



# County Sligo Biodiversity Action Plan 2025–2030





# County Sligo Biodiversity Action Plan 2025–2030



Sligo County Council  
Comhairle Chontae Shligigh

**Sligo.**



**Ceangal**  
Clár den Chomhairle Oidhreachta  
A Heritage Council programme



An Roinn Tithíochta,  
Rialtais Aitiúil agus Oidhreachta  
Department of Housing,  
Local Government and Heritage

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'We can make our minds  
so like still water that  
beings gather about us  
that they may see, it may  
be, their own images,  
and so live for a moment  
with a clearer, perhaps  
even with a fiercer life  
because of our quiet.'

W.B. Yeats



## Foreword from Cathaoirleach and Chair of Biodiversity Working Group

I am delighted to welcome the publication of the County Sligo Biodiversity Action Plan 2025–2030. Sligo is privileged to possess an extraordinary wealth of natural heritage, in which we can all take great pride. Biodiversity is key to Sligo’s identity and significantly contributes to the quality of life and wellbeing of local communities. This Biodiversity Action Plan provides us with a clear framework to identify, conserve, manage, promote and protect this natural heritage that we cherish and rely on.

As Cathaoirleach of Sligo County Council, and Chair of the Biodiversity Working Group, I am honoured to present this Plan and support its implementation in the years ahead. I wish to sincerely thank the members of the Biodiversity Working Group for their dedication in preparing the Biodiversity Action Plan. Their expertise, collaboration and commitment are greatly valued and recognised as integral to biodiversity conservation in County Sligo. I would also like to express my sincere appreciation to the Sligo Heritage Forum for their steadfast dedication to safeguarding the county’s built, natural, and cultural heritage.

This Plan sets out practical actions that aim not only to protect, but also to raise awareness, deepen understanding and foster appreciation of biodiversity. I am confident that it will bring biodiversity to a wider audience, so that all who experience and value Sligo’s wild places, will

help to ensure their ongoing protection.

I also want to acknowledge the remarkable efforts already underway in communities across Sligo. Their actions remind us that protecting biodiversity is not the task of one organisation alone; it is a collective responsibility that depends on cooperation between individuals, communities, educational institutions, businesses and government. In the face of biodiversity loss and climate change, this plan serves as a roadmap for action. I urge everyone in County Sligo to engage with it and participate in initiatives that enhance and protect our wildlife and natural habitats.

The threats posed by the biodiversity crisis may seem overwhelming, but I firmly believe that nature has the capacity to recover when given the opportunity. To achieve this, however, we need all members of the community to take action to prevent further harm to biodiversity across the county. By committing to positive actions for biodiversity, we give Sligo’s natural heritage its best chance to thrive. With the leadership of Sligo County Council, the support and dedication of our communities, and the commitment of individuals, businesses, and organisations, I am confident that we can secure a healthier, more resilient and more biodiverse future for County Sligo.

**Cllr Donal Gilroy**

Cathaoirleach and Chair of Biodiversity Working Group



## Foreword from Sligo County Council

The County Sligo Biodiversity Action Plan 2025–2030 set out a clear and ambitious framework to protect, restore, and enhance biodiversity at a time when pressures on nature have never been greater, both locally and globally. From the wild Atlantic coastline to the ancient uplands, County Sligo is home to a remarkable diversity of habitats and species that form the cornerstone of our natural heritage. The Biodiversity Action Plan’s objective is to make space for nature, so that it can survive and thrive. It reflects Sligo County Council’s firm commitment to embed biodiversity into our policies and operations, while working in close partnership with our communities, elected members, state agencies, and all who share the responsibility of protecting our natural environment.

I wish to acknowledge the contribution of the County Sligo Biodiversity Working Group. Their expertise, vision, and dedication have been central to the preparation of this plan, ensuring that it is both ambitious and grounded in practical action.

We are also thankful for the invaluable support of the Heritage Council, which has significantly strengthened our ability to respond to biodiversity loss through the Biodiversity Officer Programme. The appointment of a dedicated Biodiversity Officer within Sligo County Council marks an important milestone,

providing the structure and expertise required to deliver this plan effectively.

Sligo has long demonstrated leadership in the protection of biodiversity. Our County Development Plan places a strong emphasis on preserving natural heritage, guiding sustainable development while safeguarding and restoring ecological integrity. The Biodiversity Action Plan plays a vital role in this process, aligning our local priorities with national and international policy, and setting out a path for meaningful, measurable progress.

I extend my sincere thanks to all who contributed – community members, local organisations, State Agencies, Sligo County Council staff, and the members of the Biodiversity Working Group. I invite every sector of our community to join us in this shared mission – to safeguard the natural world that supports us all, and to secure a future where County Sligo remains resilient and thriving for future generations.

**Martin Lydon**

Chief Executive  
Sligo County Council



## Foreword from The Heritage Council

We are delighted to introduce the County Sligo Biodiversity Action Plan 2025–2030. This landmark plan brings national biodiversity policy to life at the local level, rooted in the unique landscapes, rich natural heritage, and community spirit of Sligo.

The Local Authority Biodiversity Officer Programme, established by the Heritage Council in partnership with the City and County Management Association, has been pivotal in embedding biodiversity at the heart of local decision-making. Through funding, training and the development of networks, this programme equips local authorities with the tools to address the challenges and opportunities in biodiversity conservation. In Sligo, this work builds on a solid foundation laid by the Heritage Office and the Heritage Forum, whose vision and commitment paved the way for the appointment of the County’s first Biodiversity Officer in 2023.

The inclusive approach to heritage by Sligo County Council – recognising the interdependence of natural, built and cultural assets – is particularly inspiring. The collaboration between the Heritage Forum and the Biodiversity Working Group reflects a deep understanding of how people connect with their surroundings, valuing them as vibrant expressions of identity, memory and place.

The development and delivery of a county-level biodiversity action plan serves not only to protect habitats and species but also to foster local engagement, pride, and climate resilience. The County Sligo Biodiversity Action Plan embodies this ethos, drawing on community input, expert knowledge and policy guidance to chart a course for sustainable, impactful conservation. As we face increasing environmental challenges, the implementation of this plan will be a testament to the strength of partnerships and the commitment of all involved.

The Heritage Council looks forward to supporting Sligo County Council, the Biodiversity Officer, and local communities as they deliver this ambitious and essential plan.

**Dr Martina Moloney**

Chairperson, The Heritage Council

**Virginia Teehan**

Chief Executive, The Heritage Council



## Acknowledgements



Sligo County Council and the County Sligo Biodiversity Working Group wish to acknowledge the support of The Heritage Council in the preparation of the County Sligo Biodiversity Action Plan 2025–2030 through its part-funding of the Biodiversity Officer post and the provision of annual funding for the implementation of the Plan.

Sligo County Council and the County Sligo Biodiversity Working Group wish to acknowledge the valued contribution of all those who took part in the consultation process.

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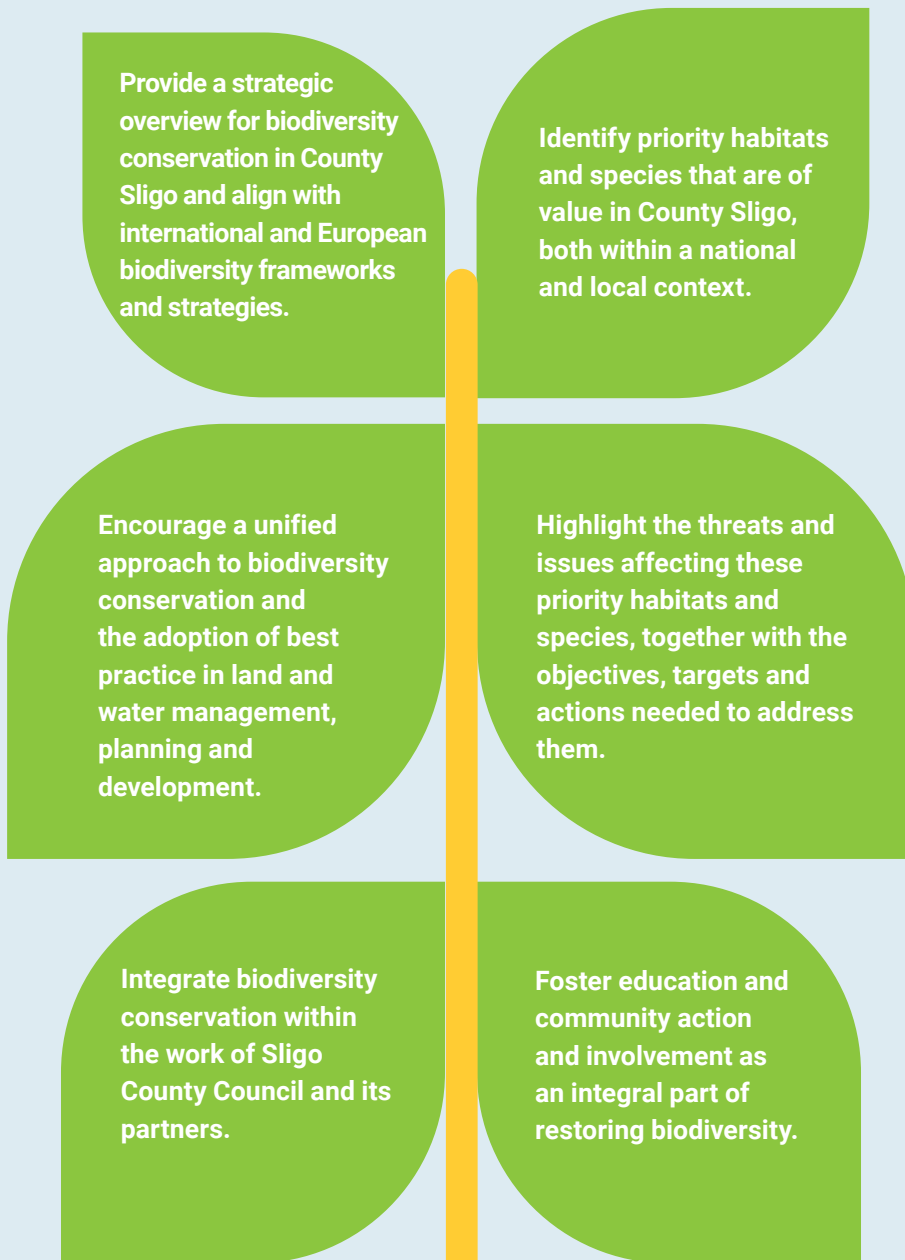
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# Overarching Aims of the Sligo Biodiversity Action Plan 2025–2030

