



Tionscatal Éireann
Project Ireland

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Climate & Environmental Assessment of NDP Review Spending Proposals

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Section 1: Introduction

1.1 What is this Document?

The NDP Review details the capital investments that will be made to promote economic recovery and provide for the infrastructure needs of a growing population. The investments included in the Review will also move the economy onto a more environmentally sustainable path, a path that is compatible with the Government's domestic climate commitments and the Paris Agreement.

As an integral part of the NDP Review, for the first time ever, an assessment has been undertaken of the contribution that the Exchequer-funded capital spending in the Review will make to a range of climate and environmental outcomes. This assessment has been undertaken in light of the climate and biodiversity emergency declared by the Oireachtas and the Government's legislative commitment in the Climate Action and Low Carbon Development (Amendment) Act 2021 to achieve a climate resilient, biodiversity rich and climate neutral economy by no later than the end of the year 2050.

Section 1 of the paper summarises the process that was followed in conducting the climate and environmental assessment and arriving at the categorisation of measures detailed in the NDP Review. Section 2 of the paper summarises the results of this categorisation, offers some guidance on the interpretation of the results of the assessment and highlights how the categorisation of certain cross-Departmental thematic issues was arrived at. Section 3 provides details on the specific climate and environmental outcomes that measures were assessed against and sets out the recommended approach that was provided to Departments for scoring each measure.

There are some important points to make at the outset of this paper. The climate and environmental assessment conducted as part of the NDP Review is the first systematic attempt that has been made at undertaking such an assessment. It is by no means definitive, rather it marks the start of a process that will evolve over time, in line with international best practice. The results of the assessment should be seen in this light.

It is particularly important to note that every measure in the NDP Review remains subject to the full rigour of the Public Spending Code. This necessitates a detailed quantitative assessment of the impact of the project on greenhouse gas emissions. Furthermore, a favourable categorisation does not imply that there are no climate and environmental issues to be considered with the measure in question and similarly, a measure with an unfavourable categorisation may still deliver very significant benefits to wider societal objectives and its categorisation is not a judgement that the measure in question should not proceed.

1.2 Details of the Climate & Environmental Assessment of NDP Measures

As part of the Government Decision underpinning the development of the NDP Review, every Department was required to perform a climate and environmental assessment of every measure¹ they put forward for inclusion in the revised NDP.

Seven relevant climate and environmental outcomes were selected by the Department of Public Expenditure & Reform, in consultation with the Department of Environment, Climate & Communications. These outcomes were deemed to be aligned with the objectives of Government climate and environmental policy. Departments were required to perform a high-level, qualitative self-assessment to determine the potential impact every spending proposal they put forward may have on each one of these outcomes.

The seven climate and environmental criteria selected were:

1. **Climate Mitigation** – the likely impact of the measure on greenhouse gas emissions;
2. **Climate Adaptation** – the contribution the measure will make to Ireland’s climate resilience;
3. **Water Quality** – any difference the measure may make to pollution levels in waterways;
4. **Air Quality** – any difference the measure may make to air pollution levels;
5. **Waste & Circular Economy** – what change in waste levels might be expected of the measure;
6. **Nature & Biodiversity** – what impact the measure may have on biological diversity;
7. **Just Transition** – will the measure contribute to employment that is compatible with Ireland’s long term climate and environmental objectives.

On the basis of this assessment, Departments assigned every measure a specific ranking against each of the climate and environmental outcomes (with the exception of Just Transition), using the following methodology:

Score	Definition
+3	The measure is focused on, or will contribute in a very tangible and specific way, to an improvement in this outcome.
+1	Although not a specific targeted outcome or the direct focus of the expenditure, the implementation of this measure is likely to contribute to an overall improvement in this outcome.
0	The expenditure is likely to have no readily discernible impact on the outcome in question.

¹ In this case, measure is taken to mean the general area of programme expenditure. For example, Departments were asked to consider the climate and environmental characteristics of a proposed investment programme in new road construction, not the specific characteristics of each individual proposed new road investment.

-1	Any positive intended impacts the measure may have may be at risk of being offset by negative impacts or potential rebound effects, which may contribute to a worsening of performance against this outcome.
-3	The measure is likely to lead to an increase in activity or encourage behaviours that would be unfavorable to this outcome.

As the development of the Just Transition is at an early stage in Ireland and many of the sectors and areas that may be at risk of adverse outcomes have not yet been identified, a binary ranking was used to score this criteria instead. A measure was considered to contribute positively towards the achievement of a Just Transition if it had an overall positive score and was likely to result in additional employment. If not, it was considered to be neutral.

The resulting self-assessment by each Department was then reviewed for consistency by a Steering Group comprised of senior officials from the Department of Public Expenditure & Reform, the Department of Environment, Climate and Communications & the Department of Housing, Local Government & Heritage.

Each measure’s cumulative score, across all outcomes, was then used to assign each measure a category. Category A indicates that measure in question is likely to have, on balance, a favourable impact on climate and environmental outcomes. Category B indicates that the measure will likely have no significant impact on climate and environmental outcomes or that any favourable impacts may be offset or balanced by some unfavourable impacts. Finally, Category C indicates that the measure may have a net unfavourable impact on climate and environmental outcomes.

This categorisation of measures is reflected in the body of the NDP Review for each of the measures attributed to each National Strategic Outcome.

1.3 How Rankings Were Arrived At

When assessing the potential climate and environmental impacts of a measure against each category, Departments were asked to consider this by reference to the counterfactual scenario, i.e. the situation that would occur if the measure were not implemented. This involves some judgement but, in general, an appropriate counterfactual should take account of all policies the Government has already committed to and is already funding before the issuance of the NDP Review.

To give a specific example, if the Government has committed to achieving a particular result via regulatory action, a proposed measure which also influences this area may not be deemed to also contribute to the outcome, unless it accelerates progress towards the outcome or leads to the achievement of outcomes additional to the regulatory intervention.

In their consideration of the potential climate and environmental impact of a proposed measure, Departments were also asked to consider both the direct and indirect impacts of the measure in question, including the potential risk of rebound effects. For example, investment in energy efficiency is likely to lead a reduction in greenhouse

gas emissions, an increase in climate resilience and contribute to a just transition due to the provision of additional sustainable employment. However, it may contribute to increased waste levels if there is no plan or strategy to use more sustainable construction materials or reduce/eliminate any waste that may arise.

It was acknowledged that there may also be differing intertemporal effects of investment. That is to say, a measure may lead to increased emissions in the short term but through expected changes to society over time, the negative impacts of this expenditure may be mitigated in the long run. The adverse impact of a new road on greenhouse emissions for example, will be mitigated, to some degree, once vehicle fleets are fully transitioned to electric vehicles powered by fully decarbonised electricity supplies.

