implement a new governance and delivery model for Climate Ireland within the remit of the EPA.

## National greenhouse gas inventories and projections assessment and reporting

- Monitoring and tracking of measures within the Climate Action Plan should be underpinned by evidence from National Inventories and Projections. EPA will support this through further development of inventories and projections to meet national, regional and local needs including further developing knowledge of landuse emissions and removals.

The EPA is mandated to produce annual national greenhouse gas inventories and projections to meet reporting obligations to the EU and the UN. These provide an independent assessment of Ireland's progress towards emissions reductions and informs climate policy development by tracking progress against targets, highlighting national sectoral trends and main sources of emissions and the impact of associated policies and measures, as well as the provision of expert technical input, insights and analysis. The data and EPA assessments are proactively communicated to a broad audience and are a key feature of Ireland's discourse on Climate Action.

The EPA's greenhouse gas inventories and projections will continue to provide pivotal inputs to strengthen the knowledge base for climate policy development in Ireland. In 2021 the EPA will also support improved local and regional knowledge of emission sources and sinks by developing spatial outputs (including Landuse Mapping) which will assist more targeted climate action. Other areas that the EPA is progressing include developing expertise on "consumption-based" emissions calculation to provide a complete picture of greenhouse emissions related to both production and consumption.

## EU Emissions Trading System (ETS)

- Insights from Ireland's participation in the EU Emissions Trading System can enable greater understanding of emissions from Ireland's ETS sector. The EPA can provide this evidence and insight as the authority for implementation of the EU Emissions Trading System in Ireland.

The EPA implements the EU Emissions Trading System (ETS) in Ireland since 2003 for large installations and, since 2009, for the aviation sector. In addition, the EPA has responsibility for administering Ireland's National Accounts as part of managing the State's compliance under the Kyoto Protocol, EU Effort Sharing Decision and future EU Effort Sharing Regulation.

From 2021 the EPA will provide greater accessibility to ETS data providing insights arising from EPA's role in regulation of large energy users and aviation. This will include an annual summary report of the ETS sector emissions, highlighting, for example, key trends and sectors such as aviation. This will be published to the new greenhouse gas web portal. In addition, ETS verified emission data for Irish installations will be made available on this web portal.

## Climate Research and systematic observations of the climate system

- The EPA recommends that the Climate Action Plan 2021 has a strong commitment to research and in particular recommends:
  - Sustained research budget funding, and continued engagement with EU and European Joint Research Programmes
  - Commitment for on-going engagement between the research community and policy makers and cross Departmental contribution to preparation of the next national Research Strategy (Successor of Innovation 2020) specifically with respect to addressing Climate Science and Policy knowledge needs.
  - National support for participation in relevant international infrastructures and networks such as ICOS
  - Ongoing commitment to periodic synthesis and assessment of climate research to highlight climate research needs and to inform research prioritisation

The EPA has a statutory role in the coordination of environmental research in Ireland, which includes climate research. Since 2016, the EPA has funded over 90 research projects relevant to the climate area, representing a commitment of € 19.4 million across the three Pillars for climate-related research over the period 2016-2020. The country's climate science research capacity and supporting infrastructure are key national resources to inform action on climate change. Research informs understanding and provides evidence of the current and projected impacts of climate change and action on the Irish environment, society and economy. It also informs policy development and enables an assessment of its effectiveness as the country plans and implements climate action, mitigation and adaptation measures.

The EPA is currently finalising its EPA Research 2030 Framework, which is a 10-year high-level roadmap for the EPA Research Programme over the period 2021 – 2030 (to be launched in 2021). The EPA Research 2030 thematic structure will comprise four interconnected hubs that bring an integrated and cross-sectoral approach, enabling holistic management and protection of our environment, namely:

- Addressing Climate Change evidence needs;
- Delivering a healthy environment;
- Facilitating a Green and Circular Economy; and

- Protecting and restoring our natural environment

As part of this the EPA will include a 'fast-track to policy' funding scheme, to facilitate short evidence-based reviews and assessments. In addition, the EPA will put in place knowledge transfer activities which will support the development and implementation of the 2021 Climate Action Plan.

The EPA has commenced the process of producing Ireland's 5 Year Assessment Report which will deliver an assessment of a national understanding of climate change based on scientific research and systematic observations in Ireland, and linked EU and global analysis. This will inform decision making on actions to address climate change and will inform the development of future climate action plans and their implementation. It will have four thematic volumes published over 2021-2023

- Science: Ireland in a changing world
- Achieving climate neutrality by 2050
- Being prepared for Ireland's future climate
- Realising the benefits of transition and transformation

### **Public Sector - Leading by example**

- The EPA recommends that green public procurement be mandatory to stimulate a critical mass of demand for sustainable goods and services, while reducing the environmental/carbon impact of providing services. The EPA will support this mandatory requirement through provision of guidelines, training and measuring.

The Irish Government's annual public sector purchasing accounts for 10% to 12% of GDP. This provides the public sector with significant influence over the provision of more resource-efficient, less polluting goods, services and works within the marketplace. A wide range of international policy instruments reference sustainable or green public procurement (GPP) as an important tool in effecting environmental change. Recent GPP-related policies at the national level include the following<sup>6</sup>:

- Waste Action Plan for a Circular Economy: Ireland's National Waste Policy 2020-2025
- Climate Action Plan 2019: To Tackle Climate Breakdown
- Circular 20/2019: Use of Environmental & Social Considerations in Public Procurement
- The Local Authority Climate Charter
- 2020 Programme for Government: Our Shared Future

The EPA, through the National Waste Prevention Programme, is an advocate and actor in this area and, in particular, has:

- Updated EPA guidance on GPP which will be published in 2021
- Developed an upskilling programme for procurers and specifiers
- Developed measuring and reporting system for Government departments
- Developing a training programme for suppliers (2021)

In the Climate Action Plan 2021, the EPA recommends that "leading by example" and, in particular, green public procurement be a cornerstone for innovation and demonstration to stimulate a critical

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<sup>6</sup> Additional detail on relevant policies provided in Annexe-1.

mass of demand for more sustainable goods and services, while reducing the environmental/carbon impact of providing services. In this regard, green public procurement should be mandatory for public sector organisations.

