

Executive Summary

This is the eighth State of the Environment Report published by the Environmental Protection Agency since the first report in 1996. The report provides thematic assessments in Part 1, focusing on key trends in and challenges and actions for air, climate change, noise, water, marine, nature, land use and soil. Part 2 provides detailed integrated assessments of key economic sectors: transport, energy, agriculture, industry and the circular economy and the interactions between human health and the environment. Finally, Part 3 provides an in-depth assessment of how Ireland is performing in the area of environmental policy implementation. The key messages emerging from each chapter are appended to this summary for ease of reference. The report also provides mid-term commentary on the many plans and programmes in place that have 2030 in their sights (e.g. Climate Action Plan, Sustainable Development Goals).

The value of Ireland's environment cannot and should not be underestimated. Our terrestrial and water environments host exceptionally rich ecosystems that support diverse populations of flora and fauna. These ecosystems provide essential services to people, including food, construction materials and manufacturing resources. They provide the pollination on which our crops depend, are the source of our drinking waters and attenuate floods. They improve the air we breathe and provide places for the recreation necessary to our health and wellbeing. In this context, this summary provides a summary environmental scorecard on environmental protection and sets out key priorities that the EPA has identified need to be progressed to improve our performance in environmental protection.

Environmental Scorecard for Ireland

The summary scorecard analysis shown in Table 1 highlights that the scale of improvements that are being made across a variety of areas is insufficient to meet national long-term environmental objectives and targets, especially where they require coordinated action across thematic areas. In all cases, the outlook is not positive with substantial challenges to deliver on climate, air, nature, water and the circular economy.





There is a need to continue intensifying our activities to address climate change and biodiversity decline while also addressing Ireland's other environmental priorities. These include tackling water pollution from nutrients, physical damage to our waterways and deficits in the safety of our water supplies, improving our waste segregation and increasing recycling rates, while at the same time reducing our overall consumption of our resources. A further priority is improving air quality to protect our health, including reducing ambient pollution from particulates and nitrogen dioxide.










Table 1 Summary scorecard for selected environmental policy areas




INDICATOR	CURRENT ASSESSMENT	OUTLOOK	NOTES
Overall climate assessment	●	▼	While there has been progress in terms of beginning to reduce greenhouse gas emissions and in strengthening adaptation governance structures and support services, overall current assessment for climate is ‘poor’ (a slight improvement from ‘very poor’ in 2020). Full implementation of actions set out in the Climate Action Plan and additional actions are needed if Ireland is to meet its 2030 and 2050 climate targets.
Overall air assessment	●	⊖	The overall current assessment for air is ‘moderate’ (the same as in 2020). Ireland is compliant with current air quality standards for many air pollutants. However, Ireland is not meeting the guidelines set by WHO for multiple pollutants, including fine particulate matter, and Ireland is non-compliant with the EU reduction target for ammonia and will remain so in the short term. Achieving the ambitions of the Clean Air Strategy and complying with the limit values of the proposed EU Air Quality Directive from 2030 onwards will be challenging but will have a significant and positive impact on health.
Overall nature assessment	●	▼	The overall current assessment for nature is ‘very poor’ (the same as in 2020). Deteriorating trends dominate, especially for protected habitats and bird populations, and Ireland is not on track to achieve policy objectives for nature. While the recent expansion of marine protected areas is welcome, additional far-reaching measures are needed to address the declines in nature and biodiversity.

INDICATOR	CURRENT ASSESSMENT	OUTLOOK	NOTES
Overall water assessment			Overall current assessment for water is 'poor' (the same as in 2020). Trends remain mixed, with no net improvement in river or lake water quality in recent years, a sharp decline in the number of monitored estuaries in satisfactory ecological condition and continued direct discharges of raw or inadequately treated sewage to water from 19 agglomerations. Significant challenges remain for achieving full compliance with relevant EU obligations and national policy objectives.
Overall circular economy and waste assessment			The overall current assessment for the circular economy and waste is poor (the same as in 2020) but progress is being made in a number of areas to improve performance. Waste generation continues to grow, in absolute and per capita terms, and Ireland remains overly reliant on export markets for recycling and for treating municipal residual waste. Recycling rates for municipal and plastic packaging waste streams are at risk and need to increase urgently to achieve 2025 targets. Recent interventions, such as the Deposit Return Scheme, statutory roll-out of the organic waste collection service, recovery levy and national end-of waste and by-product decisions, are positive developments but the effects of these remain to be seen. The circular material use rates remains very low by comparison to the European average and Ireland needs to address specific sectoral challenges to accelerate moving from a linear to a circular economy.

