

CLIMATE CHANGE ADVISORY COUNCIL

ANNUAL REVIEW 2026

Biodiversity

Annual Review 2026: Biodiversity

Submitted to the Minister for Climate, Energy and the Environment on 2 November 2026

Climate Change Advisory Council

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Summary for All

Key observations

In this Review, the Council expresses concern about the poor state of Ireland's biodiversity. Reporting in 2025 found that 42% of Ireland's protected species and 90% of Ireland's protected habitats are in unfavourable conservation status, with 51% of protected habitats showing deteriorating trends. Degraded habitats and ecosystems leave Ireland more vulnerable to climate impacts, including flooding, drought and wildfires. Protecting and restoring nature, and greater use of nature-based measures, are therefore essential for building climate resilience.

The draft National Restoration Plan, submitted to the EU in September 2026, provides a key opportunity to address the biodiversity and climate crises together. However, the Council is concerned that gaps in baseline data and monitoring will limit the ability to set targets and measure performance, while insufficient funding and inadequate scientific, technical and administrative capacity could constrain implementation.

The new annual biodiversity duty reporting obligation and online dashboard are welcome steps towards tracking implementation of the 4th National Biodiversity Action Plan, but improved monitoring is needed to inform conservation and restoration measures across public bodies. As critical infrastructure delivery accelerates, the National Planning Framework objective of no net loss of biodiversity must be consistently integrated into project planning and statutory plan-making. Nature is also critical infrastructure that urgently needs capital investment to support its protection and restoration.

Key recommendations

Public sector delivery and investment

To enable delivery of the National Restoration Plan, the Government needs to commit long-term, multi-annual funding and develop a strategy to mobilise private sector finance for conservation and restoration. The critical biodiversity skills gap should be urgently addressed by adding biodiversity-related professions to the Critical Skills Occupations list. The biodiversity duty reporting obligation should be expanded to enable monitoring and verification of the biodiversity initiatives of public bodies, and public bodies should scale up nature conservation and restoration on state lands.

Nature-based measures and land management

To support landowners to deploy nature-based measures, the Government should develop a funding stream, identify priority locations and prepare an implementation plan by Q1 2028. Ambition and support for results-based agri-environment schemes under the next phase of the Common Agricultural Policy should also be increased and the protection of hedgerows should be strengthened. The Government should map existing green space and canopy cover in urban areas by Q3 2027, to inform targets for 2050.

Coastal and marine resilience

To strengthen coastal resilience, the Government should expand and restore semi-natural coastal habitats and test nature-based measures in priority areas. The Government should also strengthen the governance of marine Natura 2000 sites and forthcoming Marine Protected Areas to maximise biodiversity and climate benefits.

Abbreviations

Abbreviation	Definition
ACRES	Agri-Climate Rural Environment Scheme
CBA	County Biodiversity Area
DAFM	Department of Agriculture, Food and the Marine
DCEE	Department of Climate, Energy and the Environment
DHLGH	Department of Housing, Local Government and Heritage
eLTER	European Long-term Ecosystem, Critical Zone and Socio-ecological Research
NBAP	National Biodiversity Action Plan
NPWS	National Parks and Wildlife Service
NRP	National Restoration Plan
OPW	Office of Public Works

Contents

Acknowledgements iii
Summary for All iv
Abbreviations v
Key observations vii
Key recommendations viii
1. Introduction 1
2. Progress on previous Council recommendations 1
2.1. Capacity and skills 1
2.2. Policies and planning 3
2.3. Marine biodiversity 5
2.4. Adaptation and resilience 6
3. Analysis and discussion 6
3.1. Nature-based measures 8
3.1.1. Nature-based measures in rural environments 8
3.1.2. Nature-based measures in urban environments 10
3.1.3. Nature-based measures in coastal and marine areas 11
3.2. Nature as critical infrastructure 14
3.3. Improved monitoring of biodiversity and climate action impacts 15
3.3.1. Monitoring the role of public bodies in biodiversity conservation and restoration 15
3.3.2. Strengthening long-term ecological monitoring 17
3.4. Agriculture and biodiversity 17
3.5. Management of protected areas 21
Appendix 1 23
References 25

Key observations

- The Council is disappointed with the findings of the 2025 report 'The Status of EU Protected Habitats and Species in Ireland', which shows that 90% of Ireland's protected habitats and 42% of Ireland's protected species are in unfavourable conservation status.[1] These findings underscore the urgent need to scale up the implementation of habitat restoration measures in Ireland's protected area network.
- The degraded state of Ireland's coastal environment, manifested in the unfavourable conservation status of priority habitats, increases the country's vulnerability to more frequent and extreme weather-related events such as storms, coastal erosion and storm surges. The degradation of Ireland's wetlands, including through the widespread drainage of peatlands and grasslands, enhances vulnerability to the impacts of floods, storms, heatwaves, droughts and wildfires. More biodiverse landscapes, greater deployment of nature-based measures and the restoration of habitats are urgently needed to increase climate resilience.
- The Council welcomes the draft National Restoration Plan (NRP), which has been submitted to the European Commission for assessment.[2] The effective design and implementation of this plan is critical for addressing the biodiversity and climate emergencies in an integrated and systematic manner, both within and outside protected areas. The Council has considerable concerns about gaps in baseline data and monitoring that are constraining evidence-based restoration planning and targets; the lack of identification of specific sites for restoration measures; insufficient committed funding; the lack of a roadmap to mobilise private sector investment for implementation of the plan; and accessibility of the plan for the general public and key stakeholders.
- The Council welcomes the introduction of the annual biodiversity duty reporting obligation and online dashboard to review progress in the implementation of the 4th National Biodiversity Action Plan. The Council notes that there is significant scope to strengthen the biodiversity duty reporting obligation to better monitor and advise public bodies on their performance and the measures they should be taking to improve biodiversity conservation and restoration.
- The Council recognises the need to speed up the delivery of critical infrastructure. However, this should be achieved in a manner that is consistent with the National Climate Objective that promotes the transition to a climate-resilient, biodiversity rich, environmentally sustainable and climate-neutral economy. The no net loss of biodiversity policy objective in the National Planning Framework needs to be consistently integrated into the delivery of critical infrastructure projects to help realise the National Climate Objective. Ireland's natural capital is part of the country's critical infrastructure, and the Council reiterates strongly that it is time to speed up and prioritise the delivery of critical natural infrastructure that delivers for climate change mitigation and adaptation through strategic ecosystem protection and restoration actions.
- The Council welcomes the publication of the Biodiversity Sectoral Adaptation Plan in November 2025[3] but remains concerned that scientific, technical and administrative



capacity is still not sufficient to ensure effective implementation of measures to enhance the resilience of habitats and species to climate change.

- The Council is disappointed that no specific allocations for nature restoration have been made to date under the Infrastructure, Climate and Nature Fund, and that there was no provision in Budget 2027 for implementation of the NRP. This is a missed opportunity to prioritise the substantial existing gap in financing for biodiversity conservation and restoration and to accelerate the use of nature-based solutions in different sectors.

Key recommendations

1. The Council recommends that the Government provide clear commitment to a multi-annual budgetary approach or long-term capital envelope to deliver the NRP out to 2050. Given the need for nature financing, adequate funding should be prioritised for capital works needed to conserve and restore critical natural infrastructure. The National Parks and Wildlife Service (NPWS) should lead the development of a strategy for mobilising private sector financing for biodiversity conservation and restoration.
2. The Department of Climate, Energy and the Environment, Office of Public Works, Department of Agriculture, Forestry and the Marine, Department of Housing, Local Government and Heritage (DHLGH) and local authorities should collectively develop a funding stream (e.g. through a carbon tax fund, the Infrastructure, Climate and Nature Fund and private investment), a spatial prioritisation framework and an implementation plan by Q1 of 2028 to support farmers and landowners to undertake nature-based measures to support flood control, drought management, water quality, wildfire risk, sediment control and biodiversity benefits as part of an integrated catchment management approach.
3. DHLGH should ensure an increased programme of support for nature-based measures in the urban public realm,[a] including measures to increase resilience to pluvial flooding, mitigate urban heat and improve urban biodiversity. Strengthened monitoring and reporting of the implementation and impact of nature-based measures by local authorities is required. DHLGH should ensure that the mapping of green space and canopy cover of all urban areas is completed by Q3 of 2027 to establish a national baseline for inclusion in the NRP. Local authorities should then ensure that targets are set and measures implemented in all cities and towns to increase green space and canopy cover by 2050 in line with the EU Nature Restoration Regulation.
4. Local authorities and NPWS should identify, expand and restore semi-natural habitats in priority coastal areas to support resilience against the impacts of coastal erosion and sea level rise, as part of adaptive coastal management approaches that recognise and plan for long-term coastal change. The Government should ensure that nature-based

a **The public realm** can be thought of as publicly accessible spaces, for example the streets, squares, parks and walkways that make up our cities, towns and villages.

measures are deployed and their efficacy tested in coastal pathfinder schemes and minor works scheme projects.

5. The Council calls for the public bodies identified in the biodiversity duty reporting obligation to scale up restoration of state lands and to dedicate space for nature (including forest creation) and biodiversity enhancement measures on all public land estates and buildings to deliver biodiversity, climate mitigation and adaptation benefits aligned with the NRP. There is a particular onus to contribute on large land and property owners such as Coillte, NPWS, Bord na Móna, the Office of Public Works, local authorities, and other semi-state agencies responsible for critical infrastructure.
6. The Council calls on DHLGH to expand its biodiversity duty reporting obligation so that it serves as a transparent reporting, monitoring and verification system for the biodiversity conservation and restoration initiatives of public bodies. The Council recommends that the Government join the Integrated European Long-term Ecosystem, Critical Zone and Socio-ecological Research infrastructure network by Q3 of 2027 to collect and use long-term data on the impacts of restoration measures on ecology, hydrology, climate resilience and greenhouse gas emissions and removals.
7. The Government should ensure enhanced ambition and support for results-based agri-environment schemes under the next phase of the Common Agricultural Policy, including an adequate level of national co-funding where necessary. The Council recommends that the Government use a coherent approach to leverage additional funding, including blended financing, for schemes that further incentivise farmers to adopt measures that deliver co-benefits for biodiversity, climate and water. Schemes should be accessible and simplified and should operate efficiently.
8. The Government should ensure that strengthened governance arrangements are developed for the ambitious management and restoration of Natura 2000 sites in the marine environment and the forthcoming Marine Protected Areas to ensure optimal biodiversity and climate benefits. This should include the development of site-specific conservation and restoration objectives, the active creation of alternative livelihood opportunities based on restoration in these areas, and clear implementation and monitoring arrangements.
9. The Council considers that stronger legislation is needed to ensure the protection of hedgerows and that the Government should include the Protection of Hedgerows Bill in the legislative Programme of Government of spring 2027. Further incentives for farmers to improve hedgerow quality and plant new hedgerows should be incorporated into agri-environment schemes.
10. The Council reiterates its previous recommendation urging the Government to address the critical biodiversity skills gap as a matter of urgency by explicitly adding biodiversity-related professions[b] to the Critical Skills Occupations List.

b These include ecologists, conservation biologists, botanists, zoologists, marine biologists, ecological landscapers and taxonomists.