**This Biodiversity Action Plan (BAP) sets out Sligo County Council’s vision for restoring species and habitats and ensuring their continued survival. The aims of the BAP are to:**





# Introduction



**The County Sligo Biodiversity Action Plan 2025–2030 (hereinafter referred to as the ‘Plan’) sets out how Sligo County Council, working alongside State Agencies, organisations and communities, will develop, deliver and promote biodiversity initiatives across the county. This Plan has been developed with input from the County Sligo Biodiversity Working Group and through public consultation with individuals, as well as local, regional, and national organisations with a responsibility for protecting and enhancing biodiversity. While specifically tailored to County Sligo, this plan aligns closely with the National Biodiversity Action Plan 2024–2030, ensuring it is delivering Ireland’s broader conservation objectives.**

**The development and implementation of the Plan is funded by Sligo County Council, The Heritage Council and the Department of Housing, Local Government and Heritage through the Local Biodiversity Action Fund.**

## What is biodiversity?

The word biodiversity describes the variety and interconnectedness of life on Earth. This encompasses all living things from plants, birds and mammals, to insects, microbes and fungi, and their genetic diversity. It also includes the ecosystems – bogs, forests, rivers, oceans and grasslands that make up our natural world.

## Why is biodiversity important?

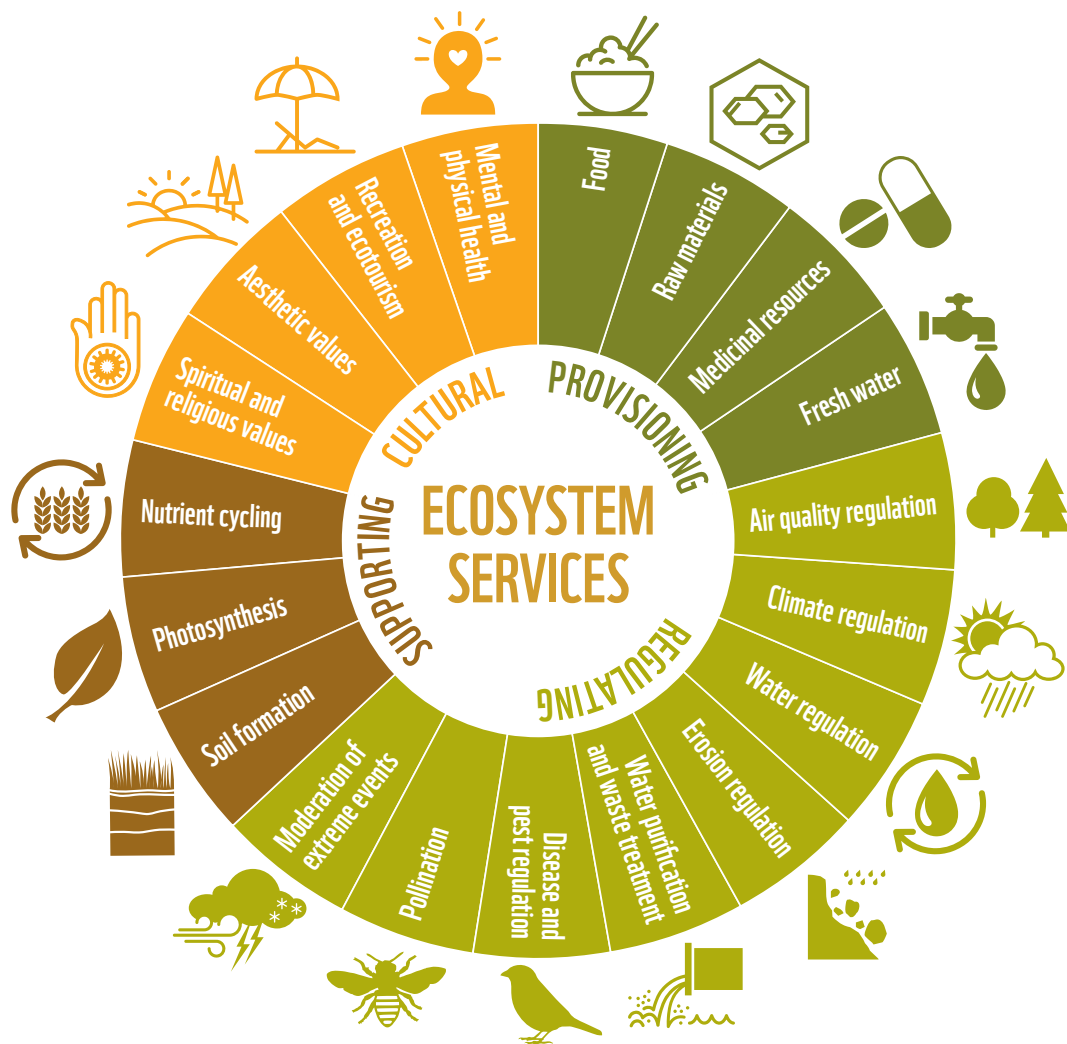
Biodiversity is essential for our survival, and to sustain our health, wellbeing and economy. Nature and people are deeply connected – nature shapes our cultures and identities through its spiritual and historical significance. We are dependent on clean air and water and fertile soil to provide food and medicines, as well as materials for industry such as forestry, farming, fisheries, tourism and manufacture. It also regulates climate processes and buffers against flooding. These free and vital functions sustain life and are termed ‘Ecosystem services’. Bogs, forests and wetlands help to purify and regulate the flow of water into rivers and reservoirs while absorbing carbon dioxide and reducing downstream flooding; native woodlands produce oxygen, supporting the respiration of nearly all living organisms on Earth; sand dunes, reedbeds and salt marshes buffer the impacts of coastal erosion and storms. Up to 75 per cent of all crops we grow globally require pollinators like wild bees.



Certain species serve as markers of environmental health and are known as indicator species. Flattened mayflies are excellent indicators of water quality due to their high sensitivity to pollution; lichens are indicative of good air quality, and bats are highly sensitive to habitat quality, climate, and pollution. The decline of an 'indicator' species warns of the potential loss of the ecosystem services and the economic benefits that are associated with biodiversity.

It is important to highlight the intrinsic value of biodiversity – its fundamental role and rightful existence and the long evolutionary journey of each species – alongside its importance to humanity. Despite its critical role in our lives, the natural environment is often not integrated into our decision-making processes. As a result, biodiversity is rapidly declining globally. One million animal and plant species face extinction, more than ever before in human history. The rate of extinction appears to have accelerated unchecked over the last 40 years.<sup>1</sup> In May 2019, the Irish Government announced a biodiversity emergency.

Categories of ecosystem services<sup>2</sup>



1 Intergovernmental Global Assessment Report on Biodiversity and Ecosystem Services (IPBES)  
 2 WWF 2016

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) has outlined five global pressures on biodiversity:

- (i) Historical and ongoing impacts of invasive species
- (ii) Changes in land and sea use
- (iii) Direct exploitation of species
- (iv) Climate change
- (v) Pollution

The different values people hold about nature and the ways we use it affects not only our natural world, but has implications for human life, our economy and society, for current and future generations. Collaboration is at the heart of halting the decline of biodiversity. It is only by working together across national and local government, State Agencies, landowners, communities, organisations and researchers that we can ensure protection and restoration of biodiversity, and secure the long-term health and resilience of our planet and the wellbeing of future generations.

## The evolution of biodiversity conservation

### Convention on Biological Diversity (CBD)

The word biodiversity or biological diversity was adopted globally following the United Nations Conference on Environment and Development (UNCED) at Rio de Janeiro in 1992, also known as the 'Earth Summit'. This landmark moment recognised that biodiversity is about more than plants, animals and their habitats; it also refers to people and their need for medicines, food, clean water, fresh air, shelter and a healthy environment to live in. In response to significant wildlife declines globally, this summit created the Convention on Biological Diversity (CBD) in 1992, an international treaty to which Ireland was one of over 189 signatories. The CBD provided a legal framework for countries to protect biodiversity and mandated the development of national strategies for its conservation and sustainable use.