Given that the focus of the NDP review is investment over the period 2021 – 2030 and that the Government has committed to reducing greenhouse gas emissions by 51% by 2030, Departments were asked to take a common sense approach and prioritise the more certain, early to medium term expected impacts of their proposals. Where a Department wished to consider the effect over a longer timeframe, it was noted that the assessment should consider the likely impacts over the lifetime of the asset in question (by reference to the relevant rules in the Public Spending Code).

It was stated that the justification for the ranking of each measure should be qualitative in nature rather than quantitative. This means that Departments were asked to consider a logical chain of reasoning as to why they believe the measure in question should be assigned a particular ranking. References to any reviews of the measure in question or similar programmes that have been conducted internationally were considered particularly welcome in this regard. Illustrative examples of the kind of justification that were expected to accompany each ranking are provided in Section 3 of this paper.

As this is the first such exercise of this nature and given that the time available for this assessment was limited, it was noted that it would be expected that Departments would rely on the existing evidence that was available to them and use their best judgement on the expected impacts of the measures under review.

Departments were also specifically requested to note that the Environmental Protection Agency's latest "Ireland's Environment – An Integrated Assessment"² provides a wealth of helpful background information on the current status of each of the climate and environmental outcomes under assessment in the NDP review. This assisted Departments in determining if a measure was likely to have an impact on one of these outcomes.

² https://www.epa.ie/publications/monitoring--assessment/assessment/state-of-the-environment/EPA_Irelands_Environment_2020.pdf

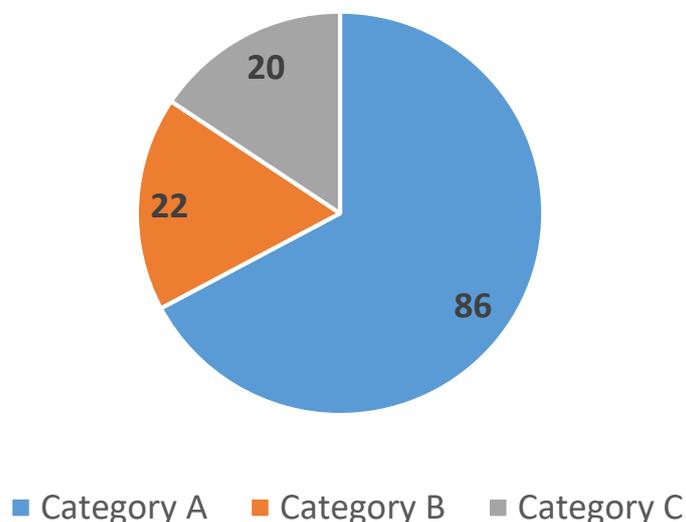
Section 2: Summary of Results & Interpretation

This section of the paper summarises the overall results of the climate and environmental assessment of the NDP Review, offers some guidance on the interpretation of these results and highlights how the Steering Group overseeing the process came to conclusions regarding certain common thematic issues that arose over the course of the review.

2.1 Summary of Results

In total, **128** measures were assessed. **67%** of these measures are deemed, on balance, as being likely to have a net favourable impact on climate and environmental outcomes. **17%** are deemed likely to have no significant impact on climate and environmental outcomes, while **16%** of measures may have a net unfavourable impact on climate and environmental outcomes. Net favourable measures were tagged as falling into Category A in the body of the NDP Review. Neutral measures were tagged as part of Category B, while potentially unfavourable measures were tagged as Category C.

Categorisation of Measures



2.2 Interpreting the Categories

As noted, the climate and environmental assessment of the NDP review is a high-level qualitative assessment. There are no claims being made that this review is a precise or definitive assessment of the climate and environmental impacts of the spending measures included in the NDP Review. Rather, the results are the best estimates of

the probable net climate and environmental impacts of the measures, as made by the Departments responsible for the programmes in question, in line with guidance provided by the Department of Public Expenditure & Reform, and reviewed for consistency by a Steering Group of senior officials.

This is the first time the Government has attempted to undertake a systematic climate and environmental assessment of Exchequer capital expenditure plans. Identifying relevant, reliable, and consistent approaches for undertaking assessments of this nature are a key challenge for Governments globally and Ireland fully expects to continually refine our national approach to identifying, measuring and tracking the climate and environmental impacts of all spending programmes. This will be progressed through the green budgeting initiative, in light of emerging best practices at EU level and from international efforts such as the OECD Paris Collaborative on Green Budgeting and the Coalition of Finance Ministers for Climate Action.

It is however necessary to start somewhere and by engaging in a systematic process for the NDP review, it encourages Government Departments to consider the climate and environmental impacts of all their spending plans and creates a base which can be built upon.

67% of the measures in the NDP review have received a favourable categorisation. This is not an unequivocal endorsement of the proposed measures. In particular, the assessment involves a calculation of the impact of the measure on a net basis. This means that it is possible for a measure to have an unfavourable impact on one or more of the outcomes assessed but still receive a positive ranking overall.

As such, even a positive climate and environmental assessment does not negate the need for Departments to consider ways to address any negative climate and environmental consequences that a net favourable measure may have.

16% of the measures in the NDP have received unfavourable categorisation. This means that these measures are, on balance, likely to have an unfavourable impact on climate and environmental outcomes.

Critically however, it should be noted that this does not mean that these measures are incompatible with the achievement of Ireland's climate and environmental objectives. Neither should it be construed as any kind of indication that the measure in question should not proceed.

The National Planning Framework, which underpins the capital investment plans laid out in the NDP, notes that Ireland needs to prepare to support an additional 1 million people living in the country by 2040 and with that, there is a need to create 660,000 additional jobs and to construct at least 550,000 more homes.

Supporting this growth requires capital investment and, in particular, capital investment in infrastructure. Some of this investment will have unfavourable impacts on climate and environmental outcomes. Assigning such investment to Category C acknowledges the reality of the likely climate and environmental impacts of this expenditure.

However, eliminating these investments and hence failing to provide for the infrastructure needs of our current and future populations will not solve the climate and biodiversity emergency we find ourselves in. Rather, inadequate infrastructure may hold back the country's ability to finance the very significant climate investments that will be required right across the economy. In addition, it is possible that investment in infrastructure that is today assessed as likely to have a negative impact on greenhouse gas emissions, may change over time as the sectors of the economy this infrastructure supports, in turn, decarbonise.

An unfavourable assessment demonstrates that there should be an increased focus on ensuring that the climate and environmental impact of this investment is minimised in so far as is possible. Where feasible, Departments should go beyond the minimum requirements imposed by legislation and put in place complimentary measures that can offset or negate any potentially harmful impacts that have been identified.

Where this is not possible, it demonstrates the need to have regard to specific additional measures which offset the unfavourable climate and environmental consequences of these expenditures.

In the Public Spending Code, which all measures, regardless of score, will still need to be assessed against, a specific quantitative assessment of the amount of greenhouse gas emissions that every project may give rise to is required. These emissions will be priced at the cost faced by the Government to reduce greenhouse gas emissions in other areas of the economy to the degree necessary to achieve our climate targets.