1. Introduction

Biodiversity loss and climate change were declared a national emergency in Ireland in 2019, and the National Climate Objective commits Ireland to pursuing and achieving the transition to a climate-resilient, biodiversity rich, environmentally sustainable and climate-neutral economy by no later than 2050. This objective highlights the need to address the biodiversity and climate change emergencies in an integrated and systematic manner.

The impacts of climate change on biodiversity continue to mount, with disturbances to ecosystems by climate change that include press (long-term change) and pulse (extreme events) processes.[4] 2025 and 2026 were marked by extreme weather events, which have had significant detrimental effects on habitats and species in Ireland. These events included severe storms, intense rainfall events, coastal flooding and storm surges, heatwaves, wildfires and droughts. In addition, these events have drawn attention to the role of biodiversity in regulating the climate and protecting citizens from extreme weather and other effects of climate change.

This Annual Review focuses on the linkages between biodiversity and climate action, and increasing the role of nature restoration across ecosystems to support climate change adaptation and mitigation efforts.

2. Progress on previous Council recommendations

2.1. Capacity and skills

The Council has previously recommended that biodiversity-related professions be included in the Critical Skills Occupations List to avoid delays in the achievement of climate action targets and to support initiatives to restore priority degraded habitats such as peatlands, salt marshes and seagrass beds. Ireland has a severe skills shortage in all specialist areas linked to the conservation and restoration of biodiversity, which was highlighted in the Green Skills 2030 strategy.[5]

The Government held a public consultation as part of its review of the occupation lists for employment permits in 2025, covering both the Ineligible Occupations List (occupations for which an employment permit will not be granted) and the Critical Skills Occupations List, and the findings were published on 29 May 2026.[6] The Council expresses its disappointment that the six occupations added to the Critical Skills Occupations List did not include ecologists or any other dedicated biodiversity-related professions. This represents a significant missed opportunity. Although another review of the occupation lists is intended to be carried out within the next 2 years,[6] this will not provide sufficient time to build the skills and capacity required to meaningfully support achievement of the 2030 biodiversity restoration targets.

Statutory Instrument No. 643/2025, which was published in December 2025, amends the Employment Permit Regulations 2024 to allow for all occupations that are not explicitly on the Ineligible Occupations List to be eligible for a critical skills employment permit, subject to minimum salary thresholds[7]. However, the minimum salary threshold for a profession not on the Critical Skills Occupations List has been set at €68,911, compared with just €40,904 for professions on the list. This is substantially above the average salary for ecologists and biodiversity-related professions in Ireland, which has been estimated at between €52,371 and €55,572 per annum.[8,9] In practice, this means that the revised permit framework is unlikely to resolve the recruitment barrier for many biodiversity-related roles, particularly early-career and mid-level specialist positions.



The Council reiterates its recommendation and urges the Government to address this critical skills gap as a matter of urgency by explicitly adding biodiversity-related professions[a] to the Critical Skills Occupations List. Without this, there is a significant risk that skills shortages in the sector will constrain the delivery of climate action, offshore renewable energy and nature restoration commitments. The Government should establish a dedicated programme to develop and maintain biodiversity-related skills on a sustained basis in Ireland.

The Council has also previously recommended that the Department of Housing, Local Government and Heritage (DHLGH) and the Department of Public Expenditure, Infrastructure, Public Service Reform and Digitalisation ensure that budgetary and staffing increases for the National Parks and Wildlife Service (NPWS) are sustained so that it can effectively coordinate and implement key policies and plans at the interface of climate and biodiversity.

Annual funding for NPWS increased to €112 million in Budget 2027, representing a fivefold increase since 2019.[10] This will support investment in National Parks and Nature Reserves and fund biodiversity and nature conservation measures to support a wide range of priority habitats, species or protected areas, including peatlands and woodlands. Staff capacity at NPWS has also increased by 68% between 2020 and 2026.[11] The Council acknowledges this as a substantial and necessary increase, noting the significant role of NPWS in coordinating the implementation of the 4th National Biodiversity Action Plan (NBAP) (2023–2030), the second Biodiversity Sectoral Adaptation Plan (2025–2030) and Ireland's National Restoration Plan (NRP) (2027–2050). This uplift in funding will need to be sustained, so that NPWS has the long-term capacity required to deliver substantial programmes of work across biodiversity conservation, nature restoration and climate action.

The Council further recommended that the Government carry out an urgent assessment of biodiversity capacity across the public service to strengthen the whole-of-government response to the biodiversity crisis and increase coordination with climate action governance structures within departments, agencies and local authorities. The Government published a progress report on the 4th NBAP in February 2026[12,13] that indicates that Action 1B3 – 'all relevant departments and government bodies will explore the biodiversity expertise and training requirements across the government to ensure the appropriate expertise is available to implement this Plan [NBAP]' – has been completed. The report notes that the first reporting deadline for public bodies under the biodiversity duty reporting obligation was in mid-2025.

As part of this process, public bodies were asked to reflect on their biodiversity expertise, and analysis of the submissions is expected to provide more detail on the training needs and the ecology-related positions within each organisation. The report notes that increasing numbers of ecologists are being recruited across the public service without providing any details on the numbers of ecologists employed in key agencies such as local authorities, An Coimisiún Pleanála and the Maritime Area Regulatory Authority. The NBAP progress report also notes that at the local authority level, the Heritage Council is collaborating with the Local Government Management Agency to develop national training modules for all local authority staff. The Council stresses the importance of publishing, without delay, the analysis of biodiversity expertise and training needs, so that skills gaps can be identified and addressed, and necessary training programmes can be developed and implemented. Currently, a full assessment of biodiversity capacity across the public service remains a critical outstanding gap.

a These include ecologists, conservation biologists, botanists, zoologists, marine biologists, ecological landscapers and taxonomists.

2.2. Policies and planning

In its 2025 Biodiversity Annual Review, the Council urged NPWS to ensure the delivery of the National Invasive Species Management Plan before the end of 2025, and to include targeted actions to map the distribution of invasive alien species of national concern, conduct climate risk assessments for priority species, and strengthen overall detection and surveillance measures for invasive alien species.

In May 2026, the Minister of State for Nature, Heritage and Biodiversity announced a new partnership between NPWS and the National Biodiversity Data Centre, which will establish an invasive species bureau.[14] The Minister confirmed that one of the top priorities of the bureau will be to develop an invasive species management strategy and to support its implementation. At the same time, the Minister also published a new roadmap for managing the Asian hornet in Ireland, following the successful identification and removal of two Asian hornet nests in Cork in 2025. The evidence-based roadmap encompasses all steps, from early detection through to investigation, eradication and deployment of all control measures.[14] The Council welcomes that the important role of the public as part of an early warning system has been acknowledged, and individuals are now able to log suspected sightings on the invasives.ie portal.

While the Council acknowledges this progress, it remains concerned that the pace of action is not commensurate with the urgency of the threat posed by invasive alien species, particularly in the context of climate change risks and the 4th NBAP, which sets the target that invasive alien species are controlled, managed and, where possible, eradicated by 2030. It is unlikely that this target will be achieved given the current pace of action and scale of the challenge.

The Council also recommended that NPWS, the Department of Agriculture, Food and the Marine (DAFM), Coillte and Bord na Móna coordinate with each other in setting targets for peatland restoration efforts out to 2030, 2040 and 2050, as well as developing an expanded programme of conservation and restoration measures both within and outside protected areas. The draft NRP was published for public consultation in June 2026.[15] Ireland was one of seven EU Member States to submit its draft NRP to the European Commission by 1 September 2026, but this draft has not been made publicly available.[b,2,16] The draft plan issued for public consultation includes targets for the restoration and rewetting of organic soils in agricultural use constituting drained peatlands for 2030, 2040 and 2050, but there is no clear ownership of these targets or indication of a coordinated approach to achieving them.

However, the draft plan points to the need for further spatial data, the assessment of overlaps and engagement with key stakeholders to determine targets for organic soils under land uses other than agricultural use and peat extraction sites. The Council notes the urgency of addressing these gaps, given that the first restoration and rewetting targets are for 2030. Strong stakeholder coordination remains critical to developing Ireland's targets under the NRP, to ensure coordinated implementation of restoration measures in support of these targets, and to identify areas suitable for an expanded programme of peatland conservation and restoration. The European Commission template used for the NRP is not reader-friendly, and the NPWS should make efforts to ensure that the NRP is made more accessible to encourage broader societal support and better engagement of citizens in nature restoration.

More broadly, the Council appreciates the work done by the Independent Advisory Committee on Nature Restoration and supports its recommendations to the Minister of State for Nature, Heritage

b The draft NRP will be reviewed by the European Commission and further revised based on this review, with final publication planned for 1 September 2027.



and Biodiversity relating to the development and content of the NRP.[17] The Council has specific concerns about the draft NRP issued for public consultation around gaps in baseline data and monitoring that are constraining evidence-based restoration planning and targets; the lack of identification of specific sites for restoration measures; insufficient committed funding; the lack of a roadmap to mobilise private sector investment for implementation of the plan; and accessibility of the plan for the general public and key stakeholders.