**The Convention on Biological Diversity (CBD) was created in 1992, an international treaty to which Ireland was one of over 189 signatories.**



**EU adopted a European Biodiversity Strategy, setting out how Member States address biodiversity conservation within the framework of the CBD.**



Ireland's 4th NBAP



2002

Ireland produced its first National Biodiversity Action Plan (NBAP) followed by subsequent plans in 2014 and 2017.

2023

The Wildlife (Amendment) Act 2023 introduced a new public sector duty on biodiversity, requiring that every public body is obliged to have regard to the objectives and targets in the NBAP.

2023

Ireland launched the 4th NBAP, the first to be established as a statutory document. Among the actions is the requirement for all Local Authorities to have a Biodiversity Officer and a Biodiversity Action Plan in place by the end of 2026.

## State of the Environment Report

Ireland has wide variety of terrestrial, freshwater and marine habitats that support a rich diversity of over 31,000 species. Our island is home to a range of ecosystems including mountains, turloughs, woodlands, rivers, lakes, grasslands, peatlands and coastal habitats. These enable globally important populations of fungi, plants, invertebrates, mammals, fish and birds to inhabit our marine and terrestrial areas.

‘The overall current assessment for nature in Ireland is ‘very poor’ with deteriorating trends for protected habitats and bird populations.<sup>3</sup> Ireland’s State of the Environment Report (2024) sets out a need for urgent interventions to address climate change and biodiversity loss. While many consider it solely an environmental issue, biodiversity loss is also a developmental, economic, security, social and moral issue.

The findings of the most recent Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) global assessment states the following:

- Nature’s dangerous decline ‘unprecedented’
- Species extinction rates ‘accelerating’
- Current global response insufficient
- ‘Transformative changes’ needed to restore and protect nature
- 1,000,000 species threatened with extinction

It is in all our interests to strive towards reversing these declines. A diverse ecosystem is more robust and better able to withstand environmental stress, thereby providing a range of ecosystem services such as water purification, carbon sequestration, and flood regulation. By making space for nature, we give it the opportunity to recover. A shining example of species recovery is evident in Ireland’s corncrake population. Once headed towards extinction, numbers have increased in recent years thanks to targeted efforts, effective partnerships and investment.

**‘Biodiversity and nature’s contributions to people are our common heritage and humanity’s most important life-supporting “safety-net”. But our safety net is stretched almost to breaking point.’**

IPBES global assessment 2019.



3 Ireland’s State of the Environment Report 2024

Table 1: The Status of EU Protected Habitats and Species in Ireland. Article 17 Report on Habitats Directive, NPWS, 2019



of EU-protected habitats are in unfavourable status.



of EU-protected habitats are declining, especially marine, peatland, grassland and woodland habitats.



of EU-protected habitats are improving over a 12-year period.



of semi-natural grasslands have been lost in the last decade.



of our 60 EU-protected species of flora and fauna are in unfavourable status.



of our 60 EU-protected species are in decline.



of native Irish plant species have declined in range and/or abundance.



of Ireland's bee species are threatened with extinction.



of Ireland's 211 bird species are Red Listed.



of breeding bird species are showing declining trends in 2019.



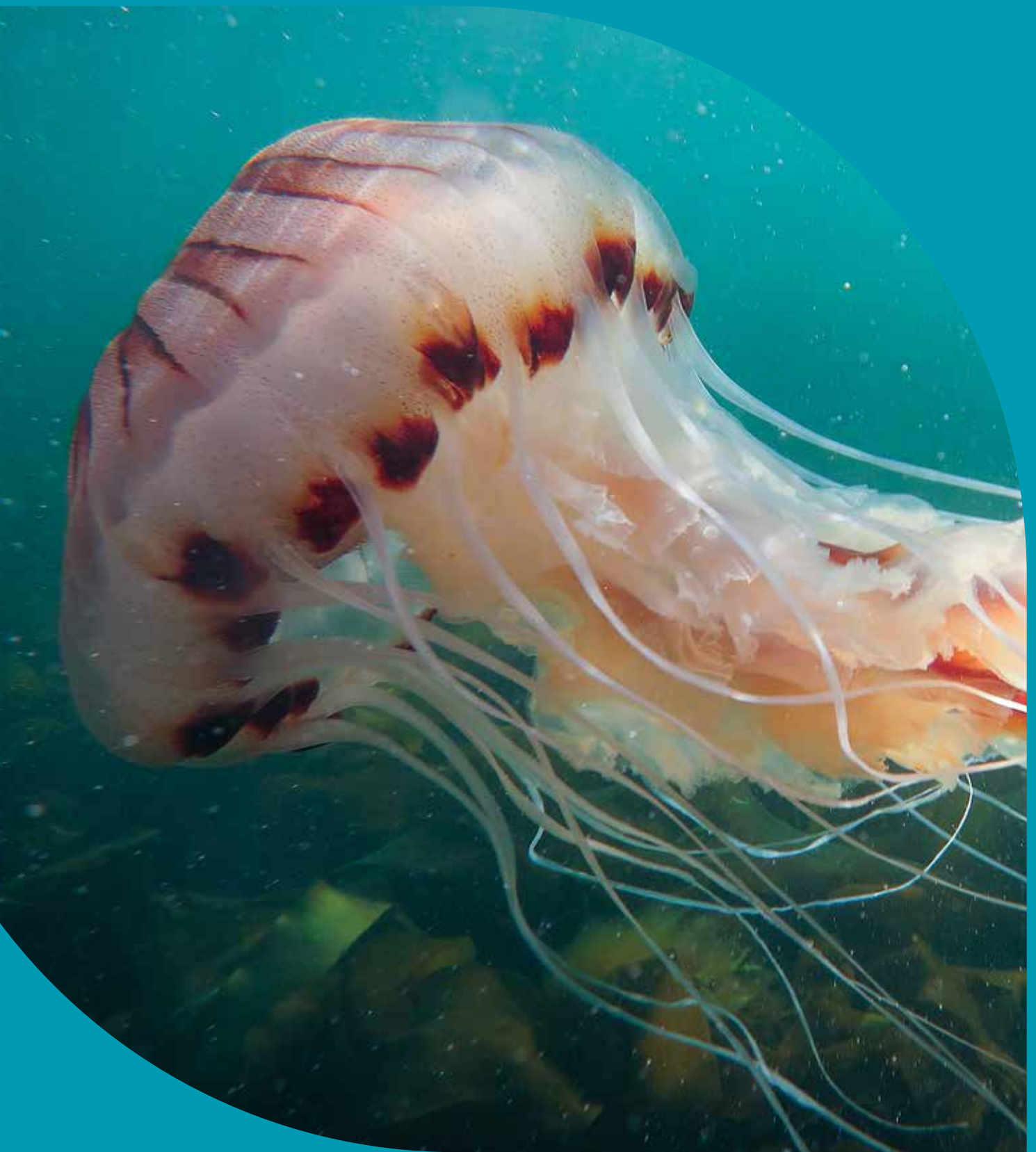
of key wintering bird species were showing declining trends in 2019.



of fish, crustaceans, shellfish and invertebrates are threatened with extinction.



of non-native introduced species have increased.



Chapter 1

# County Sligo Biodiversity Action Plan



## What is a Biodiversity Action Plan?

**A Local Authority Biodiversity Action Plan (BAP) is designed to provide a structured approach to biodiversity conservation at the local authority level. The Plan acknowledges the diverse roles of local authorities and their capacity to influence biodiversity, while highlighting the significant opportunities for enhancement and the adoption of best practices. It will outline the objectives and actions needed to protect and enhance biodiversity in County Sligo, help to raise awareness, promote community involvement, and translate international, European and national policies and biodiversity commitments, as well as regional and local policies, priorities and local consultation, into effective action on the ground.**

**The Plan will also provide a coordinated approach for Sligo County Council to work with and support local communities, state agencies, NGOs, educational institutions and landowners to record, conserve and restore biodiversity.**

Local authorities play an important role in preventing the loss of biodiversity which lies outside the Natura 2000 network, such as hedgerows, river corridors, wetlands and woodlands. County Development Plans and Local Area Plans provide statutory protection for Natural Heritage Areas and safeguard undesignated areas which are of importance for nature. The Biodiversity Action Plan supports translating these policies into action on the ground, and within the planning system. This is further supported by the NBAP, which recognises the key role local authorities play in biodiversity conservation through the planning system and requires that the objectives of the NBAP are aligned and integrated within statutory land use plans.



## Regional and Local Policy Context of the Biodiversity Action Plan

### 4th National Biodiversity Action Plan (NBAP) (2023–2030)

Ireland’s 4th NBAP sets the national biodiversity agenda and aims to deliver the transformative changes required to protect and restore biodiversity. The NBAP strives for a ‘whole of government, whole of society’ approach to the governance and conservation of biodiversity, and seeks to ensure that every citizen, community, business, local authority and agency understands the seriousness of biodiversity loss and how they can act to address it. The NBAP also seeks to respond to the recommendations of the Citizens’ Assembly on Biodiversity Loss.