### Greening the EPA

The EPA aims to be an exemplar public sector organisation in our efforts to decarbonise our fleet and reduce energy usage in our buildings. In recent years, we have invested in renewable and cleaner heating options such as heat-pumps and biomass to heat our buildings and we have ambitions to extend the use of photovoltaic cells. In addition, we have increased electric and hybrid vehicles in our vehicle fleet with charging points now at all office locations.

Since 2010, the EPA has maintained an Environmental Management System (EMS) certified to the international standard ISO14001. This facilitates a continuous improvement cycle and allows us to plan for further improvements. Particular achievements are:

- reduction of greenhouse gas emissions of 96 tonnes from 1,765tn CO<sub>2</sub>eq in 2016 to 1,669tn in 2019
- a 54% reduction in water usage since 2010
- a 50% reduction in our energy usage since 2006
- over-achievement of our 2020 targets as part of Ireland's National Energy Efficiency Action Plan (NEEAP).

We are continuing to refine how we monitor and report carbon emissions with a view to setting ambitious targets and striving to become an exemplar public sector body. This includes:

- Active membership of OPW's Optimising Power at Work programme and the SEAI Public Sector Partnership Programme
- Continuing the programme to upgrade all office, laboratory and exterior lighting to energy efficient LED lighting, which has already delivered energy and carbon reductions in Monaghan and Castlebar offices.

### **Waste and Circular Economy**

- The EPA recommends a continued alignment between the objectives of the circular economy and climate action. The EPA will support this through leadership, supports and knowledge and evidence - through the EPA's new Circular Economy Programme incorporating Ireland's National Waste Prevention Programme - and our regulatory roles.

Achieving future EU recycling targets, dealing with capacity challenges and achieving the circular economy goals will be dependent on ambitious policy and effective implementation of waste legislation. The publication of a new national waste policy, a Waste Action Plan for a Circular Economy, is welcome and brings a renewed impetus for change. Designing out waste & keeping materials in use longer will target the 45% of emissions associated with production of goods and food. The circular economy has a critical role to play in achieving climate targets at national and global levels. Influencing consumption and production patterns is critical for controlling greenhouse gas emission levels and the carbon footprint of these factors along with looking to reduce waste generation will be an integral part of this programme.

The EPA's National Circular Economy Programme will work closely with stakeholders including DECC to realise the potential of circularity as a climate action. This will contain the main interventions and knowledge to grow and mainstream the circular economy in Ireland and, in particular, will:

- Provide leadership on the circular economy to improve coherence and alignment of national, regional and local activities and ensure maximum impact
- Maintain a competitive programme of supports to drive the circular economy through providing innovation grants and seed-funding to nationally-relevant initiatives
- Implement actions that build knowledge and an evidence base to inform circular economy development in Ireland, and to report on progress towards greater circularity
- Realise the enterprise opportunity by supporting new business models; promoting resource efficiency; and retaining material value through enhanced recycling.

### Food Waste Prevention

- The EPA recommends a strong commitment to food waste reduction and to achievement of a 50% reduction in food waste by 2030, as articulated in the previous Climate Action Plan and the Sustainable Development Goals. The EPA will support the development of a supporting strategy and roadmap through its food waste prevention programme.

More than one quarter of all food produced is wasted worldwide. According to the IPCC, global food loss and waste contributed 8-10% of total anthropogenic GHG emissions during 2010-2016. In Ireland, we generate more than one million tonnes of food waste every year which represents a carbon footprint as high as 3.6 million tonnes of carbon dioxide equivalent. The climate-focussed NGO, Project Drawdown, show reducing food waste as the third most important action delivering a potential atmospheric CO<sub>2</sub>-eq reduction of 70.53 gigatonnes.

The EPA leads a major programme to drive awareness and action on food waste prevention to householders as an immediate, low-cost and effective personal climate action; and to businesses as a significant source of cost-savings along with being a response to sustainability ambitions. The Programme undertakes campaigns and supports leading to measured reduction in food waste in households and businesses.

The Waste Action Plan for a circular economy identifies the need for a national food waste prevention strategy. The EPA's food waste prevention programme will work collaboratively with Government to support the development of such a strategy and implementation roadmap to achieve the target for 50% reduction in food waste by 2030, as articulated in the previous Climate Action Plan. Additionally, the EPA will implement a strategy and a roadmap for delivery of household-food-waste prevention building on its successful food waste prevention campaigns. Business focused food waste reduction measures will focus on driving change across the Retail, Distribution, Processing and Manufacturing sub-sector and reducing food waste in the Hospitality and Food Service sectors.

## Climate Finance

- The EPA recommends alignment of public investment with climate neutrality and climate resilience and, in particular, alignment between the Climate Action Plan 2021 and the forthcoming revised National Development Plan.
- In addition, the EPA recommends a robust carbon price and welcomes the proposal to increase the price of carbon to €100/tonne by 2030.

Public and private finance will be a necessary support and catalyst for climate action. Public funding across the board must be consistent with the transition to climate neutrality and climate resilience by 2050. Measures such as Green budgeting are welcome however more is needed. Monitoring and quick phase-out of fiscal supports and investment that are inconsistent with climate neutrality and climate resilience are also required. Alignment of the Climate Action Plan and the forthcoming revised National Development Plan are critical in this regard. Creative solutions are required to ensure that public finance also has the effect of catalysing private action. Climate action can serve as a lever to attract more international finance flows to Ireland. The European Investment Bank has a mandate to increase the share of its financing dedicated to climate action and environmental sustainability to reach 50% of its operations in 2025. This represents a significant increase in finance available for climate action and is a key opportunity for Ireland if appropriate proposals can be developed. Irish sovereign green bonds are also an instrument that can successfully leverage private finance for public investment.

Creating the right conditions for private investment in climate action is required. This can be achieved by reducing uncertainty through measures such as subsidies that support a guaranteed payback on investment (tax credits or renewable electricity supports) and increasing certainty on climate policy through a long-term strategy (post-2030). A robust carbon price whether via the EU Emissions Trading Scheme or the carbon tax is another key enabler of private climate action that must be maintained. An appropriate price for carbon will be central to driving low-carbon investment. The EPA welcomes the proposal to increase the price of carbon to €100/tonne by 2030 as set out within the Programme for Government. The acceptability of this price across society will depend on the efficiency of recycling of revenues to avoid fuel poverty and fund retrofitting of homes. The price of €100/tonne needs to be kept under review, particularly for the non-ETS industrial and business sector, in view of the rising price of carbon within the EU ETS and the increased climate ambition in the EU Green Deal.