This means that the price of every tonne of greenhouse gas emissions is valued in the appraisal of these projects. This will allow the Government to make informed choices on infrastructure investments that can support a growing nation, while still achieving our climate and environmental objectives.

In the longer term, and in particular as 2050 grows closer and Ireland must reach net zero emissions, it may be the case that more radical solutions are required. Any additional greenhouse gas emissions post-2050 will have to be offset by the capture of additional greenhouse gas emissions in other areas of the economy, whether through sequestration in the land use sector or by technological means such as carbon capture and storage. As noted in the NDP Review, the Department of Public Expenditure & Reform has a full work plan on the climate and environmental review of the Public Spending Code.

2.3 Thematic Categorisation

This section attempts to give the reader an insight into how the rankings for particular measures were arrived at. It does this by outlining how the Steering Group came to conclusions regarding the consistency of ranking for some areas of expenditure, particularly those for thematic areas common to several Departments. It is intended for illustrative purposes, to simply give the reader an insight into some of practical thinking that underpinned the categorisation of measures.

New Buildings

A number of Departments put forward measures which included the development of new buildings. The Steering Group's initial view was that new buildings should receive an unfavourable climate and environmental assessment. A new building, despite being built to new, stringent building standards, still increases total greenhouse gas emissions by virtue of adding to the total stock of buildings in use. It also gives rise to additional construction waste and seems likely to have a detrimental impact on nature and biodiversity. An offsetting positive score is that by being built to modern standards, with integrated heating and cooling, new non-residential buildings will likely increase Ireland's climate resilience by reducing the occupant's risk of exposure to extremes in temperatures.

However, on review of the measures and the self-assessments submitted by Departments, a more nuanced view was adopted by the Steering Group and reflected in the rankings. New non-domestic building construction still receives a net negative ranking for the reasons outlined above. However, where a new build is explicitly replacing an existing asset, it was deemed that the net impact on greenhouse gas emissions was likely to be positive. This is because the counterfactual scenario, the continued use of the existing building, would likely result in higher greenhouse gas emissions due to the poorer energy efficiency of the building that would otherwise continue in operation. Thus a new building that explicitly replaces an existing building attracts a positive ranking on climate mitigation.

Similarly, the construction of replacement buildings on existing brown field development sites, as opposed to green field development, was deemed to have no detrimental impact on nature and biodiversity. This was sufficient to change some investment programmes with new buildings to a net positive score overall.

In cases where Departments put forward spending proposals that contained a mixture of new build and the renovation/retrofit of an existing building, unless the Department was able to provide an estimate of the share of this spending that is going towards renovation vis-à-vis new build, the proposal received a negative ranking. If an estimate was provided and it was confirmed that retrofit/renovation made up the majority of the spending, a positive ranking was awarded.

Finally, on new domestic building (i.e. homes), the measure attracts an overall neutral ranking because it is deemed that the increased emissions associated with increasing the number of homes in the country will be low overall (due to the stringency of new building regulations and renewable energy requirements) and these increased emissions are likely to be offset by a decrease in emissions by providing for compact, urban growth, which will reduce transport emissions and allow the heating of these homes by lower carbon energies.

Vehicle replacement

Several Departments put forward proposals to upgrade their vehicle fleets, highlighting the positive impacts this investment will have on greenhouse gas mitigation, air quality and waste. The Steering Group took the view that where Departments have indicated

that future vehicle purchases will be low or no carbon capable vehicles only, positive rankings on mitigation and air quality are justified. These vehicles will unequivocally contribute to a reduction in greenhouse gas emissions and improvements in air quality through the reduction and potential elimination of tailpipe emissions.

However, some measures involve upgrading fleets to fuel-efficient Internal Combustion Engine (ICE) vehicles, as opposed to electrifying the fleet. For example, in the defence forces and An Garda Síochána, low or no emission vehicles that meet their specific mission requirements are not yet available at scale.

While upgrading to a more efficient vehicle will reduce the greenhouse gas emissions generated per km travelled and is also likely to have a positive impact on air quality, there may be a risk of rebound effects in terms of an increased number of km travelled and also a risk of “lock-in” to this technology over the medium term.

In this scenario, the Steering Group was of the view that the impacts are likely to balance one another out and following confirmation from Departments that efficiency gains from the new vehicles would be significant, a neutral categorisation was applied.

Transport Infrastructure

All investment in public transport was considered, on balance, to make a positive contribution to climate and environmental outcomes. Investment in public transport results in clear improvements for climate mitigation and air quality, as the counterfactual is that a significant proportion of the additional people carried by increased capacity on public transport would otherwise use private vehicular transport.

On investment in other transport infrastructure, investment to expand capacity in these areas is considered likely to have an overall unfavourable impact on climate and environmental outcomes, while investment in the maintenance of existing assets is considered likely to have a net beneficial outcome.

For example, on investment in new roads, the Steering Group came to the conclusion that the risks of rebound effects on greenhouse gas emissions warranted an unfavourable ranking for climate mitigation. As a simplified example of this, consider that investment in new roads may decrease journey times between two destinations. However, over the longer term, this enhanced connectivity is likely to lead to increased travel between the two destinations. The net effect may be an increase in greenhouse gas emissions. In addition, new road construction results in biodiversity losses for those areas where the construction takes place.

It is also worth noting that the Government’s ambition is to reach a target of 1 million low emission vehicles on the road by 2030 and to prohibit the sale of internal combustion engine cars from this date. Hence, over time, it is possible that the greenhouse gas emissions associated with road transport will reduce. If this comes to pass, it is likely that the impact of road construction on climate and environmental outcomes could be reappraised.

Enterprise Support Measures

Measures in the NDP Review to support enterprise received mixed categorisations. Climate specific programmes and programmes to support research and development were deemed by the Steering Group as likely to make a favourable contribution to climate and environmental outcomes.

However, general supports for enterprise, such as the Enterprise Ireland (EI) and IDA Ireland non-climate specific programmes, were considered by the Steering Group as potentially having a significant risk of increased energy usage through rebound effects and the overall expansion of the sector. Since the assessment is based on the net probable impact on outcomes versus a counter-factual, some enterprise support measures were hence categorised as potentially unfavourable to climate and environmental outcomes.

It is clear that the successful decarbonisation of Ireland will require a resilient, profitable, adaptable and innovative enterprise base to provide the decarbonised products and services that will be needed to enable the transition. This is coupled with the need identified in the National Planning Framework (NPF) to provide an additional 660,000 jobs by 2040 to support Ireland's growing population. Appropriate supports for industry are required to drive and underpin this growth. Similar to investment in roads or tourism, this may increase total greenhouse gas emissions in the short term but as new and decarbonised energy sources come on stream, the impact of the sector on climate and environmental outcomes will reduce significantly. This is a clear example of where a negative categorisation does not imply the cessation of a programme.