Under the Biodiversity Duty, local authorities are required to report annually on specific actions to meet the targets within the NBAP. The NBAP includes a requirement for all local authorities to have a Biodiversity Officer and a Biodiversity Action Plan in place by the end of 2026. See Appendix Two for a list of NBAP actions relevant to local authorities.

The 4th NBAP<sup>4</sup> outlines the following five strategic objectives:



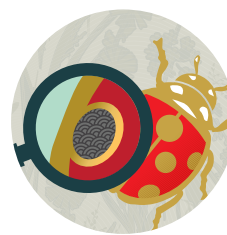
**Objective 1:**  
Adopt a Whole-of-Government, Whole-of-Society Approach to Biodiversity



**Objective 2:**  
Meet Urgent Conservation and Restoration Needs



**Objective 3:**  
Secure Nature’s Contribution to People



**Objective 4:**  
Enhance the Evidence Base for Action on Biodiversity



**Objective 5:**  
Strengthen Ireland’s Contribution to International Biodiversity Initiatives

4 Images from Ireland’s 4th National Biodiversity Action Plan, reproduced courtesy of the National Parks and Wildlife Service

## National Citizens' Assembly on Biodiversity Loss

The world's first National Citizens' Assembly on biodiversity loss was held in Ireland in 2022/2023 to advise the government on how to respond to the biodiversity crisis. Ninety-nine members of the public and one Chair agreed 159 recommendations. The Assembly proposed changes to the Constitution and sector-specific actions for agriculture; freshwater; marine and coastal environments; peatlands; forestry; woodlands; hedgerows and protected sites and species. It specifically acknowledged the role of farmers as custodians of the land and recommended that the agricultural industry be supported in conserving and restoring biodiversity. The Assembly also expressed disappointment with the State's failure to address biodiversity loss, particularly through enforcing biodiversity legislation. The first Children and Young People's Assembly on Biodiversity Loss was held in 2022, setting out actions on energy and transport, waste and consumption, nature restoration and rewilding, overexploitation, and species and habitat protection.

## County Sligo Biodiversity Action Plan 2010–2015

The previous County Sligo BAP 2010–2015 outlined the following four objectives which the current Action Plan seeks to build upon:

- To enable the delivery of the Sligo Biodiversity Action plan through appropriate resourcing and partnership work.
- To raise awareness of biodiversity in Sligo, its value and the issues facing it.
- To better understand the biodiversity of Sligo.
- To protect and enhance habitats and species in Sligo, taking account of national and local priorities.





### Heritage Council's Strategic Plan 2023-2028

The Heritage Council's Strategic Plan 'Our Place in Time 2023-2028' sets out a comprehensive vision for heritage conservation and management in Ireland. This plan is structured around six strategic pillars: Leadership and Stewardship, Climate Change and Biodiversity Loss, Research, Partnership, Communities, and Education and Engagement.

The plan emphasises collaboration, community involvement, and sustainable practices, reflecting a commitment to heritage as a vital component of national identity and societal wellbeing. The role of Local Authority Biodiversity Officers involves leading, building capacity, and facilitating natural heritage initiatives within local authorities and in partnership with local communities.



### Sligo County Development Plan (CDP) 2024-2030

The Sligo County Development Plan 2024-2030 sets out an overall strategy for the proper planning and sustainable development of County Sligo, in accordance with the Planning and Development Act. It is informed by social, economic and environmental changes, as well as national, regional and local policy. The CDP provides clear guidance on sustainable development policies and objectives for the Council's functions including transport, waste management, climate change and sustainable development.





### Sligo Climate Action Plan (CAP) 2024-2029

This statutory document sets out a clear pathway for Sligo County Council to actively assist in the delivery of National climate policy and objectives through evidence-based measures. Climate action and biodiversity are inherently connected. Actions within the CAP reference the development of a Biodiversity Action Plan to support green & blue infrastructure, nature-based solutions and integration of biodiversity considerations into operations and developments.



### County Sligo Heritage Strategy (CSHS) 2023-2030

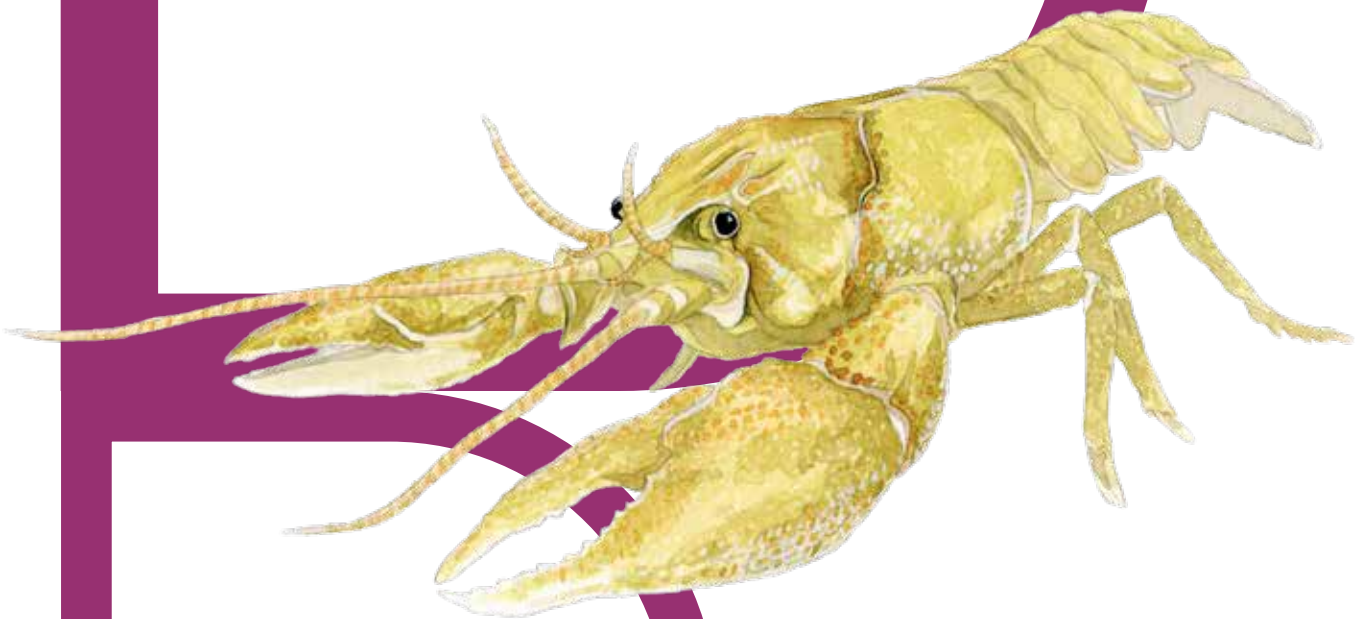
The CSHS is a strategic document which sets out the overall vision and goals for the management and protection of built, natural and cultural heritage in the county. Strategic Theme 5: Address Biodiversity Loss and Climate Change, prioritises the preparation of a Biodiversity Action Plan for the county. This Action Plan translates the strategic aims of the Heritage Strategy into action on the ground, by setting specific objectives and actions for managing and protecting natural heritage.





Chapter 2

# Biodiversity Legislation



## International and European Policy and Legislation

The following table outlines the policies and legislation governing the conservation of biodiversity at a global and European level. The Birds and Habitats Directives form the cornerstones of EU biodiversity policy. They provide a strong legislative framework for all EU countries to protect the most valuable and threatened biodiversity.

Table 2: International and European Policy and Legislation

**1971**

**Ramsar Convention**

Designates wetlands of international importance and implements principles including sustainable water management practices and habitat restoration.

**1979**

**EU Birds Directive**

Requires member states to designate Special Protection Areas (SPAs) to protect regularly occurring migratory and other vulnerable wild bird species. Ireland's SPA Network protects 597,000 ha of marine, terrestrial and inland wetland habitats.

**1992**

**Convention on Biological Diversity (CBD)**

Aims to conserve biodiversity, promote sustainable use of natural resources, and ensure equitable sharing of benefits arising from genetic resources. Signatories have an obligation to conserve biodiversity at national and local level.

**1992**

**EU Habitats Directive (HD)**

Established the Natura 2000 network of protected areas (Special Areas of Conservation – SACs), covering Europe's most valuable and threatened species and habitats and the largest coordinated network of protected areas in the world. Natura 2000 sites include SPAs (under the Birds Directive).

Also requires strict protection of species listed under Annex IV outside Natura 2000 sites.

The NPWS reports on the conservation status of EU protected habitats and species every 6 years under Article 17 of the HD. (see Appendix 3).

**1973**

**Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**

Regulates the international trade of wildlife, aiming to ensure that such trade does not threaten the survival of endangered species.

**1983**

**Bonn Convention for Migratory Species**

UN treaty providing a global platform for the conservation and sustainable use of terrestrial, aquatic and avian migratory animals and their habitats.





## 2000

### EU Water Framework Directive (WFD)

Requires EU member States to achieve water quality of at least Good Status (chemically and ecologically) in rivers, lakes, groundwater, estuaries and coastal waters, by 2027. The third River Basin Management Plan 2022–2027 is currently underway.

## 2015

### Sustainable Development goals (SDGs)

Adopted by the UN as a universal call to action to address a wide range of global challenges, including poverty, hunger, inequality, climate change, and environmental degradation by 2030. SDG goals include Goal 14: Life below water and Goal 15: Life on land.