Under the UNFCCC, Ireland as a developed country is committed to mobilising finance to assist climate action in developing countries. International climate finance represents an opportunity for Ireland to enhance its relationship with developing countries, which have been focused on adaptation and resilience for a number of years, and share learning on the response to climate change. Engagement has the potential to open up new markets for green and low-carbon goods and services for the benefit of all Parties.

## Agriculture

- In tackling agricultural pressures on the environment, the EPA recommends adoption of a holistic farm and catchment-level approach, encompassing all environmental pressures
- New measures must go beyond improving efficiencies and focus on reducing total emissions by breaking the link between animal numbers, fertiliser use and deteriorating water quality
- Climate Action Plan 2021 should be aligned to Ireland's Agri-Food Strategy 2030 and encourages the promotion of more widespread high-nature-value farming initiatives. The Plan should drive the development of supporting agri-environmental schemes that provide payments for results-based, ecosystem services.

EPA data shows that economic growth in the agri-food sector in recent years is happening at the expense of the environment, as evidenced by trends in emissions, water quality and biodiversity all going in the wrong direction. Ireland's reputation as a food producer with a low environmental footprint is at risk of being irreversibly damaged. Business-as-usual scenarios will not reverse these trends. New measures must go beyond improving efficiencies and focus on reducing total emissions by breaking the link between animal numbers, fertiliser use and deteriorating water quality. Measures are also needed to address new EU strategies including the Farm to Fork Strategy, which sets ambitious but sustainable targets to 'transform the EU's food system'. The adoption of a more holistic farm and catchment-level approach, encompassing all environmental pressures, will be fundamental to progress towards more environmentally sustainable and carbon-neutral food production.

Ireland cannot achieve its climate ambitions without the agricultural sector delivering its contribution. The 2019 Climate Action Plan sets out measures to reduce cumulative emissions in the agricultural sector range of 16.5-18.0 Mt CO<sub>2</sub>eq over the period 2021-2030. The measures identified to achieve this target, including the Teagasc Marginal Abatement Cost Curve for Irish Agriculture Climate abatement require widespread on-farm adoption. Actions that can be adopted quickly and effectively to stabilise methane emissions should be underpinned by policy measures. Measurable, reportable and verifiable data and on-the-ground verification of their use for inclusion in national emissions inventory and projection estimates is required and should be an action with the new Plan.

The Climate Action Plan 2021 and Ireland's Agri-Food Strategy 2030 should be aligned and encourage the promotion of more widespread high-nature-value farming initiatives. The Plan should drive the development of supporting agri environmental schemes that provide payments for results-based, ecosystem services. The current model of payments for costs incurred or income foregone' promotes a concept that farming with the environment is a burden or results in negative outcomes for the farmer which is not accurate or effective. Research and assessment undertaken by CSO and ESRI (latter funded by EPA) identify that there exists within the national taxation and subsidy system a series of reliefs that are environmentally harmful, a number of which occur in the agri-food sector. Such market failures need to be identified and removed from the taxation code and subsidy schema as they are incompatible with sustainability ambitions.

Supportive programmes such as Teagasc guidance measures, the Smart Farming Programme and the Agricultural Sustainability Support and Advisory Programme need to be rolled out more widely to deliver quantifiable environmental outcomes. Support and promotion of sustainable farming practices across all agricultural sectors can be achieved through the establishment of case studies, networks, knowledge exchange, supports & tools. The farmer led Smart Farming initiative operated in partnership by the EPA and IFA is an exemplar programme in this area, which has demonstrated reduced environmental impacts while delivering savings and efficiencies to participating farmers. On average, farmers who participated in Smart Farming in 2020 identified reductions of 9% on their greenhouse gas emissions, while also generating average cost-savings of €5,600. The Smart Farming Programme and other similar models should be reflected in the Climate Action Plan. Such initiatives could be scaled up to facilitate more rapid and widespread transfer of knowledge on the use of best practice to reduce environmental emissions at farm level.

Development and implementation of a food labelling system for national produce can provide consumers (national and international) with clear purchasing decision support information on

carbon intensity (including the transport to market carbon intensity), and sustainability of products.

### **Landuse, Landuse Change and Forestry**

- The EPA recommends improved carbon storage through protection of peatlands, increased levels of forestry and woodland, and changes to land management practices. Where land management is providing a store for carbon, this should be maintained or enhanced. Where land management is resulting in emissions of carbon dioxide, this source should be reduced or eliminated, and where land is degraded or has lost its ability to absorb or store carbon dioxide it should be restored.
- An integrated national approach to land mapping is needed and should be supported in the new Climate Action Plan. The EPA will support this through its spatial land-use and land cover mapping projects which are underway and provide expertise in developing knowledge and systems to account for greenhouse gas emissions and removals.

We need to continue to improve our knowledge of soils and the functions and services they provide. Careful management of soil enrichment and land management activities will minimise greenhouse gas emissions as well as nutrient sediment losses into water catchments. This needs to happen from the national policy level to the local management scale, covering cross sectoral activities on farms, forest plantations and peatlands and within urban and rural areas. A progressive approach to land cover, land use and land management is required to promote land practices that are sustainable and right for our environment and our people. Implementing such an approach will help coordinate, prioritise and measure Ireland's response to significant environmental issues such as climate change and the decline in nature across multiple sectors.

There must be an integrated national approach to land mapping and this should be supported in the new Climate Action Plan. National land cover mapping is well under way and due for completion in 2021. The EPA's spatial land-use mapping project is also underway with a steering committee established including representatives from DAFM and Teagasc. This Land use mapping project will build on the land cover map to support emissions and removals reporting. These are needed to avail of the 26.8Mt land-use emissions removal allocation under the EU Effort Sharing Decision to 2030 in Ireland's national greenhouse inventory.

In addition, the EPA estimates and reports to the EU and UN greenhouse gas emissions and removals from these activities on an annual basis and this expertise is available to develop and improve accounting for carbon sinks. Furthermore, continued research around the topic of LULUCF is required to ensure systems, knowledge and evidence continues to develop.

#### Protecting Peatlands

The Climate Action Plan provides an opportunity to lever a concerted effort to fully implement the commitments of the strategies and plans to protect and restore peatlands.