It is evident from the draft NRP that current spatial biodiversity data remain inadequate and fragmented. Comprehensive spatial data describing the extent, type and condition of biodiversity are essential to realise opportunities and minimise negative outcomes associated with land use change; however, biodiversity mapping is currently limited to discrete areas, protected habitats and/or broad vegetation classes.[18] In this context, the Council supports the recommendations from the recent research of McKeon *et al*.[18] that a high-resolution and regularly updated habitats map is urgently needed to assess biodiversity under various climate and land use scenarios, for systematic conservation planning and prioritisation and for improved land use decision-making. It is strongly recommended that the Government prioritise the development of a habitats map.

Given ongoing uncertainties around the funding of implementation at both the EU and the national levels, the Council recommends that the Government provide a clear commitment to a multi-annual budgetary approach or long-term capital envelope to deliver the NRP out to 2050. The Council is extremely disappointed that, to date, no allocations have been for nature restoration through the Infrastructure, Climate and Nature Fund. The draft NRP estimates that ecosystem restoration and re-establishment will cost just under €5.8 billion over the period 2024–2050, with an uncertainty range of €2.6 billion to €11 billion. The socio-economic benefits of the restoration and re-establishment are estimated to be €32.9 billion, with an uncertainty range of €16.9 billion to €45.7 billion.[15] The Council welcomes the commitment of the Minister of State for Nature, Heritage and Biodiversity to establishing a nature restoration fund,[10] but it is regrettable that provision for this was not included in Budget 2027. Adequate funding should be urgently prioritised for the funding of capital works needed to restore critical natural infrastructure in the period 2026–2030, and a longer-term funding mechanism should be developed to finance nature restoration initiatives out to 2050. In order to increase the scale of available funding, NPWS should lead the development of a strategy for mobilising private sector financing for biodiversity conservation and restoration.

The Council previously recommended that, as part of the mid-term review of the Forestry Programme 2023–2027, DAFM further incentivise and remove barriers to the uptake of the Native Tree Area Scheme. This would support farmers and landowners to plant small areas (0.1–1 hectares) of native woodland pocket forests[c] on farmland to help meet afforestation targets, enhance biodiversity and protect watercourses. The mid-term review of the Forestry Programme was published on 10 March 2026.[19,20] It includes a number of relevant changes to the Native Tree Area Scheme, including a 10% increase in grant rates for fencing; additional clarity in relation to supports to protect trees from deer browsing; changes to the scheme approval process to allow for partial approval where archaeological issues arise; and the provision of training on pre-application discussions for the scheme. It also enables a change of applicant on contracts. To lessen the burden of participation, the definition of 'farmer' has also been simplified, meaning that an applicant will simply have to pass DAFM's 'Active farmer check' and have received a valid payment under the Basic Income Support for Sustainability scheme prior to the completion of planting.

c Pocket forests are small, densely planted areas of native trees, shrubs and ground cover designed to create biodiversity rich woodland, mainly in urban and suburban spaces, but also in rural contexts.



The Council welcomes these adjustments, which respond to some of the barriers identified by stakeholders. It is now important that uptake of the scheme continues to be monitored so that remaining barriers to participation can be identified and, where necessary, further targeted measures introduced.

The Council has previously called on DHLGH to urgently develop a specific regulation requiring planning authorities to give effect to the principle of no net loss of biodiversity within their plan-making functions and to require developers to incorporate nature-based solutions in all future developments. Action 3C1 of the 4th NBAP states that all public authorities and private sector bodies should move towards no net loss of biodiversity through strategies, planning, mitigation measures, appropriate offsetting and/or investment in green and blue infrastructure.[d] The NBAP progress report[13] published in February 2026 considers this action on track for delivery. It reports that local authorities are supporting the goal of no net loss of biodiversity through a range of high-level approaches, including policy development planning and local authority biodiversity action plans. It also indicates that some local authorities are undertaking assessments where the concepts of biodiversity net gain and biodiversity metric systems are being considered.

The Council welcomes these initiatives by local authorities. However, this does not equate to a specific regulation mandating no net loss of biodiversity, as previously recommended by the Council. A clear regulatory framework is still needed to embed no net loss of biodiversity in plan-making and to require nature-based measures to be incorporated in all future developments.

2.3. Marine biodiversity

The Council has previously urged the Government to provide a credible plan for achieving the 2030 target of having 30% of Ireland's marine area under protection. The Council also recommended that each protected area is effectively managed in accordance with ambitious ecosystem conservation and restoration objectives, targets and measures outlined in management plans for each area. The Climate Action Plan 2023 included an action to identify, designate and manage Marine Protected Areas, with legislation due to be enacted by Q4 2023. However, the latest Q1 2026 update for the legacy actions of the Climate Action Plan 2025 identifies this as an action that remains outstanding.[21]

Government responsibility for marine environment functions, including Marine Protected Areas, transferred to the Department of Climate, Energy and the Environment (DCEE) in August 2025.[22] In November 2025, the Government approved the preparation of a General Scheme for the Maritime Area Planning (Marine Protected Areas) (Amendment) Bill, and the Council notes that this General Scheme[23] was published in July. This will amend the Maritime Area Planning Act of 2021 and provide a legislative basis for the designation and effective management of Marine Protected Areas.[24] The Council urges the Government to finalise and publish this legislation without further delay, and to set out a credible implementation plan for the designation, management, monitoring and enforcement of the Marine Protected Areas network.

In June 2026, the Minister of State at DCEE reaffirmed Ireland's commitment to designate 30% of its maritime area as Marine Protected Areas by 2030.[25] The Minister confirmed that EU funding has been secured to support Ireland's achievement of this target through the EU LIFE programme. The final phase of the Integrated Mapping for the Sustainable Development of Ireland's Marine

d Green and blue infrastructure refers to the connected network of natural and semi-natural features that provide environmental, social and economic benefits. Green infrastructure includes parks, woodlands, hedgerows, greenways, street trees, wetlands, green roofs and biodiversity corridors. Blue infrastructure includes rivers, streams, lakes, canals, estuaries, coastlines, floodplains and sustainable urban drainage systems.

Resource (INFOMAR) programme will take place from 2027 to 2029 and will map the most challenging and shallowest final 125,000 km^2 of Ireland's offshore territory. This will support the designation of protected areas by helping to identify sensitive habitats and improve oceanographic and ecosystem models.

2.4. Adaptation and resilience

The Council has repeatedly recommended that NPWS establish and implement a dedicated and funded research programme, through the Biodiversity Sectoral Adaptation Plan published in November 2025,[3] to better understand the impacts of climate change on priority habitats and species, including invasive alien species. Relevant actions include conducting a review of the research gaps related to the impact of climate change on biodiversity and novel adaptation solutions for Irish habitats and species; and engaging with the EPA to ensure research funding is allocated to adaptation-specific research for biodiversity.

There is good potential for a specific research programme linked to the broader EPA research programme, which has a thematic focus area on protecting and restoring Ireland's natural environment,[26] while other funded projects, such as the Co-Centre for Climate, Biodiversity and Water, have focus areas on risks to biodiversity from climate change, and nature-based measures for climate change mitigation and adaptation. The Biodiversity Sectoral Adaptation Plan also contains a commitment to work with relevant departments, agencies and research institutions across the north and south to build on research to explore current and projected impacts of climate change. While these actions are welcome, they do not amount to the dedicated and funded research programme that was envisaged in the previous Council recommendations.

A comprehensive, climate-focused biodiversity research programme remains a significant gap, at a time when pressure on species and ecosystems continues to intensify. Such a research programme is important to understand sensitivities, risks and vulnerabilities, to inform measures to enhance the resilience of habitats and species to climate change, and to understand the breadth of critical ecosystem services and positive cascading impacts that are provided to other sectors by healthy and biodiverse ecosystems. The Council urges NPWS to collaborate with the EPA and other agencies to establish in the next 12 months a dedicated and adequately funded research programme to address research gaps relating to the impacts of climate change, including on priority habitats and species and alien invasive species, and to novel adaptation solutions for Irish habitats and species.

3. Analysis and discussion

Ireland's protected habitats continue to be highly degraded. Ireland's most recent report on the Status of EU protected habitats and species found that 90% of its 59 protected habitats are in unfavourable (inadequate or bad) status, with 51% of protected habitats demonstrating ongoing deteriorating trends (Figure 1).[1] Degraded ecosystems compound Ireland's vulnerability to extreme weather events, including floods, coastal erosion, sea surges, heatwaves, droughts and wildfires. More biodiverse landscapes, greater deployment of nature-based measures and restoration of habitats are urgently needed to increase climate resilience in urban, rural, coastal and marine areas.

The design and effective implementation of the NRP have a key role to play in ensuring the long-term and sustained recovery of biodiverse ecosystems both on land and at sea, and within and outside protected areas in Ireland. The restoration of Ireland's ecosystems – including urban, marine, terrestrial, coastal and freshwater, floodplain, forest and agricultural ecosystems – and the restoration of pollinator populations, as envisaged in the EU Nature Restoration Regulation, offers significant potential for carbon sequestration and storage, and improved climate change resilience.