## 2020

### EU Biodiversity Strategy 2030

A broad, long-term plan for protecting and restoring nature, aiming to reverse biodiversity loss and the degradation of ecosystems by 2030.

It encompasses the European Green Deal, which aims to make the EU the first climate-neutral area in the world by 2050.

## 2022

### Kunming-Montreal Global Biodiversity Framework (GBF)

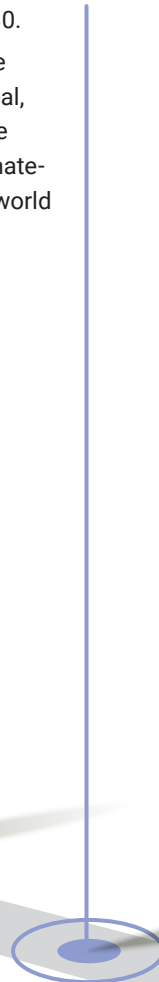
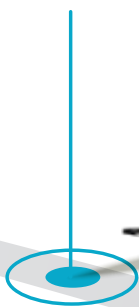
Landmark international treaty adopted at UN Biodiversity conference (COP15). It sets 23 targets for 2030 to halt and reverse biodiversity loss. European implementation is driven by the EU Biodiversity Strategy 2030.

## 2024

### EU Nature Restoration Law (NRL)

Sets legally binding targets for restoring at least 20 per cent of EU land and sea areas by 2030 and all ecosystems in need of restoration by 2050.

Member states are required to develop and implement National Restoration Plans outlining how they will meet the law's targets and obligations.



## Sustainable Development Goals (SDGs)

There are the 17 SDGs, which are an urgent call for action by all countries, developed and developing, in a global partnership. They provide a framework for sustainable development, aiming to create a better future for all, and recognise that ending poverty and other deprivations requires strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests. The SDGs are interconnected and achieving them requires collaboration among governments, businesses, civil society, and individuals.

There are 17 goals, many of which are related to or affected by biodiversity conservation. The Sligo Biodiversity Action Plan focuses on SDGs 14 and 15.

### The 17 Sustainable Development Goals



SDG 14: 'Life Below Water' aims to conserve and sustainably use the oceans, seas and marine resources for sustainable development.

SDG 14: Life Below Water

14

LIFE  
BELOW WATER

## CONSERVE AND SUSTAINABLY USE THE OCEANS, SEA AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

---

BEFORE COVID-19

OCEAN ACIDIFICATION CONTINUES TO THREATEN MARINE ENVIRONMENTS AND ECOSYSTEM SERVICES

A 100-150% RISE IN OCEAN ACIDITY IS PROJECTED BY 2100, AFFECTING HALF OF ALL MARINE LIFE

GLOBAL MARINE KEY BIODIVERSITY AREAS COVERED BY PROTECTED AREAS INCREASED

Year	Percentage
2000	30.5%
2015	44.8%
2019	46.0%

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COVID-19 IMPLICATIONS

THE DRASTIC REDUCTION IN HUMAN ACTIVITY BROUGHT ABOUT BY COVID-19 MAY BE A CHANCE FOR OCEANS TO RECUPERATE

SUSTAINABLE FISHERIES CONTRIBUTE TO GDP

Category	Percentage
Small Island Developing States in Oceania	1.55%
Least Developed Countries	1.11%

10x THE GLOBAL AVERAGE

---

97 COUNTRIES SIGNED THE AGREEMENT ON PORT STATE MEASURES, THE FIRST BINDING INTERNATIONAL AGREEMENT ON ILLEGAL, UNREPORTED AND UNREGULATED FISHING


SUSTAINABLE DEVELOPMENT GOALS

ACCESS MORE DATA AND INFORMATION ON THE INDICATORS AT [HTTPS://UNSTATS.UN.ORG/SDGS/REPORT/2020/](https://unstats.un.org/sdgs/report/2020/)

SDG 15 'Life on Land' aims to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

SDG 15: Life on Land

**15**  
LIFE  
ON LAND

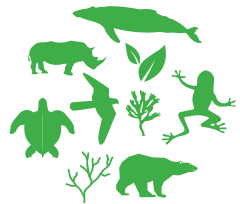


**PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS**

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**BEFORE COVID-19**


THE WORLD IS  
**FALLING SHORT ON 2020 TARGETS  
TO HALT BIODIVERSITY LOSS**



OVER 31,000 SPECIES ARE THREATENED WITH EXTINCTION

WHICH IS

27% OF OVER 116,000 ASSESSED SPECIES IN THE IUCN RED LIST



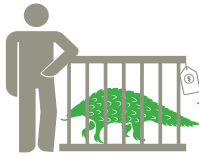
**FOREST AREAS CONTINUE TO DECLINE AT AN ALARMING RATE, DRIVEN MAINLY BY AGRICULTURAL EXPANSION**

EACH YEAR, 10 MILLION HECTARES OF FOREST ARE DESTROYED (2015-2020)

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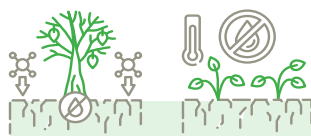
**COVID-19 IMPLICATIONS**

**WILDLIFE TRAFFICKING DISRUPTS ECOSYSTEMS AND CONTRIBUTES TO THE SPREAD OF INFECTIOUS DISEASES**




PANGOLINS ARE POSSIBLY THE INTERMEDIARY ANIMAL THAT TRANSFERRED THE CORONAVIRUS

THE EQUIVALENT OF 370,000 PANGOLINS WERE SEIZED GLOBALLY (2014-2018)




**TWO BILLION HECTARES OF LAND ON EARTH ARE DEGRADED, AFFECTING SOME 3.2 BILLION PEOPLE, DRIVING SPECIES TO EXTINCTION AND INTENSIFYING CLIMATE CHANGE**

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**ONLY A THIRD OF 113 COUNTRIES WERE ON TRACK TO ACHIEVE THEIR NATIONAL TARGET TO INTEGRATE BIODIVERSITY INTO NATIONAL PLANNING**



ACCESS MORE DATA AND INFORMATION ON THE INDICATORS AT [HTTPS://UNSTATS.UN.ORG/SDGS/REPORT/2020/](https://unstats.un.org/sdgs/report/2020/)



## National Policy and Legislation



### Wildlife Acts (1976 to 2000)

These Acts provide the foundation for wildlife protection in Ireland. Most species on the protected list are mammals including bats, marine mammals, otter, badger and red squirrel. These species cannot be wilfully killed or injured without a licence, and are subject to similar exemptions to those covering wild birds. The legislation protects their breeding places from wilful interference or destruction. Under the Wildlife Acts hedgerow cutting is prohibited from 1st March–31st August.



### Flora (Protection) Order (2022)

Gives legal protection to rare and threatened plants under the Wildlife Acts, making it an offence to cut, pick, uproot or take the flowers of any species protected by a Flora Protection Order.



### Wildlife (Amendment) Act (2000)

This Act strengthened the protective regime for SACs and extended the Wildlife Acts to include additional plant and animal species. It updated laws protecting disturbance at resting places and provided a legal mechanism to designate and protect Natural Heritage Areas.

The Act extended the offence to injuring, damaging or destroying any protected specimen, which also applies to the seeds and spores of the plants.



### National Planning Framework – Project Ireland 2040 (2018)

Places an obligation on local authorities to include objectives for the natural heritage objectives within County Development Plans, in particular sites outside the Natura 2000 network.



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## Planning and Development Act (2000 as amended)

This Act has significant implications for biodiversity as it governs land-use planning and sustainable development. It requires that Development Plans and Local Area plans are consistent with biodiversity conservation objectives.



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## Heritage Ireland 2030 (2022)

Ireland's National Heritage Plan presents an overarching framework for the protection of Irish heritage for the next ten years with actions to prevent biodiversity loss, and to which local authorities should align.



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## 4th National Biodiversity Plan 2023–2030 (2023)

The National Biodiversity Action Plan (NBAP) sets out Ireland's strategy for conserving biodiversity through targeted actions, policy integration, and public engagement. It is the first national Biodiversity Action Plan which is a statutory document.



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## Marine Protected Areas Bill (in progress)

This Bill is currently being drafted. It is expected to designate Marine Protected Areas to enable Ireland to meet its EU and international obligations to designate and effectively manage 30 per cent of Ireland's seas as MPAs by 2030. Currently 8.1 per cent of Irish marine waters are designated MPAs (as SACs and SPAs).