SUMMARY OF CURRENT ENVIRONMENTAL PERFORMANCE, POLICY AND IMPLEMENTATION IN IRELAND

-  Very poor – significant environmental and/or compliance challenges to address.
-  Poor – environmental and/or compliance challenges to address.
-  Moderate – on track generally/local or occasional challenges to address.
-  Good – mainly achieving objectives.
-  Very good – fully achieving objectives.

OUTLOOK OF CURRENT PROSPECTS OF MEETING POLICY OBJECTIVES AND/OR TARGETS

-  Largely not on track to meet policy objectives and targets. Significant challenges remain to achieving full compliance. Systemic and transformative change needed.
-  Partially on track to achieving full compliance or measures in place or planned that will improve the situation. However, the outlook is dependent on existing and planned actions and measures and plans being fully implemented and effective.
-  Largely on track to achieving full compliance. Measures in place provide prospect of meeting policy objectives and targets.

Key messages for Ireland on the state of the environment in 2024

This report shows not only that there is a need for urgent interventions to address climate change and biodiversity decline but also that there are other environmental priorities for Ireland. These include tackling water pollution, investing in critical water services, improving waste segregation and recycling rates, continuing to improve our air quality and mitigating radiological risks. In addition, this assessment indicates that how we use our land is a significant contributor to the climate, biodiversity and water quality challenges.

To protect the environment, we need to look at multifunctional approaches to land management, which will require extensive engagement with landowners.

More urgent system-wide change is needed across the energy, transport, industrial and food sectors and in the built environment to improve sustainability and reduce emissions that are damaging to our environment, our climate and our health.

The overall key priorities identified for Ireland's environment are summarised below. Further details about these priorities can be found in Chapter 17.

Figure 1 Five key priorities from the State of the Environment Report 2024

Delivering a national policy position on the environment



We urgently need to have a national policy position on the environment to address the complex interactions, synergies and trade-offs across environmental policy areas and to deal with its interactions with other policy domains.

Driving policy implementation



We must rigorously implement existing environmental plans and programmes to achieve the benefits that they were developed to deliver.

Transforming our systems



Transformation of our energy, transport, food and industrial sectors is critical to achieving a sustainable future.

Scaling up investment in infrastructure



Investment in water, energy, transport and waste management infrastructure is essential to protect the environment now and into the future.

Protecting the environment to protect our health



Protecting the environment is key to protecting our health and we must act to reduce the modifiable risks to our health from environmental exposures.



Delivering a national policy position on the environment

Since the EPA published its last State of the Environment Report in 2020, Ireland has set a national objective to transition to a climate-resilient, biodiversity-rich, environmentally-sustainable and climate-neutral economy by 2050. Achieving this ambitious multifaceted objective will be the most complex and interconnected environmental challenge for the next 25 years and each step towards its achievement will present opportunities and challenges. There will be many complex issues to overcome and trade-offs to be addressed along the way which will require significant collaboration to address issues across climate, land use, air pollution and biodiversity.

The EPA again recognises the need for a coherent national policy position on the environment. We need this policy to bring together our action and align our activities to protect our waters, air, soil, ecosystems and biodiversity so that those systems can provide the essential supporting services that we depend on for our economy and health. A national policy position would promote improvements in policy coherence and set out, in an integrated manner, the country's ambition for the environment for the next generation.

While aspects of environmental protection can be achieved through developing and implementing good government policy, the active engagement and participation of everyone will be essential if real and meaningful change is to be made. A national policy position could serve as the starting point for the development of an inclusive national contract across the economy and society so that we live sustainably in a healthy environment that is valued and protected by all.