Investment in ICT & Digitisation

Most Departments have measures to replace and upgrade ICT equipment. These programmes are likely to have several climate and environmental consequences. In the first instance, replacement programmes will lead to increased waste levels.

However, replacement equipment may have a positive impact on greenhouse gas emissions as newer equipment is typically more energy efficient than the equipment it is replacing. There are however, risks of rebound effects, as more efficient equipment may lead to a greater usage of this equipment. In light of this, the Steering Group took the view that upgrades to ICT equipment should be rated neutral, i.e. it is likely to have no significant impact on climate and environmental outcomes when considered on a net basis.

On schemes that explicitly invest in the digitisation of services, including for example the transition to a fully online passport system, it was considered that the potential for emissions reductions through decreased demand for transportation enabled the Steering Group to conclude that the investment is likely to have a net favourable impact on climate and environmental outcomes.

Data Centres

It may seem self-evident that the construction of a new data centre would increase greenhouse gas emissions through increased energy usage, and as such, proposals relating to data centres would expect to receive an unfavourable score for climate mitigation.

However, the Office of the Government Chief Information Officer (OGCIO) put forward the case to the Steering Group that its proposal for the construction of a new Government data centre will allow for the consolidation of existing data centres. Therefore this will actually result in a 50% decrease in energy usage when compared to the counterfactual of continuing to operate a number of less efficient existing data centres.

In support of their position, the OGCIO noted that this proposal has also been selected for funding as part of the National Recovery and Resilience Plan and the European Commission were satisfied on evaluation that the proposal meets the “do no significant harm” provision of the Recovery and Resilience Facility. As such the Steering Group came to the view that the data centre should be considered as likely to have a net positive impact on greenhouse gas emissions and hence be ranked as positive.

Energy Efficiency Measures

The energy efficiency renovation of a building has a clear and positive impact on a range of climate and environmental outcomes. By permanently reducing the energy required to heat a home to an adequate degree, it reduces energy demand and hence greenhouse gas emissions. With the replacement of heating systems, it also makes a tangible contribution to improved air quality.

However, the impact on climate adaptation is less clear. For example, there is perhaps a risk that retrofitting may make cooling houses during summer more difficult. At the same time a retrofitted home requires substantially less energy to adequately heat, making it more resilient to supply interruptions. In addition, energy efficiency works involve construction materials and the generation and disposal of construction waste.

Having regard to these factors and the uncertainty surrounding the risks to climate adaptation, the Steering Group arrived at the conclusion that energy efficiency works should receive strong favourable ratings for improvements to climate mitigation and to air quality. This is somewhat offset by a negative ranking on waste and circular economy (except where there is a specific plan in place to eliminate waste). On climate adaptation neutral rankings were provided for domestic energy efficiency programmes, pending further research on the risks to excess temperatures in summer months.

Tourism Support Measures

Measures to support the tourism industry, such as the Tourism Marketing Fund and Tourism Product Development, were considered by the Steering Group as potentially having an unfavourable impact on climate and environmental outcomes. The Steering Group came to this conclusion as the group considered that promoting Ireland as a

tourism destination is likely to result in increased visitor numbers and activity in the sector. This increased activity is likely to place upward pressure on greenhouse emissions.

However, tourism is a pivotal sector in the Irish economy, generating economic benefits and providing essential employment opportunities across the country, particularly in rural communities. This is another clear example of where a negative categorisation does not imply that a programme should not proceed. In rebuilding the sector following the devastating impacts of the COVID-19 pandemic, the need for a more resilient and sustainable tourism model is recognised.

The Department of Tourism, Culture, Arts, Gaeltacht, Sports and Media (DTCAGSM) has commenced the development of a sustainability-focused National Tourism Policy, which will set out the roadmap to environmental, social and economic sustainability within the Tourism sector. It is intended that the new policy will be in line with Goal 8.9 of the UNs Sustainable Development Goals: *By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products.*

The development of this new policy will set out a path to a sustainable recovery and subsequent regrowth in the sector, with benefits for employment, social cohesion and regional economies. The new policy will be underpinned by the Guiding Principles for Sustainable Tourism in Ireland. It is intended that the policy will be informed by and build upon the work undertaken by the Sustainable Tourism Working Group and be consistent with sectoral climate change targets and commitments. It will seek to mainstream environmental sustainability by developing and promoting a 'greener' national tourism product, whereby visitors will be encouraged to spend longer in destinations, with the destinations themselves supported in a green transition.

As such, the development and implementation of this new policy is likely to help address or may even negate some of the potentially unfavourable climate/environmental impacts that expansion of the tourism sector could give rise to.

Section 3: Climate & Environmental Outcomes

This section of the paper details each of the climate and environmental outcomes that Departments were required to assess spending measures against. A description of each outcome is provided to explain what the outcome is, why it is important, and how Departments were recommended to consider and rank their spending measures against it.

3.1 Outcome 1: Climate Mitigation

Is this measure likely to lead to an increase or decrease in the level of greenhouse gas emissions released into the atmosphere?

3.1.1 What Are Greenhouse Gas Emissions?

Greenhouse gas (GHG) emissions are defined in the Public Spending Code³, using the same methodology that is applied by the United Nations Framework Convention on Climate Change. Greenhouse gases are considered to be comprised of any emissions of any of the following gases: Carbon Dioxide (CO₂), Methane (CH₄), Nitrous Oxide (N₂O), Sulphur Hexafluoride (SF₆), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs) and Nitrogen Trifluoride (NF₃). These gases are known collectively as the “basket of seven” greenhouse gas emissions.

In 2019, Ireland’s GHG emissions were estimated at 59.9 Mt CO₂ equivalent; this is an increase of 10.1% since 1990, when emissions were 54.4 Mt CO₂ equivalent. The Agriculture sector is the single largest contributor to the overall emissions, at 35.3%. Transport, Energy Industries and the Residential sector are the next largest contributors, at 20.3%, 15.8% and 10.9%, respectively.

Since the publication of the National Development Plan in 2018, the Government has committed to a significantly more ambitious course of action to address climate change. Through the 2019 Climate Action Plan, the subsequent Programme for Government and the recently enacted Climate Action and Low Carbon Development (Amendment) Act 2021, Ireland has committed to an average 7% per annum reduction in overall greenhouse gas emissions from 2021 to 2030. This is equivalent to a 51% reduction over the decade. Ireland has also committed to the achievement of a net zero emissions target by 2050.

The achievement of these targets is to be driven by a series of five-year carbon budgets, which will set the total amount of emissions which can be emitted by each sector during a five-year period, in line with Ireland’s national and international commitments.

The next ten years are critical to addressing the climate and biodiversity crisis. Achieving a 51% emissions reduction target in the course of the decade and putting Ireland on a trajectory to net zero 2050 will be challenging and will require fundamental

³ <https://assets.gov.ie/43554/70a378231f1540b0a09a0560dc9dd26f.pdf>

changes and significant public and private investment across every sector of the economy. Investment that contributes to climate change mitigation measures will reduce fiscal and economic risk to the Exchequer, reduce the physical and economic risk to citizens and businesses, and improve the health, welfare and the security of all our people.