Figure 1: (a) Percentage of protected habitats in favourable, inadequate and bad status. (b) Percentage of protected habitats with stable, improving, deteriorating or unknown trends.
(Source: NPWS, 'The Status of EU Protected Habitats and Species in Ireland'.[1])

For terrestrial, coastal and freshwater habitats listed under Annex I to the Habitats Directive, the draft NRP estimates that 637,909 hectares of protected habitat types are not in good condition and envisages the restoration of 574,118 hectares of this area by 2050.[15] This is broken down in Figure 2 according to the main habitat groups under Annex I. The habitat group with the largest extent for condition improvement is wetlands (coastal and inland). This includes inland wetlands such as blanket bogs, raised bogs, wet heaths and fens, as well as coastal wetlands such as estuaries, salt marshes, coastal lagoons and intertidal mudflats and sandflats. This is followed by grassland and other pastoral habitats, which include certain species-rich grassland habitats and lowland hay meadows. River, lake, alluvial and riparian habitats have the third largest extent for condition

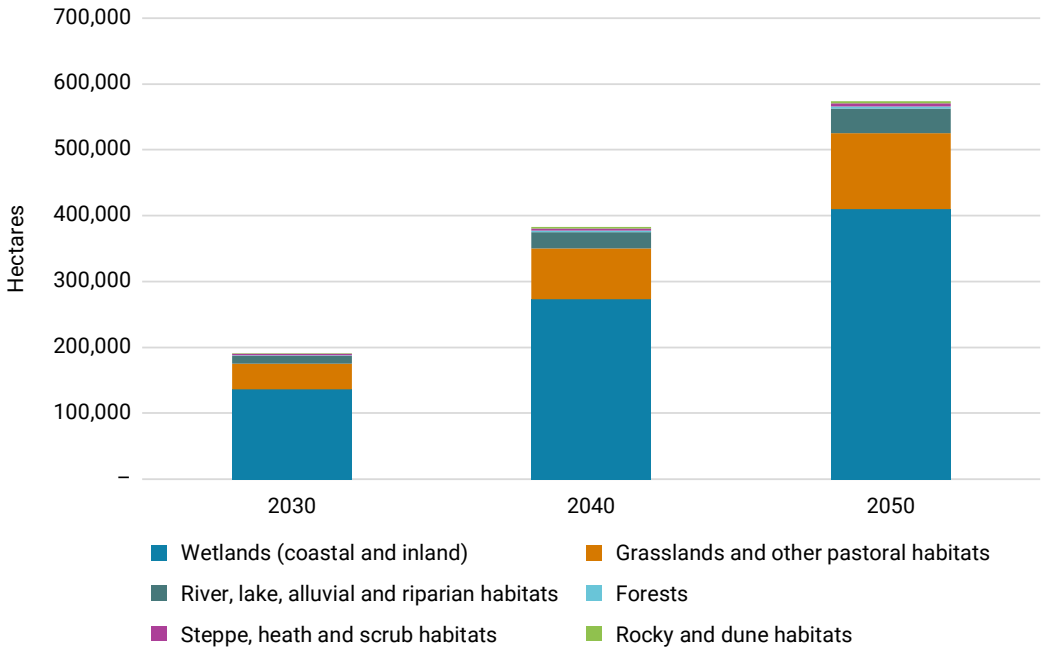


Figure 2: Targets for the minimum area (hectares) to be improved for terrestrial, coastal and freshwater habitat types listed under Annex I to the EU Habitats Directive.
(Source: Derived from the draft NRP issued for public consultation.[15])



improvement, and this group includes habitats such as turloughs, alluvial forests and riparian woodland and floodplain habitats. The draft NRP also contains targets to re-establish habitat types, with the largest targets for blanket bogs, followed by old sessile oakwoods and alluvial forests. A total of 105,203 hectares is targeted for the re-establishment of all protected habitat types by 2050.

3.1. Nature-based measures

The 2026 Agriculture[27] and Preparing for Ireland's Changing Climate[28] Annual Reviews highlighted the need to move beyond the pilot-scale use of nature-based measures towards their systematic deployment across all regions. Nature-based measures are an ideal opportunity to address the biodiversity and climate change emergency in an integrated manner, as they provide significant co-benefits for water sediment management, biodiversity, habitat restoration, coastal protection, human and animal health and carbon sequestration. The deployment of nature-based measures is also increasingly urgent given the severe impacts of a range of climate hazards in Ireland recently, including flooding, storms, coastal erosion, storm surges, drought, heatwaves and wildfires.

3.1.1. Nature-based measures in rural environments

The widespread drainage of peatlands and grasslands in Ireland has enhanced its vulnerability to the impacts of floods, storms, heatwaves, droughts and wildfires. Recent research estimated that 84% of the peat soil area (1,391,640 hectares) has undergone land cover change, with grasslands representing 30% of the land cover classes on peat soils.[29] Research by Touhy *et al*. estimates that an area of 90,000–120,000 hectares of organic grassland soils has been drained, compared with a previous estimate of 335,000 hectares.[30] While there is considerable uncertainty regarding the extent of peatlands and grasslands that have been drained, natural water retention measures have a key role to play in improving water quality, creating habitats and reducing/delaying the onset of peak flow rates downstream during flooding events, particularly in small catchments.

In 2022, a list of priority natural water retention measures for Ireland was identified through the Natural Water Retention Measures Working Group, including rewetting drained organic lands, engineered basins, ponds and ditches, floodplain restoration, river re-meandering, the removal of dams and other longitudinal barriers, riparian fencing and planting, and appropriate afforestation initiatives. These measures offer a sustainable, lower-cost and complementary approach to flood mitigation, drought management and water quality improvement, by working with natural processes to enhance the retention capacity of ecosystems.[31]

In 2026, the Office of Public Works (OPW) completed a mapping exercise to identify areas where the application of different types of nature-based measures may be appropriate nationally. These maps have been used to prioritise strategic areas for funding the application of the Forests for Water grant under the Forestry Programme, which supports the planting and maintenance of native forests for the protection of water and aquatic ecosystems and the expansion of alluvial forests. Diverse native forests are generally more resilient to climate change through greater species and genetic diversity, and higher resistance to pests and diseases and extreme events, including storms, wildfires and droughts.[32]

Other nature-based measures such as ponds can be identified at the farm level with the assistance of farm advisors and ecologists, as has been done through the ReFarm project.[33] The Farming for Water European Innovation Partnership has also adopted evidence-based pond construction and management guidelines for farmers and landowners.[34]



These type of approaches should be expanded so that stronger incentives for the full range of natural water retention measures are provided to farmers and landowners in targeted strategic areas through agri-environment schemes such as the Agri-Climate Rural Environment Scheme (ACRES), the Eco-Scheme, the Farming for Water European Innovation Partnership and NPWS's Farm Plan Scheme, and through financial programmes that will be established to support implementation of the NRP under the EU Nature Restoration Regulation.

These schemes should include specific criteria to encourage measures that increase water storage capacity and reduce surface water run-off in appropriate locations, underscoring the significant benefits of these schemes for water quality, biodiversity, habitat restoration, carbon sequestration and flood resilience. These measures should also benefit the quality of downstream transitional and coastal waterbodies, which are the ultimate receptors of excess nitrogen and phosphorus from agricultural land. Transitional and coastal waterbodies, including estuaries and lagoons, are in the poorest condition of any waterbody type in Ireland, with 70% found to be in unsatisfactory condition in 2024.[35]

Box 1: Summary of key findings from the SloWaters Project[31]

The SloWaters Project was implemented from 2019 to 2024 under the EPA research programme. It established two demonstration sites in County Wexford and County Cork to test nature-based measures, including offline storage areas, leaky dams, woodland swales and low-head boulder weirs, to investigate their effects on both flood mitigation and water quality. In terms of flood mitigation, the main findings were that (1) offline storage areas are effective for mitigating localised flood peaks, particularly for frequent, low-magnitude flood events, (2) leaky dams can influence flood peaks, but their effectiveness is contingent on storage volume, and (3) the evidence base for the effectiveness of nature-based measures for flood mitigation is growing but remains limited, particularly for larger catchments (> 100 km^2) and higher-magnitude floods.

Biodiversity and climate adaptation benefits were observed following the installation of the nature-based measures. The report recommends overall that nature-based measures be considered and prioritised in flood risk management plans, and notes that addressing funding gaps is essential for scaling up the implementation of nature-based measures.

The Council recommends that DCEE, OPW, DAFM, DHLGH and local authorities collectively develop a targeted programme by Q1 of 2028 to support farmers and landowners to undertake nature-based measures to support flood control, drought management, water quality, wildfire risk, sediment control and biodiversity benefits as part of an integrated catchment management approach. The targeted programme would involve the development of a funding stream (e.g. through a carbon tax fund, the Infrastructure, Climate and Nature Fund and private investment), a spatial prioritisation framework and an implementation plan by Q1 of 2028 to support farmers and landowners.

This should also incentivise farmers and landowners over the long term to support ongoing maintenance and management of the nature-based measures, including improved monitoring and evaluation systems to build up the evidence base for the effectiveness of nature-based measures in different catchments, and to demonstrate the long-term value and co-benefits of these measures. The programme would also support the achievement of the targets in the draft NRP to restore the natural functions of floodplains.



3.1.2. Nature-based measures in urban environments

At the urban level, the application of urban nature-based approaches to flooding and extreme weather events is prioritised in 25 of the 31 local authority climate action plans and is also supported through the 2024 National Strategy for the Nature Based Management of Urban Rainwater and Urban Surface Water Discharges.[36] These both focus on the delivery of actions to promote the application of sustainable urban drainage schemes and the design and transformation of urban landscapes by integrating planted areas to store and treat rainwater run-off prior to its discharge back into the urban drainage system. The Southern Regional Assembly published a Blue Green Infrastructure and Nature-based Solutions Framework as a resource for local authorities, decision-makers and developers to guide the implementation of blue and green infrastructure and nature-based measures.[37]

Nature-based measures have good potential for climate change adaptation by reducing risks from pluvial flooding; mitigating the urban heat island effect through increased vegetation cover, shading and shelter; and offering multiple other benefits for carbon sequestration and urban biodiversity as well as human well-being. It is encouraging that nature-based measures are now mandatory for new developments in urban areas, and the Council welcomes the Government's announcement in June 2026 of €5 million in funding allocated to the Local Authority Water Programme's Nature-based Solutions Programme to support local authorities in delivering projects that help manage surface water, enhance biodiversity and reduce flood risk in urban areas.[38]

However, an increased programme of support is needed for relevant local authorities to retrofit areas in the urban public realm (streets, footpaths, parks, estates, squares, bridges, and public buildings and facilities) with nature-based measures. Strengthened monitoring and reporting of the implementation of nature-based measures by local authorities is also needed, including the impact of these measures in reducing run-off, improving water quality and enhancing biodiversity in urban areas. This should be systematically reported on and monitored through the local authority climate action plan monitoring and evaluation undertaken by DCEE and through the steering committee overseeing the National Strategy for the Nature Based Management of Urban Rainwater and Urban Surface Water Discharges.

Moreover, urban nature-based measures can further contribute to the EU Nature Restoration Regulation target of ensuring no net loss in the area of urban green space or urban tree canopy cover in urban ecosystems by 2030 and to increasing the area of urban green space and urban tree canopy cover thereafter. While some local authorities, such as Dublin City Council, have carried out extensive work to map urban tree cover and density,[39] it is noted in the draft NRP that there is currently no national dataset for urban green space and urban tree canopy cover, and that mapping and quantification of these areas are ongoing tasks.