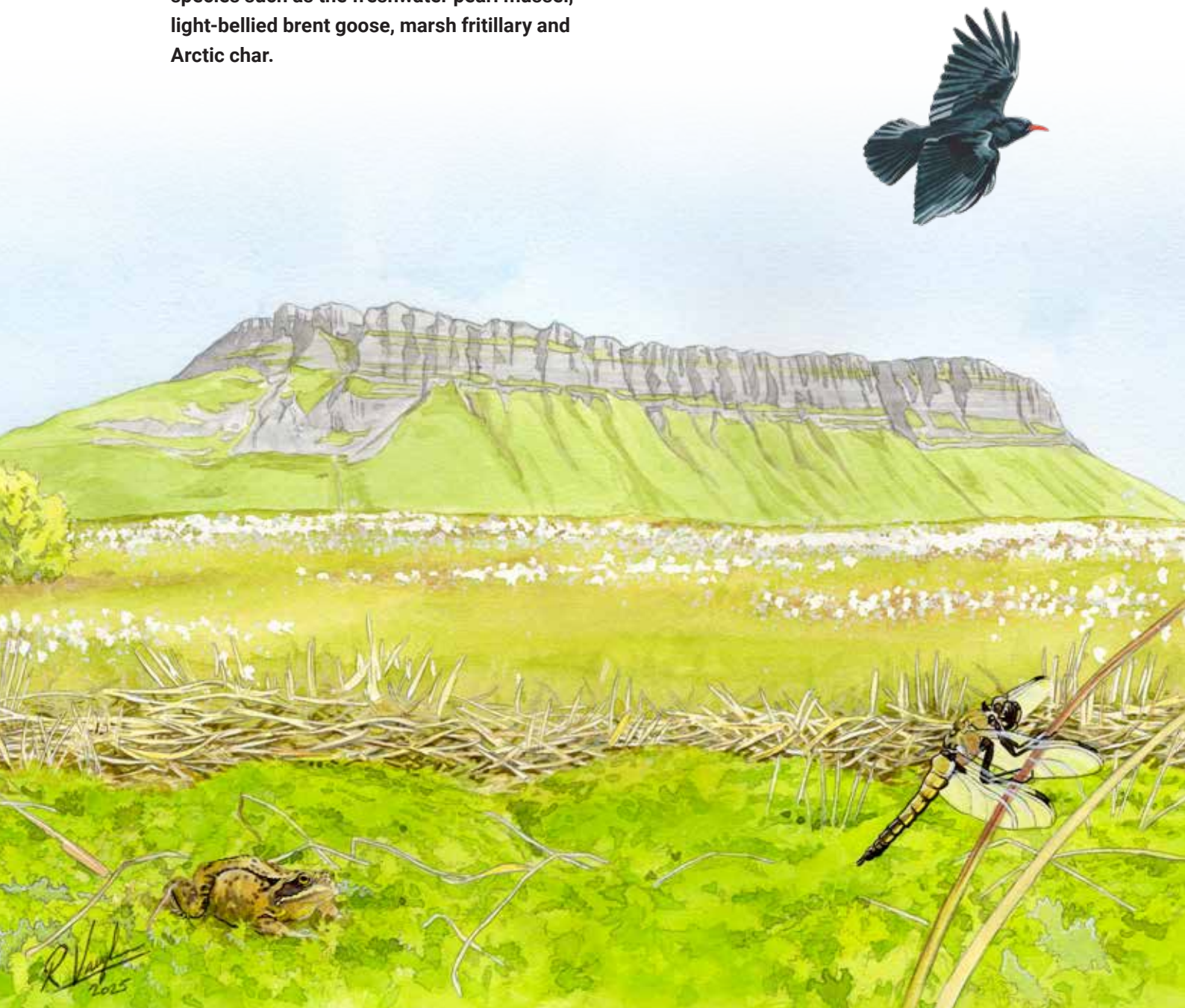
Chapter 3

# Biodiversity of County Sligo



**County Sligo is a coastal county in the north-west of Ireland, encompassing rich biodiversity and diverse habitats ranging from beaches, salt marshes, rocky shores and estuaries rising to peatlands, lakes, rivers, limestone grasslands and uplands. A diverse geology of limestone, sandstone and calcareous shale intersected by metamorphic and igneous rock have led to a range of ecosystems supporting rare and protected species such as the freshwater pearl mussel, light-bellied brent goose, marsh fritillary and Arctic char.**

Sligo's iconic landscapes including Benbulbin and the Gleniff Horseshoe are home to rare alpine and arctic-alpine and nationally rare plant species. Lowland habitat is farmed with cattle and sheep, interspersed with hedgerows, scrub and wetlands.



## Habitats of County Sligo

### Woodlands

County Sligo has notable woodlands ranging from large oak woodlands to wooded valleys, wet woodlands and small copses supporting species from the bird's nest orchid, strawberry tree, ferns, bryophytes and the red squirrel. A number of woodlands form part of Sligo's Natura 2000 network such as the sessile oak and alluvial (riparian) woodlands of Hazelwood Forest, Cleveragh Demesne, Slish Wood, and Union Wood which form part of Lough Gill and Union Wood SACs respectively.



### Estuaries

Sligo's estuaries are of significant value for wildlife providing extensive areas of salt marsh, sand, and mud flats. Ballisodare Bay, Cummeen Strand, Drumcliff Bay and Killala Bay/Moy Estuary SPAs support internationally important populations of wintering and migrating birds including light-bellied brent goose, oystercatcher, redshank, sanderling, bar-tailed godwit, dunlin, grey, golden and ringed plover and curlew. Sligo's estuaries are also designated as SACs due to the occurrence of European protected habitats including embryonic, shifting and fixed coastal dunes and species including harbour seal. The main estuaries in Sligo are the three Sligo Bays – Drumcliffe Bay, Sligo Harbour and Ballisodare Bay. Streedagh estuary lies to the north of the county, within Streedagh Point Dunes SAC. Cummeen Strand is also recognised as a Ramsar site, reflecting its international ecological significance.





## Sand dunes

Dune systems occur along Sligo's coastline forming extensive and ecologically important habitats. The sand dunes at Strandhill, Rosses Point, Mullaghmore, Enniscrone, and Streedagh are protected as they are part of the Qualifying Interests (QIs) of designated Special Areas of Conservation (SACs). These systems support plant species such as marram grass, and wildlife including the narrow-mouthed whorl snail, skylark and Irish hare. Sand dunes provide important coastal defences against erosion and the ever-increasing frequency and intensity of storms due to climate change, and are highly vulnerable to human activities such as trampling, vehicles and development.



# PROTECT

**Kelp**  
Ceilp  
*Laminaria spp.*

**Grey seal** Rón glas  
*Halichoerus grypus*  
EU Annex II and IV  
Pups are born covered in cream fur and triple in size in just three weeks!

**Bar-tailed godwit**  
Guilbneach stricearrach  
*Limosa lapponica*  
Autumn, Winter, Spring  
**RED CONSERVATION STATUS**  
In 2022 a 5-month-old bar-tailed godwit broke the world record for non-stop bird flight when it flew **13,500km from Alaska to Tasmania in 11 days!** While flying, they sleep with one eye open, switching off half their brains at a time, navigating by the stars and the Earth's magnetic field.

**Bottlenose dolphin**  
Deif bholgshronach  
*Tursiops truncatus*  
EU Annex II and IV  
Bottlenose dolphins are very social and playful. They form strong friendships that last decades! They like to surf in the waves and wakes of boats and swim through self-made bubble rings.

**Lesser spotted dogfish**  
Catsúileach ballach  
*Scyliorhinus canicula*

**Harbour porpoise**  
An mhuc mhara  
*Phocoena phocoena*  
EU Annex II and IV

**Great northern diver**  
Lóma mór  
*Gavia immer*  
September to April  
**AMBER CONSERVATION STATUS**  
These birds are also known as Common Loons. This name is believed to come from the clumsy way the animal looks when they're walking on the ground. Their legs and feet are better designed for swimming than walking!

**Bladderwrack**  
Feamainn bhoilgineach  
*Fucus vesiculosus*  
The bladders are filled with air to help the seaweed float on the surface of the water. This is how it catches sunlight to make energy!

**Eelgrass beds**  
Bileárach  
*Zostera spp.*  
EU Annex I habitat  
Seagrass is one of very few **true plants** that live in the sea (seaweed is a type of algae, not a plant!).

**Snakelocks anemone**  
Bundún nathairiúil  
*Anemone viridis*

**EU HABITATS DIRECTIVE TERMS EXPLAINED:**

**Annex I:** Rare habitat whose conservation requires the designation of Special Areas of Conservation (SACs).  
**Annex II:** Rare animals & plants whose conservation requires the designation of Special Areas of Conservation (SACs).  
**Annex IV:** Endangered, vulnerable, rare or endemic animals & plants that are in need of strict protection.

Rosses Point is situated within Cummeen Strand/Drumcliff Bay SAC and Drumcliff Bay SPA. Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are most important areas for species and habitats in Europe.

**KEY**

**BIRD CONSERVATION STATUS:**  
● MOST AT RISK  
● UNFAVOURABLE  
● LEAST AT RISK

**MONTHS IN FLOWER:**

# T ROSSES POINT

LEARN ABOUT THIS RARE & IMPORTANT HABITAT & SEE WHO LIVES HERE

**PLEASE KEEP DOGS ON LEADS AT ALL TIMES**  
to protect vulnerable ground nesting birds & their chicks.



### THE IMPORTANCE OF DUNES

SAND DUNES ARE RARE AND THREATENED HABITATS IN EUROPE.

Three types are found at Rosses Point:

- Embryonic dunes**  
(Young dunes, closest to the beach)
- Shifting dunes with marram grass**
- Fixed dunes with vegetation**

These dunes **provide vital coastal defences** by creating a barrier against storms.

Plants like **marram grass** have deep root systems which **bind the sand together**. They trap sand so the dune can grow and support even more plants.