Driving policy implementation

Ireland has a comprehensive set of laws, policies and plans aimed at protecting the environment and human health. This report shows that serious deficits remain in Ireland's implementation of environmental legislation such as the Urban Waste Water Directive, Water Framework Directive, climate law and related plans and programmes. The EU, in its national Environmental Implementation Review, has highlighted the challenges that remain for Ireland to achieve compliance with EU waste water treatment legislation; access to justice in environmental matters; conservation matters on marine nature sites; and the conservation of bogs. There are currently nine Court of Justice of the European Union cases and 16 infringements open against Ireland for failures in implementing EU environmental legislation. Resolving the current infringement procedures will require proactive action and prioritising legislation and implementation.

In addition, Ireland is not making adequate progress towards meeting our own nationally set targets and objectives. This report shows that substantial gaps remain between what has been committed to and what is being delivered. The plans and programmes already in place, if fully implemented, will go a long way to resolving our persistent environmental issues.



An essential part of implementation is the enforcement of environmental law. While the EPA has a broad remit on environmental regulation and enforcement, local authorities also have a vital statutory responsibility to protect our environment. They are responsible for enforcing much of Ireland's environmental protection legislation within their functional areas. While the scale of enforcement carried out by local authorities is significant, in many respects it is not delivering the necessary environmental outcomes such as improved water and air quality, reduced noise exposure, protection of biodiversity and improved circularity in the management of our resources. Continuing to focus on delivering environmental outcomes via this implementation and regulatory work is critical to protecting Ireland's environment.

Transforming our systems

Ireland, like Europe, faces persistent problems in areas such as biodiversity loss, inefficient resource use, climate change impacts and environmental risks to health and wellbeing. These risks are inextricably linked to economic activities and lifestyles, in particular the societal systems that provide us with food, energy and mobility. All aspects of how we live, from the homes and communities we inhabit, to the places we work and how we move ourselves and goods, have the potential to impact and be impacted by the environment.

In recent decades we have seen Irish law progress from seeking to limit pollution at the end-of-pipe stage towards driving improved efficiency. This approach has delivered substantial benefits. While this is important, we need to go beyond reducing pollution and incremental efficiency improvements. Collectively, we must transform many of the entrenched wasteful systems to shift our society onto a sustainable trajectory,

such as moving from transport based largely on private vehicles to sustainable mobility enabled by good planning and accessible public transport, delivering more efficient buildings and replacing fossil fuel-based heating systems in our homes and businesses. Taking action now makes good economic and environmental sense. Making this transition will impact on all members of society as we will all have to change our behaviours and the technology we adopt in our daily lives. In so doing we need to make the right sustainable choices easier to implement.

Many of the activities in this report related to energy, food and transport are endeavouring to make the shift to more sustainable societal systems. Progress is not, however, keeping pace with the pressures and is happening too slowly to address the growing locked in pressures for the next decade. In this context we need to speed up the transition to avoid costly lock-ins into carbon-intensive and unsustainable production and consumption practices. This will require concerted action engaging diverse policy areas and actors across society in accelerating transformation in the core areas of energy, circular economy, transport, food systems and the just transition.

Clearly, we also have to look at how we manage our land so that land management practices and the allocation of land to meet the many environmental and economic targets are addressed from a multifunctional perspective. This will include recognising the need for a substantial increase in Ireland's afforestation rates and space for nature. Phase 1 of the Land Use Review has given us valuable information on which aspects to develop and the ongoing phase 2 will support progress in this space. Given that the majority of land in Ireland is held privately, dialogue and engagement with landowners is a critical element of planning for, and delivering, sustainable and just land use that supports the necessary transitions in our societal systems.





Scaling up investment in infrastructure

The combination of a growing economy and an increasing population will continue to exert pressure on Ireland's environment. In light of these circumstances, it is imperative that we make substantial long-term investments in key infrastructure to make environmental protection a cornerstone of our future development.