Building on the methodology used in the Mapping Green Dublin project, DHLGH should ensure that the mapping of green space and canopy cover of all urban areas is completed by Q3 of 2027 to establish a national baseline for inclusion in the NRP. Local authorities should then ensure that targets are set and measures implemented in all cities and towns to increase green space and canopy cover by 2050 in line with the EU Nature Restoration Regulation. The Galway Green Spaces Strategy (2026–2036), published by Galway City Council, provides a good example of a local authority with a long-term strategic vision for its green spaces to foster health, well-being and community connection while preserving local biodiversity and combating climate change.[40]

3.1.3. Nature-based measures in coastal and marine areas

The National Climate Change Risk Assessment identifies the risk of coastal ecosystem degradation/loss due to sea level rise, coastal erosion and coastal flooding to be substantial by 2050 under the Representative Concentration Pathway 4.5 and 8.5 emissions scenarios considered.[41] The report of the Inter-Departmental Group on National Coastal Change Management Strategy recognises that managed retreat will have to be coordinated in response to increasing sea level rise in some cases.[42] With the average sea level currently rising by 2–3 mm per year and accelerating in Ireland, the impacts from coastal erosion, coastal flooding and storm surges are likely to be further exacerbated. In this context, the positions of coasts and their ecosystems will be adjusting inland in a dynamic and unstable manner. This will pose substantial risks to critical habitats for biodiversity, including estuary and intertidal habitats, particularly where there is not sufficient space for the inland migration of habitats.

While coastal ecosystems are thus vulnerable to climate change impacts, the role of nature-based measures within integrated, multi-sectoral approaches for managing coastal and marine areas is becoming increasingly evident.[43,44] These measures need to be prioritised as part of adaptive coastal management approaches that recognise long-term coastal change driven by sea level rise and coastal erosion.

Ongoing processes to update local authority development plans and local authority biodiversity action plans provide opportunities to strengthen the protection and restoration of coastal and marine habitats. In line with the County Biodiversity Areas (CBAs) methodology,[45] coastal local authorities should ensure that updated local authority development plans identify and designate semi-natural coastal habitats as CBAs. Their restoration should be prioritised to support resilience against the risks of coastal erosion and sea level rise.

Where possible, the spaces immediately inland from and adjacent to these habitats should also be identified and excluded from development to prevent further pressure on these systems in terms of coastal squeeze, to allow a more planned approach to managed realignment and to provide greater connectivity of these habitats. The finalised National Planning Statement on Sustainable Rural and Gaeltacht Housing should also reference this constraint. Examples of managed realignment of saltmarshes exist in Ireland in Turvey Nature Reserve (County Dublin), Harper's Island (County Cork) and Kilmacleague (County Waterford),[46] and lessons can be learned by other local authorities in replicating this approach.

While the Council has previously called on the Government to expedite the development of coastal change management plans as a mechanism to promote integrated coastal zone management and long-term adaptive planning (and these are still urgently required), the NRP provides opportunities to accelerate the use of nature-based measures in coastal and marine habitats. The draft plan includes area-based targets for the restoration of both coastal (see Figure 2) and marine habitats (see Figure 3), but the identification of specific sites where the active restoration of these habitats will be undertaken is still needed. Achieving the targets will also require significant research, capacity development and financing for all habitat types.

A total of 577,359 hectares in marine habitats is targeted for restoration by 2050. 80% of this target relates to the restoration of soft sediment seabed habitats, while the remaining 20% covers the restoration of habitat types outlined in Figure 3. Of the marine habitat types in Figure 3, sponge and coral beds will have the largest areas restored, followed by macroalgal forests, maerl beds, shellfish beds and seagrass beds. With regard to marine ecosystems, it is noted from the draft NRP that determining precise restoration areas, and associated measures, will be phased and adaptive, recognising that current results provide an initial national baseline, which will be refined as further habitat mapping, condition assessment, pressure data and ecological knowledge become available.

Box 2: Identification of County Biodiversity Areas

CBAs are defined as sites that make a significant contribution to the ecological network of a county or city. These are not a new statutory designation but are intended to identify sites of local or county importance outside the Natura 2000 sites and National Heritage Areas. These areas will inform zoning for housing, infrastructure and renewable energy locations.

A technical working group involving the National Biodiversity Data Centre, NPWS and local authority staff has developed a methodology for identifying CBAs based on national ecological datasets and meeting one or both of the criteria of being an Annex I habitat under the EU Habitats Directive[47] and/or including at least one hectare of semi-natural habitat – wetland, broadleaf or mixed native woodland, or species-rich dry or wet grassland. A pilot research project to develop the CBA methodology is being undertaken with Waterford City and County Council to enable its replication by other local authorities so that ecologically important places can be reliably and transparently identified.

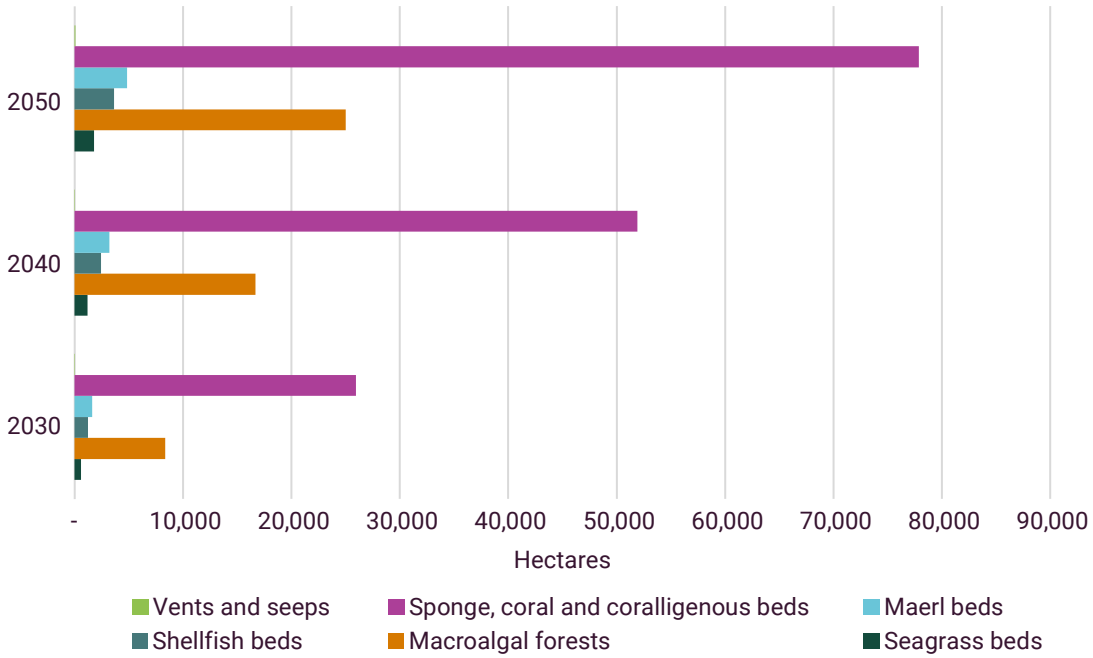


Figure 3: Targets for the minimum area (hectares) to be improved across marine habitat types listed in Article 5 of the EU Nature Restoration Regulation
(Source: Derived from the draft NRP issued for public consultation.[15])

In terms of the governance of coastal and marine nature-based measures, it is noted that there is a working group to promote nature-based measures for managing coastal change under the Inter-Departmental Group on Coastal Change. Recent research commissioned by DHLGH identified at least 60 nature-based projects being implemented in terrestrial coastal habitats and in transitional and coastal waters.[46] A breakdown of the ecosystem types being restored through the nature-based projects is provided in Figure 4. It was noted that these projects provide ecosystem services across

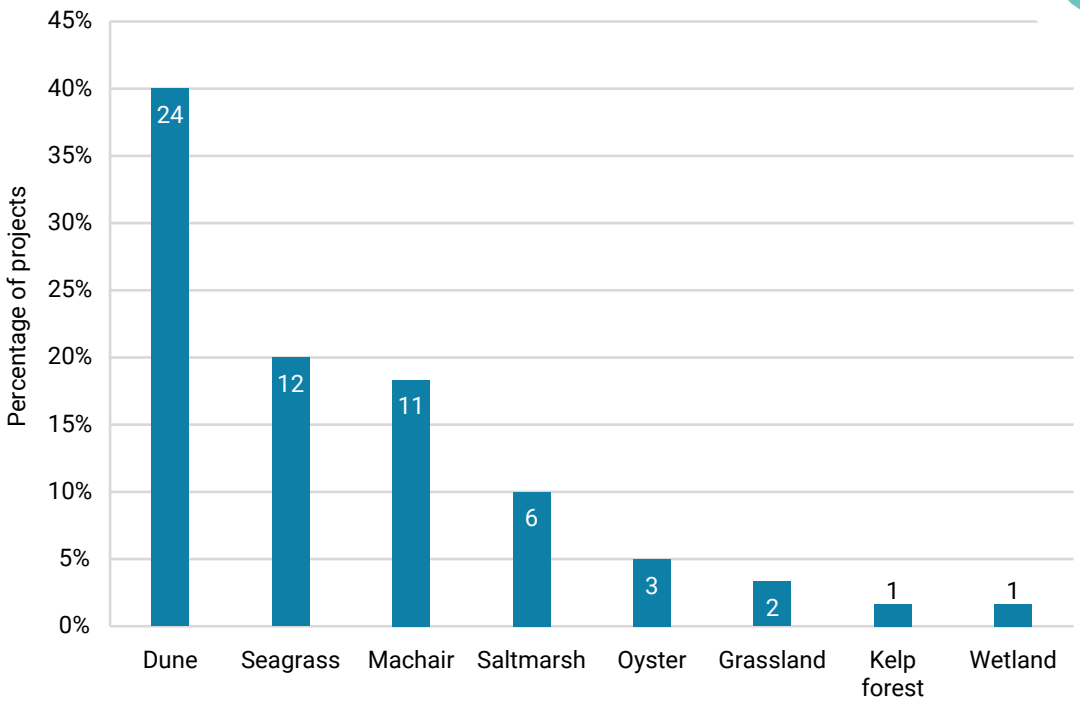


Figure 4: Ecosystem types being restored through nature-based projects in coastal and transitional waters.
(Source: Farrell *et al*., 'Desk-based Study on Nature-based Solutions in Coastal and Transitional Waters'.[46])

all categories and that 55% of the projects contribute to climate change adaptation, 17% contribute to climate change mitigation and 29% to both.