3.1.2 Estimating the Greenhouse Gas Emissions Associated with a Measure

Considering the impact on greenhouse gas emissions a measure might have from a qualitative perspective was expected to be a relatively simple process for Departments. If the measure they were proposing is likely to lead to increased fertiliser usage or animal numbers in the agricultural sector or increased energy demand in any other sector of the economy (increased usage of heating, electricity or transport) then the measure may have a negative impact on greenhouse gas emissions. If the measure is aimed at reducing any of these factors, then the impact on greenhouse gas emissions is likely to be positive.

However, this is where it was important to consider the counterfactual position. An initiative that promotes district heating for example, may lead to increased heating demand but since it would be replacing higher emission sources of heating (natural gas) with a lower one (waste heat) and a more efficient distribution system, the net impact on emissions is likely to be positive and the measure may have been marked with a positive ranking.

In addition, if there are specific safeguards or protections in the measure that are expected to prevent any consequential increases in greenhouse gas emissions that may arise, it is possible that the measure could be considered to have no discernible impact and hence be marked as neutral.

When Departments were considering the impact a proposed measure may have upon greenhouse gas emissions the scoring matrix below was used to estimate the likely impact of a proposal on greenhouse gas emissions:

Score	Definition
+3	<p>This expenditure is specifically aimed at measures which will directly reduce greenhouse gas emissions.</p> <p>For example, energy efficiency measures permanently reduce a household's or businesses' energy needs sufficient to offset any rebound effect. Therefore measures which directly target improved energy efficiency are unambiguously positive from a greenhouse gas emissions perspective and should receive the highest ranking.</p>
+1	<p>The expenditure is likely to contribute to improved greenhouse gas emissions levels, but reducing emissions is not the direct focus of the expenditure.</p> <p>An example here could be investment in broadband infrastructure. This does not reduce greenhouse gas emissions levels directly, indeed the additional construction sector activity may lead to increased emissions in the short term but the investment allows lower carbon choices to be made by households,</p>

	which over the medium to long term, is likely to lead to a net reduction in greenhouse gas emissions.
0	The expenditure is likely to have no discernible impact on GHG emissions levels. An example here could be expenditure that is social in nature, such as investment in research and development.
-1	Any positive intended impacts of the expenditure may be at risk of being offset by negative impacts on greenhouse gas emissions through rebound effects. For example investment in road infrastructure may reduce journey times and thus have a positive impact on emissions in the very short term but this provision of new infrastructure is likely to incentivise a greater level of travel between the two destinations, increasing emissions over the medium term.
-3	The expenditure is likely to lead to an increase in emissions or encourage behaviours unfavorable to GHG emissions reduction efforts An example here might be investment in airport expansion. This is investment aimed at boosting the numbers travelling through a particular airport and, as such, will lead to increased use of air travel, where the options for mitigation of emissions are extremely limited and hence increased greenhouse gas emissions are likely.

3.2 Outcome 2: Climate Adaptation

Is this measure likely to increase or decrease society's resilience to the potential impacts of climate change?

3.2.1 What is Climate Adaptation?

Greenhouse gas emissions remain in the atmosphere long after they have been emitted. This means that regardless of how successful mitigation efforts to reduce emissions are, the consequences of climate change will be unavoidable due to the delayed impacts of past and current emissions.

Climate change is expected to have a wide range of impacts on Ireland's environment, society and economic development. The most immediate risks to Ireland are mainly those associated with changes in extremes, such as floods, precipitation and storms (e.g. Storm Ophelia in 2017). It is estimated that between 2014 and 2018 local authorities spent approximately €101 million responding to extreme weather events.

Over the longer term, mid-century mean annual temperatures are projected to increase by between 1.0°C and 1.6°C in Ireland. This will lead to more frequent heat waves, with consequent impacts on mortality, and increases in both dry periods and heavy precipitation events, meaning increased flood risk and droughts. There is also the possibility that, although the average wind speed may decrease, the intensity of individual storms may increase.

It is therefore necessary that the adverse effects of climate change are anticipated and appropriate adaptation measures are taken to prevent or minimise the damage these

effects can cause. It is also necessary that adaptation measures are implemented in parallel with mitigation measures. Well planned, early adaptation action will increase Ireland’s climate resilience and minimise the economic, environmental and social costs associated with the impacts of climate change. The NDP specifically identifies flood risk management plans as key to reducing the vulnerability of the country to the negative effects of climate change.

The 2018 National Adaptation Framework (NAF) sets out the national strategy to reduce the vulnerability of the country to the negative effects of climate change and to avail of positive impacts. In addition, statutory "Sectoral Planning Guidelines for Climate Change Adaptation" were developed to support the vulnerable sectors identified in the NAF and ensure that a consistent approach to adaptation planning is adopted at a national level.

3.2.2 Estimating the Impact a Measure may have on Climate Resilience

When considering the impact that a measure may have on Ireland’s climate resilience, Departments were asked to have regard to the potential effects of climate change as outlined above and further detailed in Ireland’s National Adaptation Framework. Put simply, any measure which seemed likely to mitigate the potential impacts of the expected changes to Ireland’s climate may have been considered for a positive ranking whereas any measures which may increase Ireland’s exposure to these effects were considered for a negative ranking.

It was necessary to identify areas and sectors that may be at risk from climate change and invest in adaptation measures to reduce the impacts of such risk. It was also important that all infrastructure investment is ‘future-proofed’ in terms of climate change, so that it does not give rise to additional costs in the long-term (e.g. as a result of technological lock-in or poor spatial/resource planning). The climate risk to a project's future costs and benefits were assessed and options to alleviate those risks analysed, in order to create a climate resilient economy and make best use of exchequer funds.

When scoring proposed expenditure under the NDP, regard had to be given to the expected impact on climate adaptation and resilience arising from the project. Whether the measure in question is to be implemented in locations or sectors that are vulnerable to climate-related threats, and whether it will either potentially provide any reduction in the likely economic cost of any geophysical impacts of climate change or give rise to additional costs in the future, had to be considered.

The scoring matrix below sets out how Departments were instructed to rank the compatibility of measures proposed with climate adaptation concerns:

Score	Definition
+3	The expenditure is likely to directly and unambiguously provide some degree of protection from the likely impacts of climate change and aligns with Ireland’s National Adaptation Framework.