Ireland must continue the transition from peat to using cleaner, more renewable sources of fuel. Nationally, there needs to be a concerted effort to fully implement the commitments of the National Peatlands Strategy and the National Raised Bog SAC Management Plan 2017-2022 (DCHG, 2018). Rewetting degraded peatlands will help eliminate and reduce losses of carbon.

Where unauthorised peat extraction activities are identified, these should cease.

The EPA is supporting the assessment of the status and mitigation potential for other commercial and private peat extraction across Ireland, through research projects and EU LIFE project on Bog Restoration.

### Forestry

With regard to forestry, the level of forest cover needs to increase, supporting further broadleaf planting, species diversification and maximising sustainable forest management practices (such as the right tree in the right place). We also need to better understand the barriers to uptake of forestry by landowners, to help increase the amount of planting of native woodlands, agroforestry and forestry for fibre.

In Ireland, forest-based solutions are currently the main focus for removals. The development of wider solutions across all land use types and systems is needed. This should focus on sustainable land management to enable the accumulated removal of carbon. Additional technologies will also be needed, including direct air capture and bioenergy with carbon capture and storage. Many information and knowledge gaps exist with respect to these areas and technologies are not yet fully mature. Steps to address these gaps and to expedite this process are needed.

### Blue Carbon

As an island nation the role for our seas and coastal margins in carbon fluxes are not fully understood. The Climate Action Plan 2021 should commit to improving our knowledge and understanding of the potential of blue carbon sequestration in marine environment. A programme of research to build a knowledge base to support and inform policy in this area is recommended.

### **Transport**

- The EPA recommends a holistic and integrated systems perspective for the transport sector following the Avoid, Shift Improve hierarchy. This will multiple benefits such as reducing greenhouse gas emissions, improving air quality and enhancing wellbeing.
- The Climate Action Plan 2021 should reflect public sector leadership by decarbonising all public transport across bus and rail networks to the lowest carbon alternatives. Improving walking and cycling facilities in cities and large urban centres to encourage these modes of travel in a safe and sustainable way is an important part of the response
- Freight transport is an important component of the transport emission profile, and development of a strategy for decarbonising freight transport should be included in the forthcoming plan

Pre- Covid-19 transport was the fastest growing sector in terms of GHG emissions with increases in GHG emissions from the sector recorded in 5 out of the 7 years up to 2019 and representing 20 per cent of Ireland's total national emissions that year. While challenging, the long-term changes required in transport can deliver multiple benefits in reducing greenhouse gases, tackling growing traffic congestion, reducing air pollution and noise emissions, and enhancing our wellbeing and the economy. Improvements in energy and carbon efficiency are necessary but not sufficient, otherwise we may tackle the climate challenge by achieving 'greener congestion' with attendant long-term economic, health and wellbeing impacts. A sustainable mobility transformation is required, within the next decade, whereby necessary journeys are made by sustainable modes such as walking, cycling and public transport, followed by electric vehicles where unavoidable. For this, measures need to be fast tracked.

Reducing greenhouse gas emissions and making transport in Ireland sustainable requires the implementation of fundamental and significant policy changes, following the Avoid, Shift, Improve (ASI) hierarchy. This approach requires a holistic and integrated systems perspective and offers many benefits, but also has key requirements. Avoid is achieved through innovative spatial planning, compact development and demand management; shift through moving to active and sustainable modes of walking and cycling, followed by rail and bus; and, finally, improve through the energy and carbon efficiency of vehicles, including improved designs, choosing smaller vehicles, and switching to alternative power trains and renewable fuels. Comparison with international evidence suggests that the avoid and shift measures in Ireland could benefit from enhancement. To effectively implement the framing and thinking of ASI, Ireland needs action in three key areas: (i) evidence and scenarios, (ii) policies and measures and (iii) governance and investment.

International evidence suggests that carbon taxes can complement regulatory measures, as part of an appropriate policy mix, but also have limitations, as passenger demand is 'inelastic'. Improving carbon efficiency, through raising biofuel blend rates to 10-12 per cent of petrol and diesel, can be effective, but has historically been subject to sustainability challenges. Compressed natural gas for road freight provides a marginal improvement on life-cycle greenhouse gas emissions.

Other responses required by the transport sector include developing a strategy for freight transport in Ireland, which is an important component of the transport emissions profile. Research has shown a key plank of improving the sustainability of freight in the EU is achieving a modal shift to rail, yet Irish rail freight has seen decades of decline and a shift in the opposite direction: to road. McKinnon (2018) applies the avoid-shift-improve framework to future freight transition, through a hierarchy of five decarbonisation initiatives: demand management; shifting to lower intensity modes; logistics and vehicle loading; improving energy efficiency; and reducing carbon intensity by using electric vehicles, compressed natural gas vehicles etc.

It is critically important for the public sector to show leadership and decarbonise all public transport across bus and rail networks to the lowest carbon alternatives. Improving walking and cycling facilities in cities and large urban centres to encourage these modes of travel in a safe and sustainable way is an important part of the response. Improving the safety of rural roads for walking and cycling would also have multiple co-benefits for rural communities.

### **Energy (Electricity and Built Environment)**

- Exiting from coal and peat burning (including co-firing with biomass) in energy production must be a top priority to drive decarbonisation in transport, residential and other sectors with a high dependence on electricity. This will reduce emissions and deliver co-benefits in terms of air quality.
- Future housing and building standards should be designed to provide energy-efficient and cost-effective housing and buildings.

Almost 90 per cent of Ireland's total energy use is provided by combustion of, mostly imported, fossil fuels. This is not sustainable. The resultant emissions are damaging for our health and our environment and continue to drive climate change. To transform this situation, we need to start fast-tracking the currently identified policy measures and other necessary solutions. Strategic planning is required to transform this situation by 2050, including accelerated actions to 2030.

Exiting from coal and peat burning (including co-firing with biomass) in energy production will drive decarbonisation in transport, residential and other sectors with a high dependence on

electricity and deliver co-benefits in terms of air quality. The investment and implementation of currently available solutions to enhance efficiencies and utilise Ireland's renewable energy potential needs to be urgently rolled out.

Current fossil carbon lock-ins in electricity generation but particularly in buildings and transport need to be assessed, quantified and managed as part of the rapid transition away from these energy sources. Such a transition will require effective frameworks for investment. The redirection of fossil fuel subsidies can contribute to this process.