Healthy dunes **help protect coastlines from adverse weather events**, which are increasing due to climate change.

**Visible tracks of open sand in dunes are indicative of poor conditions**, where trampling by people and dogs uproots plants, which in turn leads to erosion.

PLEASE DON'T WALK ON DUNES

PLEASE DON'T REMOVE MATERIAL FROM BEACH

**FIXED DUNES**

**SHIFTING DUNES**

**BEACH**

**Birds-foot-trefoil**  
Crobh éin  
*Lotus corniculatus*  
●○○○○○○○○○○○○○○

**Wild thyme**  
Tim chreige  
*Thymus praecox*  
●○○○○○○○○○○○○○○

**Oystercatcher**  
Roilleach  
*Haematopus ostralegus*  
All year round  
● RED CONSERVATION STATUS  
Oystercatchers use their bright orange bills to dig for worms and shellfish at low tide.

**Redshank**  
Cosdeargán  
*Tringa totanus*  
Autumn, winter, spring  
● RED CONSERVATION STATUS

**Skylark**  
Fuiseog  
*Alauda arvensis*  
All year round  
● AMBER CONSERVATION STATUS

**Marram grass**  
Muirineach  
*Ammophila arenaria*  
●○○○○○○○○○○○○○○  
EU Annex I habitat (Marram DUNES)

**Common darter**  
Sciobaire coiteann  
*Sympetrum striolatum*  
June to October

**Harebell**  
Mearacán gorm  
*Campanula rotundifolia*  
●○○○○○○○○○○○○○○

**Common carder bee**  
Bumbóg charda choiteann  
*Bombus (Thoracombus) pascuorum*

**Sand couch grass**  
Bromfhéar gainimh  
*Elytrigia juncea*  
●○○○○○○○○○○○○○○

**Bee orchid**  
Magairín na mbeach  
*Ophrys apifera*  
●○○○○○○○○○○○○○○

**Irish hare**  
Giorra Éireannach  
*Lepus timidus subsp. hibernicus*  
This animal is unique to Ireland, and does not turn white in winter like mountain hares do in other places! Hares are bigger than rabbits, they live above ground and can run up to 50km per hour!

**Six-spot burnet moth**  
Buirnéad sébhallach  
*Zygaena filipendulae*  
Most moths are active at night time, but this moth flies during the day!

**Light-bellied brent goose**  
Cadhan  
*Branta bernicla hrota*  
Autumn, Winter, Spring  
● AMBER CONSERVATION STATUS

**Sea pink/Thrift**  
Rabhán  
*Ammeria maritima*  
●○○○○○○○○○○○○○○

**Juniper**  
Aiteal  
*Juniperus communis*  
●○○○○○○○○○○○○○○

**Sanderling**  
Luathrán  
*Calidris alba*  
Autumn-spring  
● GREEN CONSERVATION STATUS

**Ringed plover**  
Feadóg chladaigh  
*Charadrius hiaticula*  
All year round  
● AMBER CONSERVATION STATUS

**Shag** Seaga  
*Phalacrocorax aristotelis*  
All year round  
● AMBER CONSERVATION STATUS

**Hermit crab**  
Faocha gliomaigh  
*Pagurus bernhardus*  
Hermit crabs don't have their own shell! They use empty shells they find to create their home, which they carry around with them to use as shelter and protection.

Communicating the importance of sand dunes – Rosses Point Blue Flag Beach sign

## Machair

Machair is an EU Annex I priority habitat comprised of a unique and rare coastal system, which occurs only in Scotland and the west of Ireland – primarily in Mayo and Donegal. Sligo has a single identified Machair site which occurs within the Bunduff Lough and Machair/Trawalua/Mullaghmore SAC. Machair systems comprise wet and dry areas bordered by beaches and dunes on the seaward side with peatland and heathland habitats on the landward side. This complex mosaic is an important refuge for threatened breeding waders and rare bee species.



## Lakes

Sligo's lakes vary depending on the underlying geology and surrounding landscape. Lough Easkey is an oligotrophic (nutrient-poor) lake within the Ox Mountains, which historically supported a population of Arctic char, now extinct due to degradation in water quality, non-native fish introductions and acidification.<sup>5</sup> Lough Gill is a eutrophic (nutrient rich) lake. Alluvial woodland as well as the sea, brook and river lamprey, white-clawed crayfish, Atlantic salmon and otter are among the qualifying interests of the Lough Gill SAC.

Lough Arrow is a spring-fed limestone mesotrophic (moderate nutrient level) lake. It is designated as an SAC for flora and fauna which includes notable brown trout and European eel populations. It supports the highest density of breeding great crested grebe, merganser and tufted duck of any of the large lakes in western Ireland.<sup>6</sup>



5 Sampling Fish for the Water Framework Directive – Lakes 2008, The Central and Regional Fisheries Boards

6 NPWS Lough Arrow SAC Site Synopsis

## Rivers

County Sligo has a number of rivers which have been designated due to their value as wildlife habitats. The Unshin River SAC is a limestone river which rises from Lough Arrow and supports an exceptional diversity of aquatic macrophytes. Downstream of the Unshin flows the Ballisodare River, known for its salmon run. The River Moy SAC rises in the Ox Mountains and supports freshwater pearl mussel and white-clawed crayfish, as well as being one of the most productive salmon fisheries in the county. From Lough Easkey flows the Easkey River, also one of the most productive salmon fisheries in the county. Sligo's rivers provide vital corridors for wildlife and support otters, river and brook lamprey and Atlantic salmon, while providing dark vegetated corridors for bat species, in particular Daubenton's bat and common and soprano pipistrelles.

## Farmland habitats

Farmland habitats are critical in the Irish landscape with native hedgerows and tree lines providing vital wildlife corridors for commuting and foraging bats, badgers and birds. Species-rich grasslands are essential habitats for barn owls, invertebrates and pollinators. Fens and turloughs provide important habitats for wetland plants, butterflies and frogs, supporting a rich diversity of species adapted to these unique and seasonally wet environments. Flooded meadows and callows support a complex ecological system of plants, invertebrate and bird life including many rare flora and fauna. Scrub habitat is a necessary refuge from actively farmed fields, while farm buildings are important for bats, owls and swallows. Sustainably managed farmland is crucial to support species such as corncrake, curlew, lapwing and the Irish hare.



## Peatland

Peatland habitats include blanket bogs, raised bogs and fen heathland. Mountain blanket bogs occur on flat terrain above 200m altitude such as those in the Ox Mountains. They result from deep and extensive peat formation in the wet Atlantic climate. Those in the Ox Mountains are associated with heathers, cotton-grasses and bog mosses (*Sphagnum* spp.). Raised bogs are less common in Sligo and are often associated with glacial depressions left by the last ice age. Fluhany Bog SAC is a raised bog supporting Bog rosemary, common frog, hen harrier, red grouse and curlew. Bogs suffer from a perceived lack of value and continue to be at risk from issues that include drainage, overgrazing and mechanical peat cutting. Only 41 per cent of County Sligo's original peatland remains intact.<sup>7</sup>



## Limestone

Limestone habitats in Sligo include cliffs, screes, limestone pavement and limestone grassland. These are habitats of high conservation value, often protected under the Habitats Directive due to their rarity, such as orchid-rich calcareous grasslands, petrifying springs and calcareous scree. Within the Dartry Mountain Range lies the Ben Bulbin, Gleniff and Glenade Complex SAC. This provides the best example in the country of alpine and arctic-alpine vegetation and includes two vascular species which are not known to occur elsewhere in Ireland, as well as a host of rare mosses and liverworts.

The karst topography, vertical walls, caves, dry valleys and limestone pavement of the Bricklieve Mountains and Keshcorran SAC slope down to bogs formed by the retreating ice of the last ice age.



7 Irish Peatland Conservation Council.



## Wetlands

Wetland habitat types that occur in County Sligo include: coastal wetlands (including salt marsh, lagoons and dune slacks), and freshwater wetlands (such as bogs, fens, springs, turloughs, lakes, marshes, rivers, and wet woodlands). In 2023, the County Sligo Wetlands Project was commissioned by Sligo County Council and undertaken by Wetland Surveys Ireland Ltd. This report identified 525 potential wetland sites and sub-sites in the county.<sup>8</sup> 90 per cent of wetlands have been lost across Ireland since the 1700s, the highest loss of wetlands globally.<sup>9</sup>

Fens and flushes often occur in combination with peatland habitats or adjacent to other wetland habitats and support rare plants such as fen violet and marsh helleborine. Reedbeds commonly occur along rivers and lake margins and are of particular importance for invertebrates and bird species.

Turloughs are seasonal lakes that occur in karst limestone areas and are dependent on groundwater level, generally flooding during winter and drying out in summer. Turloughs are extremely rare in a European and global context. With nearly all examples occurring in Ireland, they are an EU priority Annex I habitat due to their conservation value. In addition to providing a range of habitats to support a variety of different species, they also contribute as areas of significant carbon storage.



## Islands

Marine and lake islands in County Sligo support a wide range of habitats, many of which are of national and international importance for biodiversity—especially for birds, plants, and marine life. Inishmurray is designated as a Special Protection Area (SPA) due to its breeding populations of shag, barnacle goose, herring gull, and Arctic tern. It is also the most southerly breeding spot of the eider duck. Oyster Island in Sligo Bay historically supported corncrake.