Many coastal and marine habitats also provide significant benefits for climate change mitigation – for example, at least 9.2 Mt of carbon is estimated to be stored in Ireland's saltmarshes and seagrass beds.[46] However, the research highlights that there is a paucity of data on the extent, condition and carbon uptake and storage of other potential blue carbon habitats in Ireland, including carbon-rich macroalgae, maerl, cold-water corals, phytoplankton and sediments. The Council supports important recommendations from this research report, including the need to:

- develop expertise in the restoration of the full range of coastal and marine habitats;
- carry out more research into carbon sequestration in Ireland's coastal and marine ecosystems and develop strategies to manage these habitats to meet climate targets;
- identify and map vulnerable areas and adjacent accommodation spaces to prioritise areas for protection and restoration and to guide policy decisions on land use and conservation efforts;
- quantify the value of ecosystem services provided by coastal and marine habitats, including carbon sequestration, coastal protection and biodiversity enhancement – this could be integrated into the Central Statistics Office's programme of work on ecosystem accounting;[48]
- identify and secure funding opportunities from national and EU sources to support nature-based measures in coastal and marine areas to ensure adequate funding for the successful implementation and sustainability of restoration initiatives.



With regard to scaling up the financing of nature-based measures, existing programmes also provide opportunities in coastal and marine habitats. The Government should ensure that nature-based measures are deployed and tested in the three yet-to-be identified coastal pathfinder schemes envisaged in the Programme for Government,[49] and nature-based measures should be systematically embedded and prioritised in OPW's Minor Flood Mitigation Works and Coastal Protection Scheme.[50] Local community groups and non-governmental organisations are often closely involved in coastal and marine restoration projects, and there is a need for national and local government to support and engage with these community-driven efforts so that restoration initiatives can be accelerated.

Examples of this include dune restoration work by the Maharees Conservation Association in County Kerry and the Tramore Eco Group in County Waterford, while BirdWatch Ireland published a report identifying 71,450 hectares of habitat in protected areas, including estuaries and intertidal habitats, that should be restored for threatened bird species.[51] The Climate Action Regional Offices have played an important role in supporting coastal dune habitat protection and conservation, and similar supports should be made available for the restoration of other coastal and marine habitats.[52] Funding for coastal and marine nature restoration projects should be targeted through existing community supports, including the Community Climate Action Programme and the Local Biodiversity Action Fund.

3.2. Nature as critical infrastructure

There is increasing recognition that natural capital, including rivers, forests, soil, plants and biodiversity, is critical infrastructure that needs to be enhanced alongside the development of built infrastructure such as housing, water services, transport and grid development.[53–55] Natural capital directly underpins the functioning and resilience of traditional critical infrastructure, and the degradation of natural capital could significantly disrupt essential services, economic stability and even national security. In this context, biodiversity should no longer be treated solely as a compliance requirement within the planning process, and instead be understood as a strategic asset that delivers multiple ecosystem services and long-term value.[54] Funding the restoration of Ireland's natural ecosystems and ensuring a clear and consistent approach to integrating no net loss of biodiversity into projects and plan-making are two critical steps that are needed.

The Council notes that the Land Use Review process has outlined many of the challenges involved in providing for a sustainable future. The Land Use Review's 'A Living Land' report[56] recommends the development of a governance framework to 'optimise use of land to meet a variety of societal needs including socio-economic, restoring nature, improving water quality, enhancing climate adaptation and mitigation'. However, the Government response to this recommendation lacks the urgency that has been brought to bear on fast-tracking built infrastructure delivery. The Council reiterates strongly that it is time to speed up and prioritise the delivery of critical natural infrastructure that delivers for climate change mitigation and adaptation through strategic ecosystem protection and restoration actions.

Similarly, implementation of the concept of no net loss of biodiversity has been inconsistent, fragmented and without the necessary clarity for both project developers and planning authorities. The Council urges the Government to develop a clear regulatory framework to embed no net loss of biodiversity in plan-making and project developments, and to adopt a standardised, practical, national approach to biodiversity measurement tools. This is particularly urgent given the ongoing process of local authorities updating their statutory plans and the ongoing and planned expansion of built infrastructure.

3.3. Improved monitoring of biodiversity and climate action impacts

Recent policy documents, including national Climate Action Plans, the 4th NBAP (2023–2030), the second Biodiversity Sectoral Adaptation Plan (2025–2030) and the draft NRP (2027–2050), highlight the need for a whole-of-government and whole-of-society approach to biodiversity and climate action. This necessitates robust systems to mainstream biodiversity and climate considerations across institutions and policy frameworks, and a strong focus on the monitoring and evaluation of progress and outcomes, at both the institution and the site levels. Improved monitoring of ecosystem services relating to site-specific interventions is also key for mobilising private sector financing of biodiversity conservation and restoration measures.

3.3.1. Monitoring the role of public bodies in biodiversity conservation and restoration

With responsibility for the management of at least 8% of the national land area,[57] public bodies have a clear leadership role to play in addressing the dual climate and biodiversity crises. The role of public lands in delivering on the Government's objective of improving socio-economic, climate, biodiversity, and water and air quality outcomes is a focus of Phase 2 of the Land Use Review, and the Programme for Government states that restoration on state lands will be prioritised in the implementation of the NRP.

Although there is considerable uncertainty around the areas of land owned by different public bodies, Coillte is considered the largest landowner, with 440,000 hectares. Other significant public body landowners include NPWS, with 87,000 hectares, Bord na Móna, with 80,000 hectares, local authorities, with 72,000 hectares, and OPW, with 11,300 hectares. Figures of 1,500 hectares for Uisce Éireann, 1,300 hectares for the Health Service Executive and 500 hectares for Córas Iompair Éireann are included in Phase 2 of the Land Use Review.

The Public Sector Climate Action Mandate[58] requires public sector bodies to show leadership on climate action, and the first statutory annual biodiversity duty reporting obligation was introduced in 2025 for public bodies to consider biodiversity and the actions they take for biodiversity. The Wildlife Amendment Act of 2023 does not define 'public body', but Section 59(h) lists 26 public bodies, as well as Ministers of Government, local authorities and planning authorities, that must now have regard to the objectives and targets of the 4th NBAP in the performance of their functions. They must report annually to the Minister for Housing on the fulfilment of this obligation by outlining measures adopted and progress made towards the objectives of the 4th NBAP.

DHGLH is encouraged to strengthen the biodiversity duty reporting framework as a key accountability mechanism and system for monitoring the performance of public bodies, not only in the implementation of the 4th NBAP but also in that of the NRP. Limited information was published in the first reporting cycle, and greater transparency should be provided on the reports submitted by public bodies and the lessons learned and key outcomes from the first reporting cycle. Public bodies should in particular be encouraged to show leadership on and include information in their submissions to DHLGH on:

- Setting clear and ambitious targets for the conservation and restoration of biodiversity on public land for 2030, 2040 and 2050. This is particularly necessary for public bodies with direct responsibility for the restoration of peatland habitats, such as Coillte, Bord na Móna and NPWS.
- Establishing space for nature areas and biodiversity corridors on all public lands and the inclusion of nature-positive features on all state-owned infrastructure, buildings and curtilage.



This could include uptake of the forest creation on public lands option of the Forestry Programme.[59]

- Pioneering natural capital accounting approaches and the measurement of ecosystem services to demonstrate the impacts of their interventions.
- Demonstrating approaches used to ensure no net loss of biodiversity based on the mitigation hierarchy of avoid, minimise, restore and offset.
- Establishing targeted programmes to develop internal human resources, capacity and skills for biodiversity conservation and restoration within public bodies.

The biodiversity duty reporting guidance allows for the Minister to prescribe other bodies, persons, companies, organisations or groups to be a public body if they have or may have a bearing on matters concerning biodiversity or be in a position to promote the conservation of biodiversity. In this regard, the Council recommends prescribing the Maritime Area Regulatory Authority as a public body, given its significant role in marine environmental protection. Major faith-based organisations could also be considered, given the increasing role they are playing in conserving and restoring biodiversity on faith grounds.[60]

Box 3: The All-Ireland Pollinator Plan

The All-Ireland Pollinator Plan is an important example of the effective mainstreaming of biodiversity action that offers lessons for other relevant plans and policies. The third All-Ireland Pollinator Plan (2026–2030) was launched on 9 July 2026 and seeks to create 'pockets for nature every 200 metres' across Ireland.[61] It sets 50 aims across 10 work packages, supported by 129 partner organisations and measured through 75 success metrics. The plan aims to reverse pollinator decline, enhance biodiversity and support sustainable agriculture and food security. It is the key instrument for reversing the decline of pollinators by 2030, as envisaged in the NRP. The main successes from previous plans include:

- a high level of delivery of planned actions and positive outcomes for pollinator populations, although many species remain under pressure;
- the broad participation of a wide range of stakeholders across the island, including local authorities, farmers, businesses, schools, community groups, non-governmental organisations and government agencies, in a coordinated conservation effort;
- the widespread adoption of new land management practices by local authorities, schools, sports clubs, businesses and householders, including reduced mowing, pollinator-friendly planting, reduced pesticide use and the planting and protection of wildflower areas;
- increased public awareness of the need for pollinator-friendly management and the development of practical guidance for farmers, councils, communities and gardeners.

3.3.2. Strengthening long-term ecological monitoring

While the biodiversity duty reporting obligation provides opportunities for monitoring the activities of different public bodies, there are still considerable gaps when it comes to monitoring the site-specific impacts of activities on ecology, hydrology and emissions reductions and removal. The effectiveness of restoration measures in withstanding future climate impacts is also a significant research gap. This applies to specific habitat restoration projects such as the rewetting of peatland and the restoration of coastal and marine habitats, as well as the impacts linked to infrastructure delivery projects in a diverse range of areas such as energy, housing and water supply and treatment.