The combination of poor insulation and fossil energy heating systems represents a significant systemic and household-level lock-in to energy-related emissions. There are considerable benefits to addressing these lock-ins through reducing energy waste and losses (e.g. through increased building energy efficiency). This improves comfort and has long-term cost savings and health and climate benefits.

Energy ratings on appliances and tools have also been a factor in reducing energy demand. The BERs for houses and buildings increase awareness of energy use and of the benefits and savings that accrue from energy efficiency and investments. This trend in increasing energy labelling is also increasing consumer awareness but there are barriers to consumer uptake. The implementation of a transition strategy that encompasses energy providers and users is needed. Systemic, institutional, technological and financial barriers need to be addressed. Energy-efficient choices tend to require significant upfront investment, with savings occurring over time. Approaches to address these issues are needed, including the provision of financial and fiscal instruments that enable or advance the efficiency transition (e.g. linking loans and mortgages for energy-efficient choices/investment or linking taxation/value-added tax to efficiency ratings). The engagement of citizens and stakeholders is essential.

Residential energy use in Ireland peaked in 2010. Fuel type, building standards and the efficiency of appliances fundamentally determine the demand for energy and environmental burden. In the short term, residential energy use can reflect weather events, with high use, and loss, during cold spells. Future housing and building standards should be designed to provide energy-efficient and cost-effective housing and building. The nearly zero energy building standards came into force for public buildings in January 2019 and all other buildings in January 2021. Small-scale energy solutions such as solar panels and emerging energy storage solutions can contribute to reduced dependence on combustion for energy and generate energy for community use, thereby increasing resilience. Deployment of these standards and solutions can ensure energy security, comfort and low operational costs along with high air quality and low to zero carbon dioxide emissions.

## **Industrial Emissions**

- The Industrial Emissions Directive and earlier legislation have delivered concrete achievements in reducing pollution. A transition to a greener industrial sector will require integrated approaches, with stronger control of pollution at source and the use of innovative technologies.
- Several of the sectoral Best Available Techniques (BAT) conclusions produced in the past few years will require a technical assessment of almost half the existing EPA licences from the intensive agriculture, chemical, energy, food and drink, and waste treatment sectors in the coming years. This process represents an opportunity to modernise installations and keep environmental protection in Ireland in line with developing technologies and standards.

The environmental performance of Irish industry has improved in recent decades. However, industry still generates a significant amount of hazardous waste and emissions discharged to the environment, especially air emissions.

There have been significant and sustained decreases in releases of certain air pollutants from a range of industries in the period 2007-2017. Releases of sulphur oxides, nitrogen dioxide, nitrogen oxides and PM10 particulate matter have significantly decreased. These decreases are due to changes in the fuel type used at combustion plants and improvements in abatement technology at these and a range of other facilities, including the cement, food and drink, and chemical sectors. Decarbonisation of industry, stimulated by climate change mitigation policies, is expected to be the main driver of further reductions in industrial air pollutant and greenhouse gas emissions in the medium and long terms.

While the Industrial Emissions Directive and earlier legislation have delivered concrete achievements in reducing pollution, a transition to a greener industrial sector will require integrated approaches, with stronger control of pollution at source and the use of innovative technologies. These policy-driven reductions are a clear success story to build upon. Challenges, however, remain for the energy sector in terms of transforming it to meet the environmental and decarbonisation targets now required.

The food and drink (agri-food) sector continues to face challenges in maintaining environmental compliance as the industry adapts to increased agricultural production and intensification under the Harvest 2020 and Foodwise 2025 strategies.

Positive trends include recent increases in industrial waste transfers undergoing recovery and reductions in waste undergoing disposal. The change can be viewed as movement towards the implementation of EU waste policies where increasing emphasis is placed on the higher tiers of the waste hierarchy of prevention and minimisation, reuse, recycling, recovery and disposal. However, the overall increase in quantities of hazardous and non-hazardous waste transfers suggests that there is scope for improvement in resource use and consumption in industrial facilities.

The quantities of hazardous waste generated in Ireland have increased since 2015, driven mainly by increases in incinerator ash and contaminated soils. While domestic treatment capacity has increased for some hazardous waste types in recent years, Ireland has not moved significantly towards self-sufficiency. A lack of domestic infrastructure, in part due to a lack of economies of scale and the often more favourable cost option of treatment abroad, means that Ireland remains heavily reliant on export, with 65% of our hazardous waste being exported for treatment to other EU member states in 2019.

Ensuring that industry contributes to a climate neutral and circular economy is a key element of the European Green Deal. A review of the implementation of the Industrial Emissions Directive across Europe is under way at present. The revision will assess options to ensure ongoing (and enhanced) environmental protection from industry, across eight areas of focus including:

- Identifying sectors outside the IED scope that cause high pollution and for which the IED could be an appropriate policy instrument
- Comparability of Member States' implementation of EU requirements, including best available techniques (BAT) conclusions, permits and verification
- Contribution to reducing industry emissions to water
- Elaboration of BAT conclusions
- Public access to information, participation in decision making and access to justice
- Contribution to the circular economy
- Interaction with industry decarbonisation efforts

- Coherence with other EU legislations including the Water Framework Directive, the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation and the IED.

Industry will need continued improvements in emission reductions and abatement technologies. Several of the sectoral Best Available Techniques (BAT) conclusions produced in the past few years will require a technical assessment of almost half the existing EPA licences from the intensive agriculture, chemical, energy, food and drink, and waste treatment sectors in the coming years. This process represents an opportunity to modernise installations and keep environmental protection in Ireland in line with developing technologies and standards.

Through CIRCULÉIRE –The National Circular Manufacturing Platform, EPA, with DECC and Climate KIC, will deliver a €4.5m public-private partnership employing systems thinking to co-create circular solutions to real-world industry challenges through capacity building, working groups and an Innovation Fund. CIRCULÉIRE's objective is promote circular manufacturing, supply chains and business models to deliver significant reductions in CO2 emissions and waste for Irish industry.

## Appendix I

## Links to EPA Publications

Ireland's Environment - An Integrated Assessment 2020

<https://www.epa.ie/irelandsenvironment/stateoftheenvironmentreport/>

Inventories and Projections Reports:

<https://www.epa.ie/ghg/documents/>

The impact on 2020 greenhouse gas emissions of Covid-19 restrictions

<https://www.epa.ie/pubs/reports/air/airemissions/>

## Appendix II

Mr Eamonn Ryan TD  
Minister for Department of Communications,  
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LoCall: 1890 33 55 99

December 18th, 2020

**Re: Preparation of Climate Action Plan**

Dear Minister,

I refer to your letter of November 19<sup>th</sup> 2020 in relation to the preparation of the next Climate Action Plan for Ireland that will ensure delivery of 2030 targets and commitments, preparation for climate neutrality by 2050 at the latest and in doing so establish Ireland as a leader in responding to climate change.