In this context there is a need for continued large-scale investment in waste water treatment systems to bring them up to standard. Similarly, many drinking water supplies lack robust treatment to guarantee their long-term resilience and safety requiring improvements in existing infrastructure. Delivering on national ambition for renewable electricity will require substantial investment in wind and solar and will require unprecedented levels of change in the National Grid up to 2030. In the case of transport, substantial investment is needed to deliver on the key strategic public transport construction projects. There is also a substantial need to deliver housing for our growing population. In resource management, a substantial investment gap exists in delivering the circular economy transition which will require investment in repair, reuse and remanufacturing capacity and in delivering infrastructure for waste segregation, collection, treatment and recycling.

Collectively, these infrastructural needs constitute an extremely large delivery challenge to provide Ireland with the assets needed to meet the challenges of its growing population and economy while providing the systems that protect the environment. Investment decisions made in this decade will define the infrastructure that will be available to our society for the next 50 years and these need to be fully aligned with achieving the transition to a low-carbon society. Maintaining and enhancing current investment will be key to delivering this infrastructure and will need to be a critical facet of national development over the coming decade.

Protecting the environment to protect our health

Creating healthy places free from environmental hazards is key to creating a healthier and fairer society in which everyone can thrive. There is substantial evidence of the positive impact of engaging with nature and our environment. On the other hand, harmful exposures including air, water, radiation and noise pollution can have substantial negative impacts on our health and wellbeing. The impacts of environmental hazards and exposures are not equal across society. Identifying and increasing the visibility of environmental exposure and inequalities at a local scale will be key to informing policies to address health and environment. The impacts of our environment on our health, both positive and negative are, in the main, modifiable (i.e. they can be changed) and addressing harmful exposures (such as radon, air pollution, noise and water pollution) will have a substantially beneficial impact on our health. Addressing these risks by reducing pollution, adapting to and mitigating climate impacts, and restoring ecosystems means that people can be healthier and live longer.



Conclusion

This assessment of the state of Ireland's environment shows that the challenges facing it are closely linked and interrelated. Our understanding of these issues is greater than ever before, underpinned by comprehensive monitoring systems, evidence and research. While some welcome progress is being made on climate action, we are still well off track in meeting our 2030 targets. Critically this level of delivery is not evident across other areas of the environment. We need to build momentum towards delivering on not only climate but also our biodiversity, water, circular economy and pollution reduction goals. Delivering on these goals will require transformational change in many of the core systems of our society and will involve everyone.

The immense value of Ireland's environment cannot be taken for granted. Societal progress will be severely hampered if our actions continue to damage this essential asset on which we all depend for our air, water, food and resources.

A clean and healthy environment will deliver economic and health benefits and improve the resilience of our environment to the shocks that will inevitably come from climate change. There are substantial benefits in us acting now: it will reduce the overall cost to our society, deliver many new employment opportunities, provide more plentiful access to clean, renewable energy and afford us a healthy environment that we can enjoy.

For us as individuals and as a society, our task now is to address the challenges set out in this report so that the next generation does not have to. We have much to do, but by acting now we can make good in providing a healthy, clean and resilient environment for ourselves and for future generations.

Key messages from chapters

Introduction

1. A national policy position for Ireland's environment is critical to addressing complex and interrelated challenges on climate, biodiversity and pollution and prevent damaging lock-ins.
2. Our growing economy and population are increasing the pressure on our environment. We need to invest in our infrastructure to prevent this growth impacting on our natural environment.

Air

1. While air pollution has reduced over recent decades, our understanding of the level at which it impacts health has grown. The World Health Organization (WHO) says that there is no safe level of air pollution.
2. Currently, Ireland is not meeting the guidelines set by WHO for multiple pollutants including fine particulate matter and nitrogen dioxide. We can actively improve our local air quality by changing to more sustainable forms of transport and heating.
3. Achieving Ireland's ambition, set out in the Clean Air Strategy, to move towards meeting the health-based WHO air quality guideline limits will be challenging but will have a significant and positive impact on health. A road map of actions is required to deliver on the overall ambition and the 2026 and 2030 interim targets.
4. Ireland is non-compliant with the EU reduction target for ammonia and will remain so in the short term. Meeting the 2030 emission reduction commitment is dependent on fully executing all known ammonia abatement measures at the farm level.