	An example of a measure likely to receive this ranking is investment in flood risk management or works to prevent or limit coastal erosion.
+1	The expenditure is likely to at least tangentially contribute to improved climate resilience, but increasing resilience is not the direct focus of the measure. For example investment in infrastructure that will be specifically future-proofed against the projected geophysical impacts of climate change is likely to lead to a net improvement in Ireland's climate resilience and should therefore receive this ranking.
0	The expenditure is likely to have no discernible impact on climate resilience or adaptation. As an example here, investment in education or other social outcomes is unlikely to significantly alter Ireland's climate resilience.
-1	Any positive intended impacts of the expenditure may be at risk of being offset by negative impacts to climate resilience. Areas which might fall into this category include measures which might increase dependency on natural resources that are vulnerable to the impacts of a warming climate likely – increased water usage in an area of water stress for example.
-3	The expenditure is likely to give rise to additional costs in the future in terms climate risk An example here would be the provision of new infrastructure in vulnerable areas, such as coasts & flood plains without any steps to protect said infrastructure from the expected effects of Ireland's changing climate.

3.3 Outcome 3: Water Quality

Is the measure likely to increase or decrease pollution levels or otherwise affect the in Irish waterways?

3.3.1 What is Water Quality?

Water is an important national resource that provides a multitude of benefits to the people of Ireland, including food, tourism, recreation, transport and environmental services. Ireland's rivers, lakes, estuaries and coastal waters are also home to thousands of plant and animal species. This resource needs to be protected to allow the benefits that currently arise to be enjoyed by future generations.

The EU Water Framework Directive classification scheme for water quality has five status labels: high, good, moderate, poor and bad. 'High status' is defined as the biological, chemical and morphological conditions associated with no or very low human pressure. 'High status' is the reference scenario and water quality assessments are based on the extent of deviation from these benchmark conditions. The definition of ecological status takes into account specific aspects of the biological

quality elements, for example “composition and abundance of aquatic flora” or “composition, abundance and age structure of fish fauna”, as well as chemical and hydro-morphological elements.

Under the Water Framework Directive, which was transposed in Irish law in 2003, Member States are required to protect/enhance the quality of all waters, with the aim of achieving ‘good’ ecological status for all waters by December 2015, or 2027 at the latest, and managing water bodies based on river basins or catchments. The National River Basin Management Plan 2018-2021 sets out the steps to be taken to protect and improve water quality. The third cycle of Ireland’s River Basin Management Plan is currently under preparation and will set out environmental objectives to be achieved up to 2027. This will include new rules around the protection of drinking water, proper management of septic tanks and improved controls of the abstraction of water.

However, despite these commitments, a 2020 EPA report⁴ found that the quality of our aquatic environment is declining after a period of relative stability and improvement. Nearly half of the surface waters in Ireland are failing to meet the legally binding water quality objectives set by the EU Water Framework Directive because of pollution and other human disturbance.

Since the last assessment (2010-2015), 483 water bodies declined in status and just 368 improved, resulting in a net decline in water quality. The EPA note that: “*the ecology of poor status waters is so significantly altered that their ability to function normally in terms of food web dynamics and nutrient cycling is greatly diminished.*” This deterioration in water quality is being driven overwhelmingly by agricultural activities, largely as a result of run-off of nutrients and sediment from agricultural land and farmyards and the contamination of surface waters with pesticides. Drainage of agricultural land is also a contributory factor.

3.3.2 Estimating the Impact a Measure may have on Water Quality

As per above, the requirements of the Water Framework Directive provided the baseline against which any measures proposed in the NDP were evaluated. When scoring proposed expenditure under the NDP, Departments were instructed to consider any changes to water pollution levels that may arise from the measures under contemplation but also any other changes that may affect the morphology and hydrology of the water way and hence, overall water quality.

The EPA’s integrated assessment of Ireland’s environment showed that the most significant factors in pressure to the quality of water bodies are agriculture, hydromorphology (i.e. change in the shape and flow of water bodies due to physical alterations), urban wastewater and forestry. All measures which might increase activities in these areas required particularly careful consideration.

⁴ <https://www.epa.ie/publications/monitoring--assessment/assessment/state-of-the-environment/EPA-Ireland's-Environment-2020-Chapter7.pdf>

Score	Definition
+3	<p>The expenditure is likely to lead to a direct and unambiguous reduction in water pollution, and/or an improvement in water quality and contribute to compliance with our WFD obligations.</p> <p>For example, new investment in urban waste-water collection and treatment infrastructure is likely to reduce pollution levels and hence improve water quality and so should receive this ranking.</p>
+1	<p>The expenditure is likely to at least tangentially contribute to improved water quality, but improving water quality is not the direct focus of the expenditure.</p> <p>As an example here, investment in certain agri-environmental programmes targeted at reducing levels of fertiliser usage will reduce greenhouse gas emissions but will also contribute to reducing the water pollution caused by the agricultural sector (assuming no significant rebound effects are expected).</p>
0	<p>The expenditure is likely to have no discernible impact on water quality.</p> <p>It may be expected that many measures proposed in the NDP will not impact water quality to any significant degree. Investment in electricity infrastructure for example does not seem likely to drive any alterations to water quality levels.</p>
-1	<p>Any positive intended impacts of the expenditure may be at risk of being offset by negative impacts on water quality.</p> <p>For example, weirs, dams and channel diversions may have legitimate policy purposes but can also damage river habitats and prevent the movement of fish and can be extremely detrimental to migratory fish species.</p>
-3	<p>The expenditures are likely to reduce water quality or encourage behaviours unfavorable to water quality</p> <p>As an example here, measures that support the intensification of agricultural production would likely lead to a decline in water quality due to increases in fertiliser usage and run-off nutrients</p>

3.4 Outcome 4: Air Quality

Is the measure likely to change pollution levels in the atmosphere?

3.4.1 What is Air Quality?

There are a number of air pollutants that can affect human health. The Ambient Air Quality Directives (2008/50/EC and 2004/107/EC) sets limits for 13 air quality pollutants, while the National Emission Ceilings (NEC) Directive (2016/2284/EU) sets emissions reduction commitments for the five main pollutants for 2020 and 2030 – nitrogen oxides (NO_x), non-methane volatile organic compounds (NMVOC), sulphur dioxide (SO₂), ammonia and fine particulate matter (PM_{2.5}).

These air pollutants can contribute to both short-term and long-term health outcomes. While air quality in Ireland has largely been considered to be good, monitoring and research by the EPA show that Ireland has air quality issues that need to be resolved.

The latest estimates from the European Environment Agency suggest that in excess of 1300 premature deaths occur in Ireland each year due to poor air quality.

Air quality is measured through the National Ambient Air Quality Monitoring Network which is managed by the EPA, along with local authorities, other public bodies and third-level education institutions. Pollution levels are compared against European legal limit values. Up to 2018, Ireland was compliant for NO_x, SO₂ and NMVOC emissions targets after flexibilities were applied. Ireland was not compliant for ammonia emissions from 2016 – 2018. It is expected that Ireland will find it challenging to reach 2030 emissions reductions commitments for NO_x and ammonia.

EU Member States are required to draw up a National Air Pollution Control Programme (NAPCP). The Department of the Environment, Climate and Communications (DECC) is responsible for ensuring that Ireland meets its EU air quality obligations and is preparing a National Clean Air Strategy as part of the NAPCP.