I welcome the development of the next Climate Action Plan and the strong focus on implementation including actions with specific timelines and clear assignment of roles and responsibilities. The EPA will provide whatever support and assistance it can to you and your officials in developing and implementing this plan.

The EPA has a wide range of statutory responsibilities in climate change and sees these responsibilities and their implementation to be a cornerstone of the both current and future Climate Action Plans. These include:

- National greenhouse gas inventories and projections assessment and reporting
- Coordination of national research on climate change
- Emissions trading regulation
- Secretariat to the Climate Change Advisory Council
- Secretariat to the National Dialogue on Climate Action
- Intergovernmental climate science support to DECC
- State of the environment reporting and Strategic Environmental Assessment
- Circular economy and food waste
- Advice and assistance to Local Authorities
- Industrial and chemical regulation

We can provide you with further information about these responsibilities if required.



The purpose of this letter is to provide input to the Annex of Actions to help sustain momentum as Climate Action Plan 2021 is prepared. We will, in addition, provide further input on proposals for policies and measures for inclusion in the next Climate Action Plan by 12 February 2021.

We have outlined both existing and new potential actions (highlighted in green) in the attached table. Many of the new actions are categorised as “research” which is critically important in terms of providing the evidence base for future action. This research will, in particular, inform action post-2025 when a wider and deeper range of mitigation options will be required. At the moment these options are not fully understood. Therefore, the EPA feels that this research needs to start now to inform these options. Examples of research that we highlight as being particularly relevant include blue carbon sequestration; a synthesis and assessment of climate research (the 5 Year Assessment); negative emission options and solutions; and Land-use, Land Use Change and Forestry.

We have also included a specific action to ‘green the EPA’ and it is our ambition to be an exemplar public sector organisation in our efforts to decarbonise our fleet and reduce energy usage in our building. In recent years, we have invested in renewable and cleaner heating options such as heat-pumps and biomass to heat our buildings and we have ambitions to extend the use of photovoltaic cells. In addition, we have increased electric and hybrid vehicles in our vehicle fleet with charging points now at all office locations.

Since 2010, the EPA has maintained an Environmental Management System (EMS), certified to the international standard ISO14001. This facilitates a continuous improvement cycle and allows us to plan for further improvements. We are committed and will continue to refine how we monitor and report carbon emissions with a view to setting ambitious targets and striving to become an exemplar public sector body.

I would also like to highlight the important work underway as part of the National Dialogue on Climate Action. The EPA’s ambition is to provide a national recognised framework and leadership structure that will inform, enable and facilitate high quality national and local engagement on the transition to a climate resilient society and economy. In collaboration with Yale University Climate Change Communications Programme, the EPA has commenced development of an understanding of the Irish public’s climate change beliefs, risk perceptions, policy preferences and behaviour. This is based on the internationally recognised methodology developed as part of the “Six Americas Methodology” and, for Ireland, be called “Climate Change in the Irish Mind”. This will be built upon an extensive nationally representative survey of Irish adults (4,000 people) which will be completed in Q1 2021 to establish a national baseline on behaviours and attitudes around climate change. The results and outcomes of this work will be available to your officials to inform effective citizen engagement and activation during and following the development of the next Climate Action Plan.



The Annex of Actions are outlined in the attached and we are more than happy to provide further information should you require.

I look forward to working with both you and your officials in driving the implementation of the next Climate Action Plan.

Best wishes,

A handwritten signature in black ink, appearing to read 'Laura Burke'.

**Laura Burke**  
**Director General**

CC Mr Brian Carroll, Assistant Secretary, Department of Environment, Climate Action and Communications

## Annex of Actions

<i>Action 14: Strengthen our delivery of public funding for basic and applied research to underpin government policy, meet our decarbonisation objectives and open up new economic opportunities</i>	<i>Carbon Pricing and Cross Cutting Policies</i>				
Steps necessary for delivery	Action TYPE	Explanation of climate impact	Proposed output	Proposed timeline	Lead Department
Research Blue Carbon Sequestration	Research	<p><b>Primary action</b> Ireland has traditionally looked to terrestrial systems associated with GHG accounting rules. However, as an island nation the role for our seas and coastal margins in carbon fluxes are not fully understood. These are the Blue Carbon and sea-bed carbon storage spaces.</p>	Report on the potential of blue carbon sequestration in marine environment. Long-term programme of research that will build a knowledge base that we can usefully use to influence policy in this area, and hopefully lead to some contribution to national offset.	Q4 2021	EPA/DECC
Launch and implement EPA Research 2030 strategy, incorporating Climate & Biodiversity	Research	<p><b>Primary action</b> Targeted research will support national efforts to understand and respond to Ireland's climate and environmental challenges. Evidence-based knowledge supports robust decision making, behaviour change and policy development.</p>	Delivery of EPA research strategy to address Ireland's climate research priorities	Ongoing	EPA/DECC
Delivery of annual climate research report	Research	<p><b>Primary action</b> As above</p>	Annual climate research report	Q4 2021	EPA/DECC