Environmental Noise

1. Environmental noise is the second biggest environmental cause of health problems in the EU. In Ireland, over 1 million people are likely to be exposed to noise levels above the mandatory reporting thresholds.
2. National policy for environmental noise is not as well advanced as in other environmental areas. There is a need for coordinated national policy and actions around planning, health and transport infrastructure to reduce noise exposure.
3. Local authorities, in collaboration with transport infrastructure bodies, need to focus implementation of noise action plans on the priority areas identified using strategic noise mapping.

Climate Change

1. The science is clear – climate change is already having an impact on people, animals and plants in Ireland. The evidence is unequivocal, Ireland is being affected by climate change now, and the severity of the impacts is likely to increase significantly in the coming years.
2. Ireland needs to be resilient to ongoing and future climate change impacts. The implementation of climate adaptation measures is currently too slow and fragmented. More cross-sectoral and integrated adaptation actions can deliver multiple benefits. Doing better requires more financing, working with people and nature, monitoring and evaluating outcomes and increasing public and private sector involvement.
3. Ireland is not currently projected to achieve its 2030 emissions reduction targets or to meet national or EU reduction targets. Despite Irish climate action ambitions, significantly faster progress is needed to decarbonise all sectors of Ireland's economy and implement adaptation actions to deliver a resilient and sustainable future for the benefit of all society.
4. It is critical that people and communities are supported to achieve the changes required to address climate change. To overcome the practical barriers to climate action, and to ensure that objectives are both achievable and equitable, understanding the beliefs, attitudes and challenges facing people in Ireland is crucial. Policy should be designed and implemented so that the desirable action becomes the default action.

Land

1. Ireland's land is in demand. Our current land use is a net source of greenhouse gas emissions. Some of our current land use practices such as agriculture, forestry and urbanisation are exerting pressures on water quality and nature that show no immediate signs of abating.
2. We cannot make more land, so must use our land wisely. Part of this challenge is to understand how best to use our land for social and economic benefit in a way that supports, rather than damages, the environment. The national land use review has a vital role to play in identifying land use opportunities and constraints.
3. Land use offers natural, social and economic benefits. We can use our land in ways that support climate action, nature restoration, protection of water quality and a sustainable economy through implementing a multiple benefits approach. To do this we must reframe how we approach national land use decisions. We must take a holistic and integrated view across all the demands there are on Ireland's land. Emerging evidence shows that we can implement solutions that deliver natural, social and economic capital together.
4. Land use is about using land to benefit people. Landowners and other stakeholders need to be engaged in decisions that impact them. Evidence shows that to reframe how we use our land will require engaging people in the process and providing positive supports to incentivise change.

Soil

1. Ireland's soils play important roles in storing carbon, in regulating both water flow and water quality and in growing food and raw materials. Soils are under threat from excess nutrients, compaction, soil sealing and loss of soil biodiversity, in Ireland and across the EU. Soil health must be prioritised to ensure food security, protect the soil biome, and safeguard the important environmental services that soil provides.
2. The protection of soils lacked a legal and policy framework until recently and the publication of the EU Soil Strategy in 2021 and the proposed soil monitoring law in 2023 are significant. Ireland faces challenges in achieving the objectives of the EU Soil Strategy and in implementing the proposed soil monitoring law. However, getting this right would significantly advance the protection of Ireland's soil health.
3. To support the proposed soil monitoring law and soil health assessment, Ireland should advance soil mapping and modelling, through a cross-public sector approach, which would rapidly improve our knowledge of soil health at a national level.