The draft NRP acknowledges the existence of significant knowledge gaps that constrain evidence-based restoration planning. It recognises that the limited availability of long-term ecological monitoring data, together with the absence of historical baseline data across ecosystems and species, create substantial uncertainty in assessing ecosystem conditions and restoration outcomes. These uncertainties are further compounded when restoration planning is integrated with climate-related objectives and future climate projections.

The Council recommends that the Government join the Integrated European Long-term Ecosystem, Critical Zone and Socio-ecological Research (eLTER) infrastructure network by Q3 of 2027 to collect and use long-term data to inform evidence-based solutions for positive climate and biodiversity outcomes. Ecosystem processes and problems are inherently long term and require long-term observation of ecosystem dynamics. The eLTER system offers an integrated approach to monitoring different ecosystem components, including ecology, hydrology, soil science, atmospheric science and social sciences. Nineteen countries are currently members of the eLTER network, with membership involving an annual contribution of approximately €100,000. NPWS would need to prepare a business case for Ireland to become a member, and this would need further consultation with relevant stakeholders, including DCEE, EPA, Met Éireann and the Geological Survey of Ireland.

Joining the eLTER infrastructure network would allow Ireland to expand its network of ecosystem monitoring stations, with support for the necessary equipment, and allow it to access data from approximately 250 sites and platforms across Europe. The current focus of Ireland's monitoring network is limited and largely focused on peatland sites, but there is considerable scope to prioritise the expansion of network sites to monitor the impacts of restoration initiatives in coastal and marine habitats, grassland habitats and forests, as well as in Marine Protected Areas and around offshore wind energy projects.

Overall, having an expanded long-term ecological research network would strengthen the evidence base for decision-making on infrastructure projects as well as on restoration initiatives through the provision of information on the longer-term impacts of site-specific developments on ecology, hydrology, soils, climate resilience and greenhouse gas emissions and removals. It would further improve understanding of how climate change is impacting the health of Ireland's protected habitats and species.

3.4. Agriculture and biodiversity

Even though state-owned lands are prioritised for meeting restoration targets, agriculture is the dominant land use in Ireland, covering an estimated 67% of its land mass,[56] and around 90% of the terrestrial Natura 2000 network is privately owned.[15] Pressures relating to agricultural land continue to be the main threat to protected habitats in Ireland, with 69% of habitats impacted by pressures relating to agricultural practices and the pressure ranked as being of high importance in more than 50% of habitats.[1] The different subcategories of agricultural pressure on protected habitats are

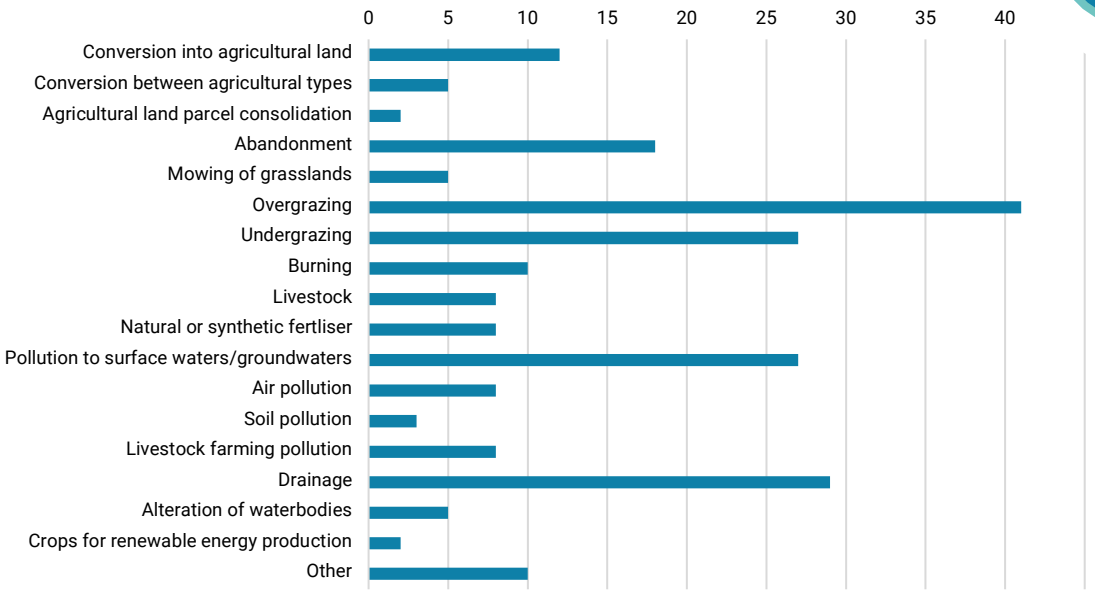


Figure 5: Percentage of protected habitats impacted by pressures relating to agricultural land.
(Source: NPWS, 'The Status of EU Protected Habitats and Species in Ireland'.[1])

shown in Figure 5, with intensive grazing or overgrazing by livestock the most prevalent subcategory of agricultural pressure, followed by drainage for use as agricultural land.

The need to restore agricultural ecosystems is included in the EU Nature Restoration Regulation, and Member States are required to achieve an increasing trend at the national level of at least two out of the following three indicators: (1) the Grassland Butterfly Index, (2) the stock of organic carbon in cropland mineral soils and (3) the share of agricultural land with high-diversity landscape features.[e][62] Member States must also ensure that the Common Farmland Bird Index reaches specified levels and that the area of drained peatland currently in agricultural use is restored by at least 50% by 2050 (of which at least one-third must be rewetted). The draft NRP identifies 141,000 hectares of organic soils under agricultural use constituting drained peatlands and includes an overall target to restore 70,500 hectares of organic soils by 2050, with 23,500 hectares of this to be rewetted. However, further engagement with key stakeholders to determine targets for organic soils under land uses other than agricultural use, including peat extraction sites, is still required. Therefore, there is still no final peatland restoration target and no breakdown of how much of the target will be attained by Coillte, Bord na Móna, NPWS and farmers.

While the uptake by farmers of measures to achieve targets will be voluntary, overall incentives and funding will be of critical importance. It is estimated that 79.5% of spending on biodiversity in Ireland is through DAFM and relates mainly to agri-environment schemes, forestry programmes and marine biodiversity initiatives.[63] It is concerning that considerable uncertainty remains around the funding of agri-environment measures beyond the current Common Agricultural Policy Strategic Plan period (2023–2027) and around the broader implementation of the NRP at both EU and national levels. In

e The draft NRP outlines that Ireland has committed to increasing the trend of the Grassland Butterfly Index and the share of agricultural land with high-diversity landscape features, but baseline information is not available for either.



spite of this uncertainty, the Council recommends that the Government ensure enhanced ambition and support for results-based agri-environment schemes under the next phase of the Common Agricultural Policy. Adequate mechanisms and incentives to enable farmers to voluntarily contribute to Ireland's NRP and provide critical nature-based measures on their land are clearly required.

The Council recommends that the Government use a coherent approach to leverage additional funding for results-based agri-environment schemes, including an adequate level of national co-funding and blended financing. National co-funding should be optimised from multiple sources, including the Infrastructure, Climate and Nature Fund, a hypothecated carbon tax fund (Climate Action Fund, Just Transition Fund, allocation to ACRES), an expanded NPWS Farm Scheme and funding instruments for the EU Carbon Removals and Carbon Farming Regulation and the 6th Nitrates Action Programme.

The recently published EU roadmap for nature credits should be actively implemented to ensure that greater financing is mobilised from the private sector, as well as from retailers and processors, for the offsetting and insetting of negative environmental impacts and scope 3 emissions. Future agri-environment schemes should be accessible and simplified and should operate efficiently.

Future agri-environment schemes should further incentivise farmers to adopt measures that deliver multiple benefits for biodiversity, climate and water quality, including nature-based measures and biodiversity-friendly farming practices and the enhancement of space for nature and habitat and species diversity on farms. An increasing focus on delivering the climate resilience of soil is required in future schemes. The extreme weather events of 2026, including the floods early in the year and heatwaves and droughts in the summer, showed the need to enhance soil health on farms and to enhance water infiltration into Ireland's soils, and to build up soil organic carbon to provide better water storage to get Ireland through droughts, while enhancing soil biodiversity.

It is recommended that DAFM consider the introduction of a nationwide soil health monitoring scheme that would expand on the soil fertility analysis work of Teagasc,[64] similar to the Soil Nutrient Health Scheme in Northern Ireland. This work would also support preparations for the implementation of the EU Carbon Removals and Carbon Farming Regulation, the EU Soil Monitoring Law and the international private sector's greenhouse gas protocol's scope 3 emissions removal guidance for the Land sector.

There is a clear need to build comprehensive nationwide monitoring, reporting and verification into future agri-environment schemes. Currently, the impacts of agri-environment schemes are difficult to evaluate, including their rate of return on investment of public funds. Monitoring, reporting and verification of impacts is needed at the field level to track the impacts of behavioural change among farmers. DAFM needs to leverage the use of satellite technologies in supporting field-based surveys. The Soil Nutrient Health Scheme and ACRES cooperation scorecards are good examples of practical approaches that can be followed and expanded to assess the impacts of measures on a range of ecosystem services at the farm level.

Box 4: Overview of the Soil Nutrient Health Scheme in Northern Ireland[65]

- The £45 million scheme is funded by the Department of Agriculture, Environment and Rural Affairs and is implemented by the Agri-Food and Biosciences Institute. It is one of the largest soil health monitoring programmes in the world.
- The scheme is voluntary; however, participation is a condition for the receipt of the Farm Sustainability Payment.
- Fields are sampled and analysed for pH, phosphorus, potassium, magnesium, calcium and sulfur, together with organic matter estimation and crop-specific lime and fertiliser recommendations.
- As of June 2026, over 540,000 fields had been soil tested. This equates to over 90% of actively managed fields in Northern Ireland.
- The scheme combines independent precision soil sample analysis with high-resolution LiDAR[f] data at 16 scans per square metre, providing for unprecedented granularity and transparency.
- Farmers are trained on the soil nutrient reports and generation of farm nutrient plans.
- The repetition of the sampling every 5 years provides an opportunity to accurately measure the impacts of interventions on different parameters of soil health.