Research: 5 Year Assessment Report (5YAR)	Research	<p><b>Primary Action</b></p> <p>The 5YAR process will deliver an assessment of our understanding of climate change based on scientific research and systematic observations in Ireland, and linked EU and global analysis, to inform decision making on actions to address climate change. The process will serve to:</p> <ul style="list-style-type: none"> <li>• Identify research gaps to inform future research investment needs and priorities</li> <li>• Utilise and enhance existing and emerging structures designed to address climate change</li> <li>• Develop national assessment and analysis capacity</li> <li>• Enhance engagement with similar European and international processes</li> <li>• Establish a structure and process to develop future reports.</li> </ul>	<p>The 5YAR will have four thematic volumes published over 2021-2023</p> <ul style="list-style-type: none"> <li>• Science: Ireland in a changing world</li> <li>• Achieving climate neutrality by 2050</li> <li>• Being prepared for Ireland's future climate</li> <li>• Realising the benefits of transition and transformation</li> </ul> <p>Each volume will contain a short summary for policymakers. The volumes will be published as individual but linked components of the 5YAR in a sequenced manner. The completion of the 5YAR will be signalled by publication of a short synthesis report that integrates key messages from the material in the underlying volumes.</p>	Q4 2023	EPA/DECC
<i>Action 33; Establishment of a steering group to examine and oversee the feasibility of the utilisation of CCS in Ireland, and report to the standing committee on climate action as appropriate</i>	<i>Carbon Capture and Storage</i>				
<b>Steps necessary for delivery</b>	<b>Action TYPE</b>	<b>Explanation of climate impact</b>	<b>Proposed output</b>	<b>Proposed timeline</b>	<b>Lead Department</b>
Establish a framework for analysis of negative emissions options/solutions for Ireland e.g. land management, emerging technologies, CCS including assessment of scale, maturity and resilience/environmental security.	Research	<p><b>Primary action</b></p> <p>Use of bioenergy with carbon capture and storage is a major source of negative emissions. However, there are risks for land use, land management and biodiversity if this is not advanced in a sustainable manner. A framework for analysis of options, including energy feedstock and their sustainability is needed.</p>	A framework for analysis of negative emissions options/solutions for Ireland e.g. land management, emerging technologies, CCS including assessment of scale, maturity and resilience/environmental security.	Q4 2021	EPA/DECC

<i>Action 133: Assess and implement mitigation options on post-production peat extraction sites</i>	<i>Better Management of Peatlands and Soils</i>				
<b>Steps necessary for delivery</b>	<b>Action TYPE</b>	<b>Explanation of climate impact</b>	<b>Proposed output</b>	<b>Proposed timeline</b>	<b>Lead Department</b>
Research on Land-Use, Land-Use Change and Forestry (LULUCF) to ensure robust National Inventory Systems are in place to report and account LULUCF emissions and removals	Research	<b>Primary action</b> Land-use activities – for example forests, grassland – can remove CO <sub>2</sub> from the atmosphere. Conversely, they can also be a source of CO <sub>2</sub> emissions depending how they are managed. The EPA estimates and reports to the EU and UN greenhouse gas emissions and removals from these activities on an annual basis. Carbon sinks (CO <sub>2</sub> removals) will be allowed to be used towards compliance calculations for the 2030 EU target which will allow for the use of land based credits.	Ongoing support for research on LULUCF opportunities for Ireland  EPA's spatial land-use mapping project is underway with a steering committee established including representatives from DAFM and Teagasc.	Q4 2022	EPA/DECC
Assess the status and mitigation potential for other commercial and private peat extraction across Ireland	Research	Assess the status and mitigation potential for other commercial and private peat extraction across Ireland	Research projects ongoing. Support for EU LIFE application on Bog Restoration in hand.	Ongoing	EPA/DECC
<del><i>Action 137: Develop a new National Waste Prevention Programme, and Regional Waste Management Plans that will guide our transition to a circular economy by EPA and Local Authorities</i></del>  <i>Action 137: Reconfigure the existing National Waste Prevention Programme into Ireland's Circular Economy Programme to guide our transition to a circular economy led by EPA.</i>	<i>Waste and the Circular Economy</i>				
<b>Steps necessary for delivery</b>	<b>Action TYPE</b>	<b>Explanation of climate impact</b>	<b>Proposed output</b>	<b>Proposed timeline</b>	<b>Lead Department</b>
Publish and Implement Ireland's New Circular economy programme	Incentive	<b>Primary Action</b> Designing out waste & keeping materials in use	EPA will implement Ireland's Circular Economy Programme incorporating	Q4 2021	EPA/DECC

		<p>longer will target the 45% of emissions associated with production of goods &amp; food.</p> <p>The circular economy has a critical role to play in achieving climate targets at national and global levels. Influencing consumption and production patterns is critical for controlling greenhouse gas emission levels and the carbon footprint of these factors along with looking to reduce waste generation will be an integral part of this programme.</p> <p>The EPA's National Circular Economy Programme will work closely with stakeholders including DECC to realise the potential of circularity as a climate action.</p> <p>The Waste Action Plan 2020 states: "We will reconfigure the existing National Waste Prevention Programme to make it Ireland's Circular Economy Programme. Led by the EPA, it will have a designated coordinating role to support the Departments' circular economy unit in overseeing national, regional and local activities to improve coherence and alignment of national and local activities and ensure maximum impact.</p>	<p>Ireland's National Waste Prevention Programme.</p> <p>The will contain the main interventions and knowledge to grow and mainstream the circular economy in Ireland.</p> <p>Over the course of its six-year duration, the EPA will:</p> <ol style="list-style-type: none"> <li>1. Provide leadership on the circular economy to improve coherence and alignment of national, regional and local activities and ensure maximum impact.</li> <li>2. Maintain a competitive programme of supports to drive the circular economy through providing innovation grants and seed-funding to nationally-relevant initiatives.</li> <li>3. Implement actions that build knowledge and an evidence base to inform circular economy development in Ireland, and to report on progress towards greater circularity.</li> <li>4. Realise the enterprise opportunity by supporting new business models; promoting resource efficiency; and retaining material value through enhanced recycled.</li> </ol>		
<p>Implement Ireland's National Food Waste Prevention Programme as part of the Circular Economy Programme</p>	<p>Incentive</p>	<p><b>Primary Action</b></p> <p>Wasted Food accounts for up to 10% of global GHGs. Reducing food waste is a strong and rapid climate action.</p>	<p>The EPA will lead on food waste prevention in Ireland and undertake campaigns &amp; supports leading to measured reduction in food waste in households and businesses. This will include:</p> <ol style="list-style-type: none"> <li>1. Develop a strategy for delivering the 50% food waste reduction target</li> <li>2. Develop a delivery road map for the strategy</li> <li>3. Create a strategy and a roadmap for delivery of household-food-waste (HHFW) prevention</li> <li>4. Develop a programme focused on driving change across the Retail, Distribution, Processing and Manufacturing sub-sector</li> <li>5. Reduce food waste in the Hospitality and Food Service sector</li> </ol>	<p>Q4 2021</p>	<p>EPA/DECC</p>