Nature

1. The Irish landscape is heavily modified by humans. Many of the few remaining natural and semi-natural habitats are in a poor or bad state. Research in Ireland highlights that 85% of our protected habitats and almost one-third of our protected species of flora and fauna are in unfavourable status, over half our native plant species are in decline and more than 50 bird species are of high conservation concern. The leading causes of these declines are changes in agricultural practices, including intensification; pollution; the increasing spread of invasive species; and our changing climate.
2. Our natural habitats and biodiversity have been squeezed to the margins of our landscape and policies, while food production and economic development have been prioritised. However, nature underpins our food production, food security and economic development. We risk our future if we continue to marginalise nature, and its protection, and fail to deliver adequate, achievable, impactful, evidence-based and coordinated action to protect and restore it.
3. Biodiversity loss affects everyone. It is essential that nature protection, enforcement, management and restoration are mainstreamed across government, social and economic sectors and are fully considered at all levels of national, regional and local decision-making.
4. Nature can recover if given the opportunity. For example, Ireland's corncrake population has risen by more than 35% in recent years, reflecting the outcome of a multi-million euro conservation investment that began in 2019. Positive actions to halt declines and to restore the key elements of our natural world must be implemented.

Water

1. There needs to be immediate, substantial and sustained reductions in nitrogen pollution, especially in catchments of concern in the south and south-east, to prevent any further deterioration in the quality of our estuaries and coastal waters. Targeted measures to reduce phosphate run-off could deliver significant improvements in inland waters and offer multiple benefits for climate and biodiversity.
2. We need to see full implementation of existing environmental legislation and high compliance rates across all regulated activities. A regulatory regime to address activities that impact hydromorphology is also required. All measures must be sufficiently targeted to the water quality issue and location to ensure that they deliver improvements.
3. Water governance structures need to be reviewed to ensure that they operate effectively. Detailed tracking and reporting of measures in Ireland's Water Action Plan 2024 is required to improve accountability among implementing bodies, public access to information and, ultimately, Ireland's water quality.
4. It is essential to build climate resilience into water quality management and into water services. Plans – such as the Water Action Plan, the Water Quality and Water Services Climate Adaptation Plan, and Uisce Éireann's National Water Resources Plan – are key to identifying risks and adaptation measures.

The Marine Environment

1. Our wider marine environment is generally clean and healthy, but legislation to maintain this needs to be enforced more rigorously and new priorities addressed more quickly. For example, the delayed marine protected areas legislation is an essential part of the marine spatial planning approach that will ensure that marine developments do not occur at the expense of the wider marine environment.
2. Key pressures are still causing impacts on the biodiversity and productivity of marine ecosystems. Fishing at unsustainable levels is impacting both habitats and the food chain. Nearshore nutrient enrichment has the potential to affect coastal amenity. Measures to combat these issues need to be implemented and enforced, as current trends are indicating that environmental status is not moving in the right direction.
3. There have been many recent changes in marine policy. Policy coherence and coordination needs to be improved to avoid damaging our marine environment and to maximise the benefits of protecting it.

Environment and Agriculture

1. Agriculture is an integral part of the fabric of Irish society. It has a key role in delivering, and depends on, a healthy environment. However, our food systems are not currently meeting our sustainability targets and need urgent transformational change.
 2. There are many plans and programmes in place, with positive actions being implemented at farm scale, but there is no clear evidence that the current measures will collectively achieve the scale of environmental outcomes that are needed.
 3. A shared vision for 2050 for land use and the food system is urgently required. A clear pathway for the agriculture and land use sector, and adequate supports to achieve it, must be put in place. Implementation and an evidence base for assessing progress must be a priority.
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Environment and Transport

1. The transport sector is a major consumer of energy and material resources and is a source of environmental pollution, particularly greenhouse gases, air pollutants and noise.
2. A sustainable, accessible and efficient transport system is not only important for the environment and wellbeing but is also a key enabler for the economy.
3. High-level integration between land use planning and transport planning is needed to achieve more compact development, incentivise a move away from private cars, and move trips to rail, bus, cycling and walking. Shifting to these modes is an essential part of a sustainable and climate-neutral transition for the transport sector.