The emissions of the gases that affect air quality are driven by day to day human activities, particularly agricultural production and the combustion of fossil fuels for transportation, electricity generation and home heating. Urban areas are particularly vulnerable to the impacts of poor quality due to the higher population density and hence a greater concentration of these activities. However, solid fuel use (coal, peat and wet wood) particularly contributes to localised high levels of particulate matter pollution and these fuels are more commonly used in rural areas.

3.4.2 Estimating the Impact a Measure may have on Air Quality

When scoring proposed projects for the National Development Plan, Departments were instructed to have regard to the expected impact on the air pollutants arising from the measure and in particular the five air pollutants measured under the NEC Directive. Projects that lead directly or indirectly towards reductions in emissions of air pollutants received a positive score while projects where it is expected will result in an increase in air pollutants were scored negatively.

As noted above, any measure that may lead to an increase in the combustion of fuels or agricultural production is likely to increase air pollution and hence a negative ranking was warranted. Conversely any measure likely to lead to a decline in these activities or the replacement of them with lower emitting alternatives, is likely to be beneficial to the atmosphere and a positive ranking has been considered.

Consideration was also given to the impacts of noise pollution where appropriate with regard given to the EU's Environmental Noise Directive (2002/49/EC).

The scoring matrix below provides illustrative examples of how measures that affect air quality were ranked:

Score	Definition
+3	<p>The expenditure is likely to lead to a direct and unambiguous improvement in air quality levels.</p> <p>For example, measures to support electric vehicle take-up might have received this ranking as an electric vehicle eliminates the tail pipe emissions associated with an internal combustion engine vehicle and thus leads to a reduction in the levels of nitrogen dioxide in the atmosphere.</p>
+1	<p>The expenditure is likely to at least tangentially contribute to improved air quality, but it is not the direct focus of the expenditure</p> <p>As an example here, investment in renewable electricity generation is likely to lead to decreased combustion of fossil fuels in the electricity generation sector and so decreased emission of air pollutants</p>
0	<p>The expenditure is likely to have no discernible impact on air quality.</p> <p>If the measure does not increase or reduce or create an incentive to increase to reduce agricultural activity and fuel combustion, it is not likely to have a significant impact on air quality.</p>
-1	<p>Any positive intended impacts of the expenditure may be at risk of being offset by negative impacts on air quality.</p> <p>For example, investment in new road infrastructure is likely to lead to an increase in the number of km travelled by drivers and hence an increase in fuel combustion in the transport sector and hence a worsening of air quality.</p>
-3	<p>The expenditures are likely to reduce air quality or encourage behaviours unfavorable to air quality</p> <p>As an example here, measures which lead to an intensification of agricultural productions will likely see subsequent increases in NOx and ammonia emissions and a deterioration in air quality.</p>

3.5 Outcome 5: Waste & Circular Economy

Is the measure likely to lead to changes in the levels of waste produced in the economy?

3.5.1 What is Waste & the Circular Economy?

Waste is material that is discarded as no longer useful or required after the completion of a process or use of a product. The circular economy is a concept that seeks to minimise waste generation and resource use by ensuring that the value of products and materials is maintained for as long as possible through good design, durability and repair; and when a product has reached the end of its life, its parts are used to create further useful products.

It is estimated that Ireland produced 14 million tonnes of waste across all sectors and households in 2018, with the latest statistics indicating that waste generation is increasing. Ireland's domestic material consumption, a measure of materials used by an economy, is significantly above the EU average (23.45 tonnes per person vs 13.14 tonnes per person).

This is damaging to society as increasing extraction of natural resources and disposal of waste is a major contributor to habitat and biodiversity loss and contributes to global warming. The most common sources of waste in Ireland are: food waste, plastic and packaging waste, single use plastics, construction and demolition waste, textiles and by-products.

Targets on waste and circular economy including recycling, reducing disposal to landfills and plastic packaging recycling, are set to become significantly more ambitious in the coming years following updates to EU Regulations and Directives arising from the new EU Circular Economy Action Plan⁵. To support meeting the increased waste reduction targets, the Department of Environment, Climate & Communications released a National Waste Action Plan for a Circular Economy⁶ in September 2020. This strategy aims to use the post-COVID recovery to change the focus of waste management from waste treatment to waste prevention and to introduce circular economy measures.

3.5.2 Estimating the Impact a Measure may have on Waste & Circular Economy

When scoring proposed projects for the NDP, consideration was given to the likely impact that the project will have on waste generation and whether the project will move Ireland closer to achieving a circular economy.

While most Government capital investment seems unlikely to generate, or even incentivise, additional waste generation across most sectors of the economy, increased levels of construction and demolition waste may arise from any increased infrastructural investment. Construction and demolition waste is defined as waste from any building works, demolition and development (including transport infrastructure).

Departments were therefore asked to prioritise consideration of the likely impact measures will have on this aspect of waste generation and consider if there are sufficiently robust safeguards in place to minimise or even eliminate via circular economy measures any waste that may arise.

The matrix below sets out factors that Departments were instructed to consider when assigning a ranking to a measure:

⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN>

⁶ <https://assets.gov.ie/86647/DCF554A4-0FB7-4D9C-9714-0B1FBE7DBC1A.pdf>

Score	Definition
+3	<p>This measure is specifically aimed at measures which will directly reduce waste and/or promote recycling or more sustainable product design, durability and repair and/or directly incorporate reduced resource intensity measures through re-use of recycled materials.</p> <p>For example, investment in recycling infrastructure is clearly directly aimed at reducing waste and promoting a circular economy. Measures in these areas should receive the highest ranking.</p>
+1	<p>The measure is likely to contribute to reduced waste levels, increased recycling levels and/or sustainability reforms to goods produced but these are likely by-products rather than the direct focus of the expenditure.</p> <p>An example here could be an investment measure that incorporates explicit requirements to make better-informed consumption decisions – a programme that offers grants to business that are contingent on developing and implementing Environmental Management Systems.</p>
0	<p>The expenditure is likely to have no discernible impact on waste levels or the development of a circular economy.</p> <p>An example here could be expenditure that is social in nature such as investment in science and technology or skills and training.</p>
-1	<p>Any positive intended impacts of the expenditure may be at risk of being offset by negative impacts on waste levels or indirect incentives</p> <p>For example, as previously mentioned in this note, energy efficiency works offer multiple benefits to the State and households. Increasing energy efficiency activity is however likely to lead to an increase in waste construction material being sent to landfill and will therefore have a negative ranking.</p>
-3	<p>The expenditure are likely to lead to an increase in waste or encourage behaviours unfavorable to recycling efforts</p> <p>An example here might be investment in increased activity in the construction sector, regardless of the purpose of that activity as this seems likely to generate additional construction and demolition waste. Absent specific measures to eliminate this waste, this suggests that any measures that involve construction activity must receive a negative ranking.</p>

3.6 Outcome 6: Nature & Biodiversity

Is the measure likely to impact protected habits or impact on the species of life in Ireland?