Increasing the share of agricultural land with high-diversity landscape features is identified in the EU Nature Restoration Regulation[62] as a key indicator for improving biodiversity in agricultural ecosystems. In Ireland, it is estimated that approximately 12–14% of agricultural land is covered by high-diversity landscape features.[g][66] While this area is significant, agri-environment schemes need to more strongly incentivise measures to enhance the condition of these features.

Hedgerows are the most significant high-diversity landscape feature for biodiversity on Irish farmland, with an estimated total length of 689,000 km of hedgerows in the country, equating to 186,000 hectares or 2.6% of the area of Ireland's landmass.[67] These provide important corridors for a diverse array of wildlife, improve the connectivity of habitats and species, provide vital climate-related benefits linked to the storage of carbon and the provision of shelter and shade, and support flood control and improved water quality.

In spite of their importance for biodiversity and climate action, several stakeholders have raised concerns regarding the mismanagement of hedgerows,[68–70] and recent county hedgerow appraisal surveys undertaken in Monaghan and Kildare estimated that 88.2% and 87.9% of hedgerows were in unfavourable condition, respectively.[71,72] Hedgerows are afforded limited and fragmented legal protection in Ireland. The final report of the Citizen's Assembly on Biodiversity Loss of 2023[66]

f LiDAR stands for light detection and ranging, and is a remote sensing method used for mapping.

g According to the Eco-Scheme, these features include hedges, drains, stone walls and margins in arable parcels, and area features such as habitat, patches of scrub, rock, copse/trees and woodland.



acknowledged this policy gap and recommended a review and the strengthening of legislation and regulation regarding hedgerows.

Currently, subject to some exemptions, hedge cutting is illegal from 1 March to 31 August under the terms of the Wildlife Act;[73] more than 500 metres of field boundary removal (including of hedgerows) is subject to screening for environmental impact assessment under the terms of the Environmental Impact Assessment Regulations (Agriculture);[74] and farmers in receipt of Common Agricultural Policy payments are generally required to retain and maintain hedgerows in good agricultural and environmental condition.[75] Countries such as the UK have far stronger legal protection measures for hedgerows, including clear enforcement procedures and protection based on the length and connectivity of the hedgerow. The hedgerow's importance is based on its age, wildlife and archaeological or historical significance, and there are provisions for 2-metre buffer strips alongside hedgerows where cultivation and application of fertiliser or pesticides are restricted.[76]

While new hedgerow planting offers the best carbon sequestration potential, it is estimated that allowing hedgerows to grow out by 1 metre on either side and upwards will increase carbon sequestration by 1–2 tonnes per hectare per year.[77] In this context, improving hedgerow quality and promoting taller, wider and denser hedges offers the best potential for maximising biodiversity and the ecosystem services, including climate change mitigation and adaptation, that hedgerows provide.

The Council considers that stronger legislation is needed to ensure the protection of hedgerows and that the Government should include the Protection of Hedgerows Bill in the next legislative programme. Considerable work has already gone into the development of this bill, which was drafted by the Hedgerows Legislation Project (a working group of Comhshaol – the Climate Bar Association) and introduced to the Dáil in 2024 by Green Party Teachtaí Dála as a Private Member's Bill.[78] This bill[79] would introduce the concept of significant hedgerows, which would be protected and could only be removed in specified circumstances. It would establish offences and penalties for unlawful hedgerow removal and amend several existing laws relating to roads, forestry, utilities, railways and other infrastructure to ensure they align with hedgerow protection measures.

In addition to strengthening legal protection, the Council recommends that further incentives are also incorporated in agri-environment schemes for farmers to improve hedgerow quality. Mapping the extent and condition of hedgerows through satellite technologies and appropriate surveys based on the hedgerows appraisal methodology should be further strengthened and support results-based payments for farmers and landowners.

3.5. Management of protected areas

Ireland's protected area network is primarily made up of National Parks, Nature Reserves, Special Areas of Conservation, Special Protected Areas (Natura 2000 sites) and National Heritage Areas, while the legal process for the designation and management of Marine Protected Areas continues to be under development. The Council has previously been critical of the low area of coverage of protected terrestrial and marine areas in Ireland and of delays in the legislative framework for the establishment of Marine Protected Areas and for the management of National Parks, and has highlighted the need for more active management approaches across the full range of protected area types.

While all Natura 2000 sites must legally have clearly defined conservation objectives and measures, the management frameworks for both National Parks and Marine Protected Areas have yet to be finalised. The Minister for Nature, Heritage and Biodiversity has announced the development of a National Parks Bill to establish nature conservation and restoration as their primary management purpose; establish management and governance arrangements; confer powers to create by-laws



that will regulate certain activities within National Parks; and enable the prohibition or restriction of certain other activities, where necessary, alongside appropriate enforcement powers and sanctions.[80]

Although it is long overdue, the Council welcomes this development and calls for the management framework for National Parks to fully integrate and plan for climate-related risks and the scenarios outlined in the National Climate Change Risk Assessment. The legislation should also make provision for regular reviews of management effectiveness in each National Park based on international best practice tools.[81] This would include regular reporting on the implementation of climate change adaptation and mitigation measures within National Parks.

Recent EPA research has highlighted the impact of extreme weather events on ecosystems,[82] while the extreme weather events experienced in 2025/2026, including wildfires, drought and floods, have had significant impacts on National Parks, protected habitats and a range of species. The EPA research explored habitat-specific vulnerabilities and varying sensitivities to flooding, heatwaves, droughts, wildfires and storms. The research explored a vulnerability framework that was tested on Dublin Bay's Atlantic salt meadow, which showed potential for national application. The findings highlight the need for targeted assessments to track climate impacts, the development of indicators, the collection of multi-scale data, and the enhancement of monitoring systems.

As noted in *Section 2.3*, the General Scheme of a Maritime Area Planning (Marine Protected Areas) Amendment Bill[23] was published in July 2026, and the Government has committed to having 30% of Ireland's marine area designated Marine Protected Areas, compared with the current 10% that is under formal protection. The Government should ensure that strengthened governance arrangements are developed for the ambitious management and restoration of Natura 2000 sites in the marine environment and the forthcoming Marine Protected Areas to ensure optimal biodiversity and climate benefits.

This should include the development of site-specific conservation objectives and management plans for each Marine Protected Area and provisions for adequate funding and resources, strong systems for scientific evidence and monitoring, strong governance and legal frameworks and good stakeholder engagement and public participation. Climate-related risks such as marine heatwaves, increased sea surface temperature and ocean acidification should be integrated into management plans for each Marine Protected Area.

It is noted from Head 18 of the General Scheme that the Maritime Area Regulatory Authority or one or more local authorities will be appointed to manage Marine Protected Areas. Significant financial and human resource investment in these entities will be needed so that they can carry out these additional functions effectively.

Appendix 1

Box 5 summarises the main biodiversity-related recommendations drawn from the individual sectoral reviews published ahead of this Biodiversity Review and as part of the 2026 Annual Review.

Box 5: Biodiversity-related recommendations across the Climate Change Advisory Council Annual Review 2026

These sectoral recommendations from across the Climate Change Advisory Council's Annual Review 2026 are critical for strengthening biodiversity action in Ireland; however, they are not explored in further detail within this Biodiversity Review. Please refer to the relevant sectoral review for further information.[83]

Electricity sector

(Review published 13 May 2026.)

- The Council calls for engagement by national and local planners (e.g. An Comisiún Pleanála, local authority planning departments and the Maritime Area Regulatory Authority), to take a constructive approach to repowering projects, including the appropriate use of the Habitats Directive Imperative Reasons of Overriding Public Interest derogation, while ensuring biodiversity benefits and risk mitigation.
- The Government should urgently approve the Electricity (Supply) (Amendment) Bill to provide for the establishment and maintenance of forestry corridors and strengthened vegetation management measures, improving the resilience and operational safety of the electricity networks. ESB Networks should also ensure the urgent implementation of a transparent national programme of afforestation and hedgerow renewal and nature-friendly management of forestry corridors to mitigate (both on- and off-site) the loss to biodiversity and habitat disturbance caused by its timber clearance programme and support its goal of being nature-positive by 2030.

Built Environment sector

(Review published 29 July 2026.)

- The Council recommends that the Government expedite the development of coastal change management plans, supported by three pathfinder schemes, as identified in the Programme for Government 2025, in priority vulnerable areas. The plans should determine the most appropriate adaptation options for identified at-risk coastal areas, and a strategic, proactive approach to planned relocation should be undertaken for properties vulnerable to coastal flooding and erosion.

Agriculture and Land Use, Land Use Change and Forestry sector

(Review published 9 September 2026.)

- The Government should integrate the evidence and findings of the Land Use Review, published in early July 2026, into a coherent national land use framework consistent with the National Climate Objective within 18 months. This framework is needed to address



growing and diverse demand for resources and ecosystem services, delivered through sustainable land use management across the country.

- The Council recommends that the next Forestry Programme, due in 2028, address the challenge of achieving 18% national forest cover by mid-century. This will require setting specific targets across the various schemes and introducing the necessary policy flexibilities to support increased participation by landowners and farmers. The Council recommends that the design of the policy flexibilities be informed by insights from behavioural analysis, which identifies key non-economic barriers to participation.
- The Council recommends that DAFM develop a digital land-parcel-specific climate resilience and risk management decision support tool over the next 12 months to assist farmers in understanding future climate impacts, risks and possible opportunities, and provide practical support for on-farm management options. This could be integrated into other increasingly used farmer decision support tools, such as AgNav and PastureBase Ireland, as appropriate.

Preparing for Ireland's Changing Climate

(Review published 29 September 2026.)

- The Council recommends that the Government move beyond the pilot-scale use of nature-based measures and that the Climate Adaptation Taskforce support their systematic integration across catchments and within urban and coastal areas. Agri-environment funding schemes should include specific criteria to encourage measures that increase water storage capacity and reduce surface water run-off in appropriate locations, recognising the substantial co-benefits for water quality, biodiversity, habitat restoration, carbon sequestration and flood resilience.

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