Environment and Industry

1. Industrial pollution in Ireland is decreasing, thanks to a blend of regulation, developments in manufacturing, control technology and environmental initiatives. Continued investment and change are needed to ensure compliance with tighter environmental standards and to achieve the targets and reductions that are required under industry's climate requirements.
2. Compliance with environmental regulation across industry in Ireland is high overall. Many sectors have advanced environmental systems in place that demonstrate a maturity in their approach to environmental compliance. However, a disproportionate number of sites in the food and drink sector, in particular dairy processing sites, and in the waste sector are not performing optimally and are regularly cited on the EPA's list of national priority sites for not complying with their licence conditions.
3. The unauthorised harvesting and extraction of peat on an industrial scale is causing destruction of Ireland's natural habitats and compromising the vital role of peatlands in helping society mitigate the impacts of and adapt to climate change. It is essential that planning policy clearly prioritises the regulation and control of these operations. The EPA will continue to exercise its authority over operators and other regulators to ensure the cessation of such unauthorised activities.

Environment and Energy

1. Established technologies, such as wind energy, solar photovoltaics and bioenergy, will be key in meeting short-term emission reduction targets (i.e. 2030), whereas significant growth in offshore wind infrastructure is expected to be the key essential element of future energy systems. Enhanced regulatory and planning frameworks, and support schemes, are required to accelerate the deployment of renewables, realise co-benefits and manage trade-offs.
2. Growing demand for electricity is an anticipated by-product of the expected electrification of the heat and transport sectors. However, additional and rapidly increasing electricity demand growth from large energy users is putting pressure on energy systems.
3. World class infrastructure takes significant time and investment from conception to implementation. The time horizon for achieving national and EU commitments is getting ever shorter. Planning in the broadest sense needs to be fast tracked to achieve the ambitious national renewable energy targets.
4. Substantial challenges remain for high-intensity hard-to-decarbonise sectors, e.g. high temperature users, and the development of low or zero carbon fuels to meet these applications are needed. Negative emissions technologies and solutions will also be required to deliver a climate-neutral Ireland.

Environment, Health and Wellbeing

1. Our health and wellbeing is inextricably linked to our surrounding environment. The health benefits of a vibrant natural world are countless, providing us with breathable air, drinkable water, productive soils and spaces for us to spend time in and enjoy, enhancing both our physical and mental health and wellbeing.
2. The harmful environmental exposures causing disease and early death are modifiable. Reducing pollution, adapting to and mitigating climate impacts, and restoring ecosystems can have enormous benefits for our health and wellbeing. Solutions that can help tackle one issue can have multiple co-benefits for others. Implementation of solutions that can maximise benefits across multiple domains should be prioritised.
3. The impacts of environmental hazards and exposures are not equal across society. More efforts are required to assess inequalities in both levels of exposure and impact at a finer geographical scale to determine whether measures implemented are helping to bridge the gap.

Circular Economy and Waste

1. Ireland has a damaging linear economy characterised by the overconsumption of materials and goods and the growing volumes of waste and greenhouse gas emissions. While recycling tonnages are increasing, these increases are being cancelled out by the growing amount of waste generated. Current trends pose a high risk of not meeting mandatory recycling targets. The challenge for Ireland is to reverse these trends and significantly reduce waste production.
2. Ireland's capacity to collect and treat waste is vulnerable and underperforming, with an over-reliance on other countries to treat our recycling materials, general municipal and hazardous wastes.
3. Systemic change is needed to accelerate the transition to an accessible, fair and affordable circular economy. Effective regulation, incentives and enforcement are required to influence businesses and consumers to adopt best practices in production, supply, purchasing, use and reuse of goods, products and services.

Environmental Policy Implementation and Performance

1. Serious deficits remain in Ireland's implementation of environmental legislation and related plans and programmes. We need to scale up and speed up the implementation of measures and critical infrastructure in energy, transport, waste and water to protect our environment and human health.
2. Environmental policy responses to date have been insufficient to halt or reverse environmental decline. A national policy position on protecting Ireland's environment is urgently required to provide a shared whole-of-government vision for protecting our environment to guide decision-making, support policy coherence and improve the coordination of environmental protection efforts nationally.
3. Looking ahead to 2050, more ambitious and transformative policy responses are needed that set out a roadmap for achieving the transitions required across our food, energy, mobility, and production and consumption systems. These policies need to be supported by clear governance structures and the necessary investment plans to implement them.