3.6.1 What is Nature & Biodiversity?

The terms 'biodiversity' and 'nature' are often used interchangeably. In general they refer to the multitude of living things that make up life on Earth. This encompasses the 8 million or so species on the planet—from plants and animals to fungi and bacteria—and the ecosystems that house them. Healthy biodiversity is key to ecosystem resilience and the provision of ecosystem services is vital to matters such as

pollination, soil productivity, provision of clean water and the provision of raw materials to produce many medical treatments that are fundamental to society.

Although Ireland naturally has a less diverse population of plants, insects and animals than mainland Europe, it has some habitats that are of particular EU importance, such as our peatlands. Our aquatic systems and wetlands also support populations of birds, fish and invertebrates that are of international importance.

Most habitats assessed in Ireland have an unfavourable status and almost half show ongoing declines, including marine, peatland, grassland and woodland habitats. A 2019 report⁷ by the National Parks and Wildlife Service shows that 85% of EU protected habitats have an unfavourable status, with 46% continuing to decline. While progress has been more favourable for protected species, with 72% of species showing stable or improving trends, there are still a number of species at risk.

The primary pressures on Ireland's protected habitats and species are driven by agricultural activity, extraction of resources, forestry, urbanisation, recreation, invasive species and climate change. Some of these pressures can also have a significant impact on air and water quality which are dealt with in the preceding sections.

Increased efforts are being made to conserve and restore Ireland's habitats and species. The 3rd National Biodiversity Action Plan 2017-2021, which contains 119 actions, is key to this while the National Planning Framework also contains biodiversity objectives. The Programme for Government reaffirms the Government's commitment to Ireland's biodiversity. In addition, the recently enacted Climate Action and Low Carbon Development (Amendment) Act 2021, contains a legislative commitment to achieve a climate neutral and biodiversity rich economy by 2050 at the latest.

3.6.2 Estimating the Impact a Measure may have on Nature & Biodiversity

The National Planning Framework aims to enhance the conservation status and improve the management of protected areas and protected species. When scoring a proposed measure, consideration was given to the likely impact on any habitat that may be affected by the measure and/or any impact the measure may have upon species diversity. Projects that will likely impact favourably on a habitat and/or species directly or indirectly were scored positively while projects that expect to have an undesirable impact received a negative scoring.

Many investment projects may have little or no impact on biodiversity. As noted by the EPA the primary activities that influence biodiversity include agricultural activity, extraction of resources, forestry, urbanisation and recreation. Therefore Departments should have had particular regard to any proposed measures in these areas and consider whether they are likely to promote or harm biodiversity.

Certain activities such as increased construction activity or increased agricultural output or intensification by definition would seem to have negative impacts of nature and biodiversity. However, it may be that the negative effects of a measure can be

⁷ <https://www.npws.ie/sites/default/files/publications/pdf/NPWS-Biological-Diversity-web.pdf>

mitigated through the adoption of robust amelioration or restoration efforts that would run in parallel with the measure in question.

The table below sets out the scoring matrix for this environmental outcomes and gives examples of measures that DPER believe may qualify for each ranking:

Score	Definition
+3	<p>The measure actively contributes to the improvement or extension of protected habitats or promotes species diversity.</p> <p>For example, investment by the National Parks and Wildlife Service to restore habitats and to manage State-owned National Parks and Nature Reserves has the direct aim of habitat protection.</p>
+1	<p>The expenditure is likely to at least tangentially contribute to improved habitats and species diversity but these benefits are ancillary to the main purpose of the measure.</p> <p>As an example here, the recent Government investment in the sequestration of greenhouse gas emissions in BnM peatlands will also likely to lead to improved biodiversity outcomes on the lands in question.</p>
0	<p>The expenditure is likely to have no discernible impact on nature and biodiversity outcomes.</p> <p>If the measure does not affect the physical environment to any significant degree, it is not likely to have any significant impact on biodiversity. Investment in research and development or skills and training are examples of measures likely to be neutral.</p>
-1	<p>Any positive intended impacts of the expenditure may be at risk of being offset by negative impacts on biodiversity or the creation of incentives towards their destruction.</p> <p>For example, investment in new infrastructure projects, even ones projected to have broader environmentally beneficial impacts such as new rail construction, may result in a loss of biodiversity, unless these measures are deemed to have sufficiently strong protections that can reverse any projected species or habitat decline.</p>
-3	<p>The expenditures are likely to directly lead to a loss of natural habitat and/or a decline in species biodiversity.</p> <p>An example of measures that receive this ranking include any measures that may contribute to increased agricultural production or intensification of farming practices that resulting in decreases in protected habitat quality</p>

3.7 Outcome 7: Just Transition

Is the measure likely to contribute to employment that is compatible with Ireland's ambitions to reach net zero emissions by 2050?

3.7.1 What is the Just Transition?

Just Transition is a recognition that the process of moving to a low carbon economy is likely to result in shifting patterns of economic activity and employment and that the consequences of these shifts must be recognised and dealt with in a way that protects those most vulnerable to the changes. In essence, it is about identifying the areas, sectors and professions at risk of disruption, providing alternative job opportunities and ensuring that there is a supporting infrastructure that can assist people in availing of these alternative opportunities.

The Programme for Government specifically commits to finding a Just Transition pathway which delivers alternative job opportunities to sectors and regions most affected and ensures that vulnerable groups are helped, as transformative policies are implemented.

The first area affected by the low carbon transition is the Midlands. This arose as a result of the early closure of the peat fired electricity generation plants in the region. In response, the Government initiated a range of policy responses, from the appointment of a Just Transition Commissioner to investigate the specific needs that arose, to the creation of a dedicated Just Transition Fund to support activities and needs identified by communities in the region, and the initiation of a new Local Authority retrofit scheme to provide additional sustainable employment.

3.7.2 Estimating the Impact a Measure may have on the Just Transition

It is appreciated that since policy development of the Just Transition is at an early stage in Ireland and many of the sectors and areas that may be at risk have not yet been identified, it would not be considered appropriate to score every measure on a scale with its compatibility with a Just Transition.

Therefore a binary ranking system was used. A measure was considered to contribute positively towards the achievement of a Just Transition if, on a net score basis, it contributes positively to the achievement of the climate and environmental outcomes identified in this note and it is likely to result in additional employment. If this cannot be said of a measure it has been considered to be neutral.

For example, energy efficiency works are capital and labour intensive. As such, measures that increase energy efficiency activity levels are also likely to increase employment levels in the sector. Since energy efficiency works are also likely to secure a net positive ranking against other climate and environmental – reducing greenhouse gas emissions, improving air quality etc., then energy efficiency works can be considered to contribute positively to achievement of a Just Transition.



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