CIRCULÉIRE – National Circular Manufacturing Platform	Research	<b>Primary Action</b> CIRCULÉIRE's objective is promote circular manufacturing, supply chains and business models to deliver significant reductions in CO2 emissions and waste for Irish industry.	EPA, with DECC and Climate KIC, will deliver a €4.5m public-private partnership employing systems thinking to co-create circular solutions to real-world industry challenges through capacity building, working groups and an Innovation Fund.	Q4 2022	EPA/DECC
<i>Action 145: Develop a strategy to achieve at least a 30% reduction in CO2eq. Emissions by 2030 and a 50% improvement in public sector energy efficiency</i>	<i>Public sector leading by example</i>				
<b>Steps necessary for delivery</b>	<b>Action Type</b>	<b>Explanation of climate impacts</b>	<b>Proposed output</b>	<b>Proposed timeline</b>	<b>lead department</b>
Greening EPA	Incentive	<b>Primary Action</b> Since March 2010, the EPA maintains an Environmental Management System (EMS), certified to the international standard ISO14001. Using this standard, the EPA strives to continually improve its environmental impact and in doing so prevent pollution and encourage environmental awareness. Carbon emissions are reported by the EPA as part of their biennial environmental performance reports since 2013, using the Greenhouse Gas Protocol global standardised frameworks for monitoring and reporting. In 2020, the EPA decided to revisit the existing categorisation of EPA's own activities under the scopes set out in the Greenhouse Gas Protocol used for monitoring and reporting EPA's carbon emissions. This initiative is part of a continuous improvement process designed to ensure the EPA continue to lead by example and be an exemplar in the Public Sector.	Review the existing categorisation of EPA's organisational activities under the "Greenhouse Gas Protocol " used by the EPA for monitoring and reporting carbon emissions.	Ongoing	EPA/DECC

<b>Action 148: Mandate the inclusion of green criteria in all procurements using public funds, introducing requirements on a phases basis and provide support to procurers as required</b>	<b>Green public procurement</b>				
<b>Steps necessary for delivery</b>	<b>Action TYPE</b>	<b>Explanation of climate impact</b>	<b>proposed output</b>	<b>proposed timeline</b>	<b>lead department</b>
Upskill programme for procurers and specifiers	Incentive	<b>Supporting Action</b> Green procurement is a well-recognised driver of reducing national GHG emissions and energy consumption.	Training programme developed & delivered by EPA for public sector procurement staff in 2020 will continue in 2021. EPA will launch of revised GPP guidance following public consultation completed in 2020	Ongoing	EPA/DECC
Government Departments to measure and report on GPP on an annual basis	Incentive	<b>Supporting Action</b> Green procurement is a well-recognised driver of reducing national GHG emissions and energy consumption.	Government departments to report on GPP activity during 2020 to EPA by end of Q1-2021 EPA to produce report on Government Green Public Procurement.	Q2 2021	EPA/DECC
Up skill programme for suppliers	Incentive	<b>Supporting Action</b> Green procurement is a well-recognised driver of reducing national GHG emissions and energy consumption.	Training and guidance to enable suppliers to respond to green criteria within public procurement.	Q4 2021	EPA/DECC
<b>Action159: Enhance the effectiveness of climate related communication, network building and deliberative capacity within and through the National Dialogue on Climate Action</b>	<b>Citizen Engagement</b>				
<b>Steps necessary for delivery</b>	<b>Action TYPE</b>	<b>Explanation of climate impact</b>	<b>proposed output</b>	<b>proposed timeline</b>	<b>lead department</b>
Conduct a national baseline study on Irish behaviours and attitudes around climate change.	<b>Research</b>	<b>Primary Action</b> Awareness, engagement and activation of public Effective engagement across local, regional and national level - requires knowing who to target and how best to target activation, what messages and framings mobilise action and generate behavioural change for climate action. Such an approach is predicated on robust behavioural insights and an understanding of people's attitudes, perceptions and behaviours as they relate to their beliefs around climate change, perceptions of risk, attitudes to policy and support for climate action.	"Climate Change in the Irish Mind" A national baseline study and reports on Irish behaviours and attitudes around climate change.  EPA National Climate Change Behavioural Insights and Implementation Unit. This will inform a national understanding of the Irish public's climate change knowledge, attitudes, policy preferences, and behaviour, and the underlying psychological and cultural factors that influence the public. This work will support national coordination, networking and capacity building across and	Q4 2021	EPA/DECC

		This will be provided by the EPA as part of the Secretariat to the NDCA and through the establishment of a National Climate Change Behavioural Insights and Implementation Unit. Building this capacity within the NDCA will provide a solid foundation, grounded in social science, to facilitate the changes required to effectively engage citizens and achieve a transition to a low-carbon, climate resilient future.	between stakeholders.		
EPA Climate conference and lecture series	Outreach	<p><b>Supporting Action</b> The Climate Conference brings together policy makers, academics, practitioners and NGOs to discuss key issues relating to climate challenge theme. Panel discussions facilitate examination of latest science, policy trajectories, cross-policy issues, co-benefits, and mutual understanding.</p> <p>Awareness, engagement and activation of public High-profile Lectures are intended to be thought-provoking and to trigger discussions and debate of the latest science, policy issues and direction of any resultant policy decisions. It is mutually beneficial to all part-taking in the events and gives a mutual understanding of the issues at the heart of the Climate debate.</p>	Climate Conference and two climate lectures	Q4 2021	EPA/DECC
Provide support for the development of relevant media content, including in the independent production sector	Outreach	<p><b>Supporting Action:</b> Public awareness, engagement and activation</p>	relevant media content, including in the independent production sector	Ongoing	EPA/DECC
<b>Action 183: Put in place arrangements to ensure Climate Ireland is developed to its full potential as an operational support for climate adaptation and climate action in Ireland</b>	<b>Adaptation</b>				
<b>Steps necessary for delivery</b>	<b>Action TYPE</b>	<b>Explanation of climate impact</b>	<b>proposed output</b>	<b>proposed timeline</b>	<b>lead department</b>

Climate Ireland	Outreach Co-ordination	<b>Supporting Action:</b> Climate Ireland is Ireland's Climate Information Platform and a central source of climate data and information for Ireland. It assists stakeholders in planning ahead for the likely impacts of climate change and supports decision-makers in the development and implementation of adaptation plans and strategies.	Develop and implement a new governance and delivery model for Climate Ireland within the ownership of EPA. Support (such as provision of information/data, decision tools and capacity building) to sectors and local authorities tasked with developing and implementing adaptation strategies	Ongoing	EPA/DECC
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