Wooded lake islands, such as Church Island on Lough Gill and others in both Lough Gill and Lough Arrow, provide vital habitats for wintering wildfowl like tufted duck, as well as breeding birds, and are home to native sessile oak woodlands.



<sup>8</sup> <https://bit.ly/SligoWetlandsMap>

<sup>9</sup> Fluet-Chouinard, et al, 2023



### Sligo and Donegal Bay

The shore and sea that make up Sligo's coastline includes many habitats from tidal rocky shore to sandy beaches, headlands and open sea. It produces rich feeding grounds for migratory sea trout and salmon. There are considerable numbers of seabirds nesting on islands and some headlands; a notable example is Aughris Head SPA, which holds eiderduck, in addition to breeding kittiwake, fulmar, guillemot, razorbill, cormorant and shag. The bay provides rich feeding grounds for grey and harbour seal, as well as basking shark, humpback whale, bottlenose dolphin, harbour porpoise, bluefin tuna, minke whales, common dolphin and fin whale.





## Ecological Networks

It is important to recognise that the majority of our biodiversity occurs in the wider countryside and lies outside designated sites. There are a number of mechanisms for protecting wildlife and their habitats outside of designated sites. Article 10 of the EU Habitats Directive encourages the adoption of land-use planning policies to protect and encourage management of features that are of major importance to species. One of the intentions of this is to enhance the value of the network of protected areas. These features may include rivers and their banks, small woods and wetlands and 'linking' features such as hedgerows.

Most of our wildlife habitats now remain as fragments of their original areas – they have been separated by roads, agriculture and development. This has resulted in increasing pressure from disturbance through recreational activities, road noise and artificial lighting among other factors. Fragmentation creates 'islands' of wildlife habitat which reduces the ability of species to move from one area to another through these barriers.

As habitats are broken into smaller sections, the overall quality often reduces, known as the 'edge effect'. The overall effect is to reduce wildlife mobility, leading to a loss of genetic diversity and increased vulnerability to extinction.

### **The Ecological Network of a county comprises the following:**

1. Sites – SPAs/SACs/NHAs/pNHAs/Nature Reserves or Locally Important Biodiversity Sites
2. General natural features/connections – ecological corridors/networks, i.e. hedgerows, smaller stands of trees, rivers and streams, scrub, smaller wetland sites.

Specific planning policy requirements apply to designated sites based on their status. However, natural features – particularly linear corridors – must continue to be safeguarded through natural heritage policies during the design and development process. These features characterise the entire spatial landscape ecology of a county or region. The following section outlines some of our most significant habitats and environmental designations.

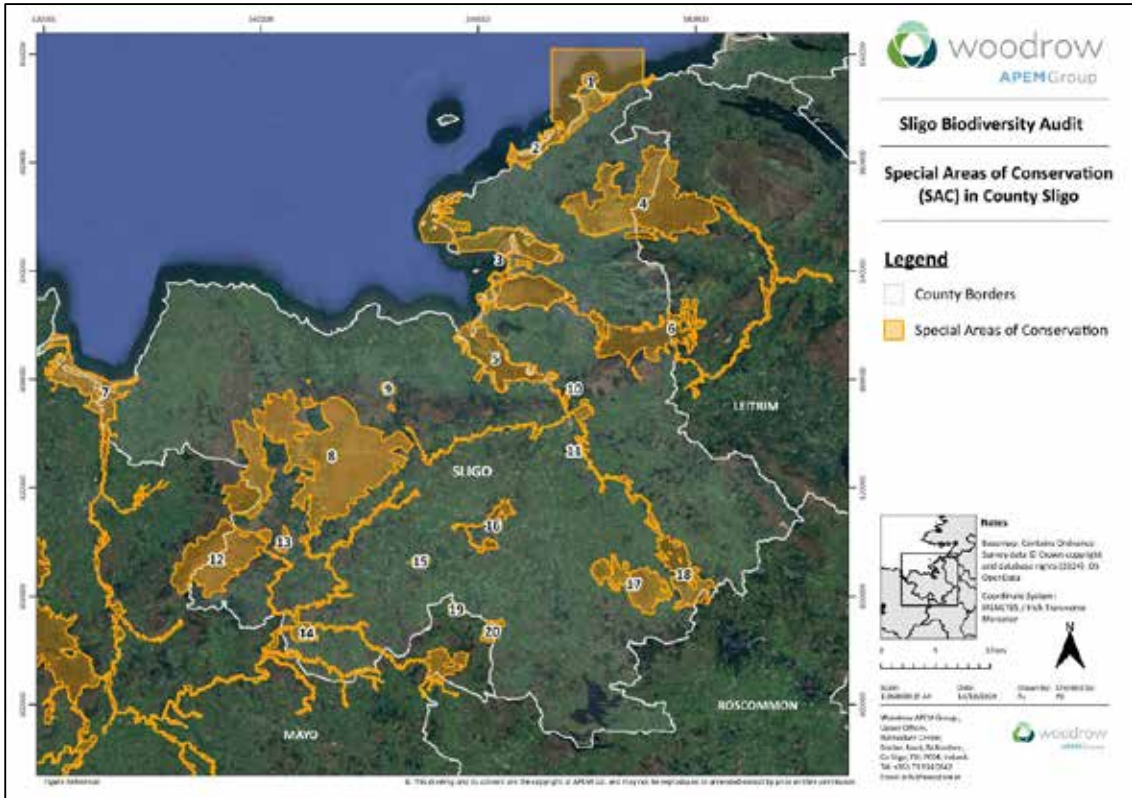
## Designated sites for nature protection

Ireland aims to conserve habitats and species, through the designation of conservation areas, as required under European and national legislation.

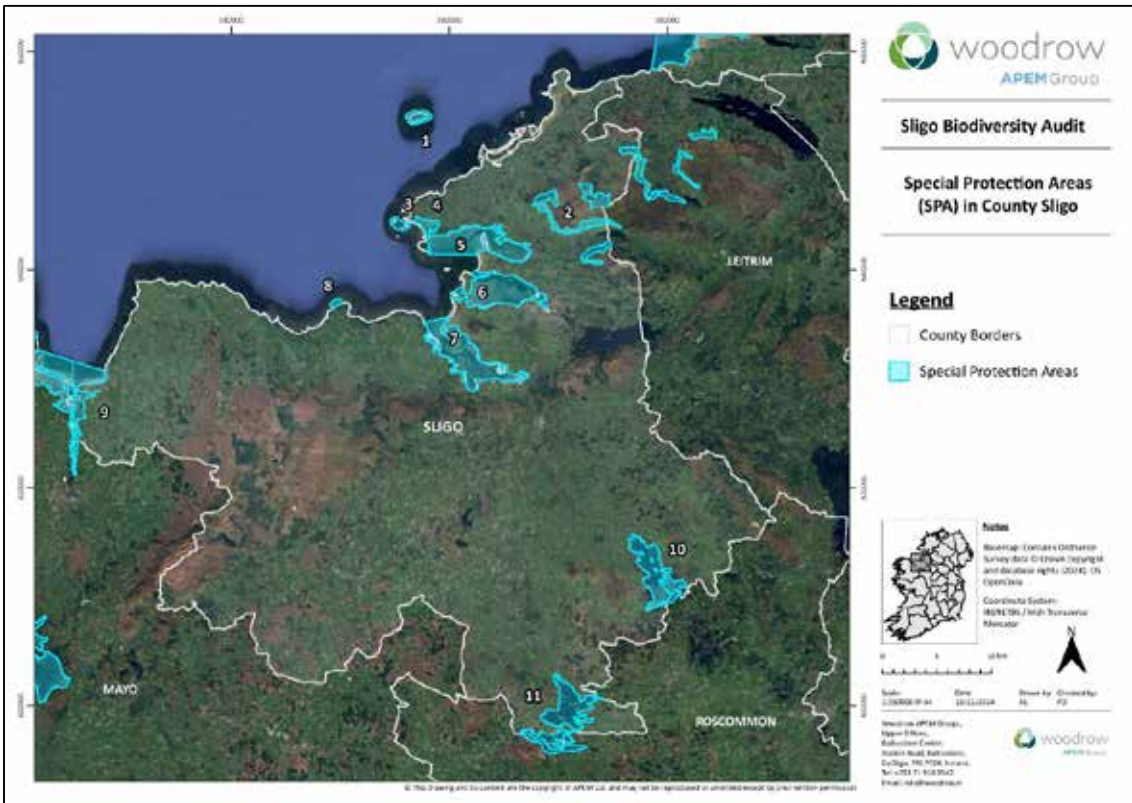
Sligo is home to 20 Special Areas of Conservation (SACs) and 11 Special Protection Areas (SPAs), all part of the EU's Natura 2000 network. The county also includes three Nature Reserves, four Ramsar sites, three Natural Heritage Areas (NHAs), 34 proposed NHAs (pNHAs), and 43 County Biodiversity Sites.

Designated SACs that fall completely or partly within County Sligo make up a total of around 58,500 hectares, over 5 per cent of the total area of designated SACs in the Republic of Ireland. SACs, designated for the internationally important habitats and species that they hold, highlight the importance of Sligo for biodiversity.

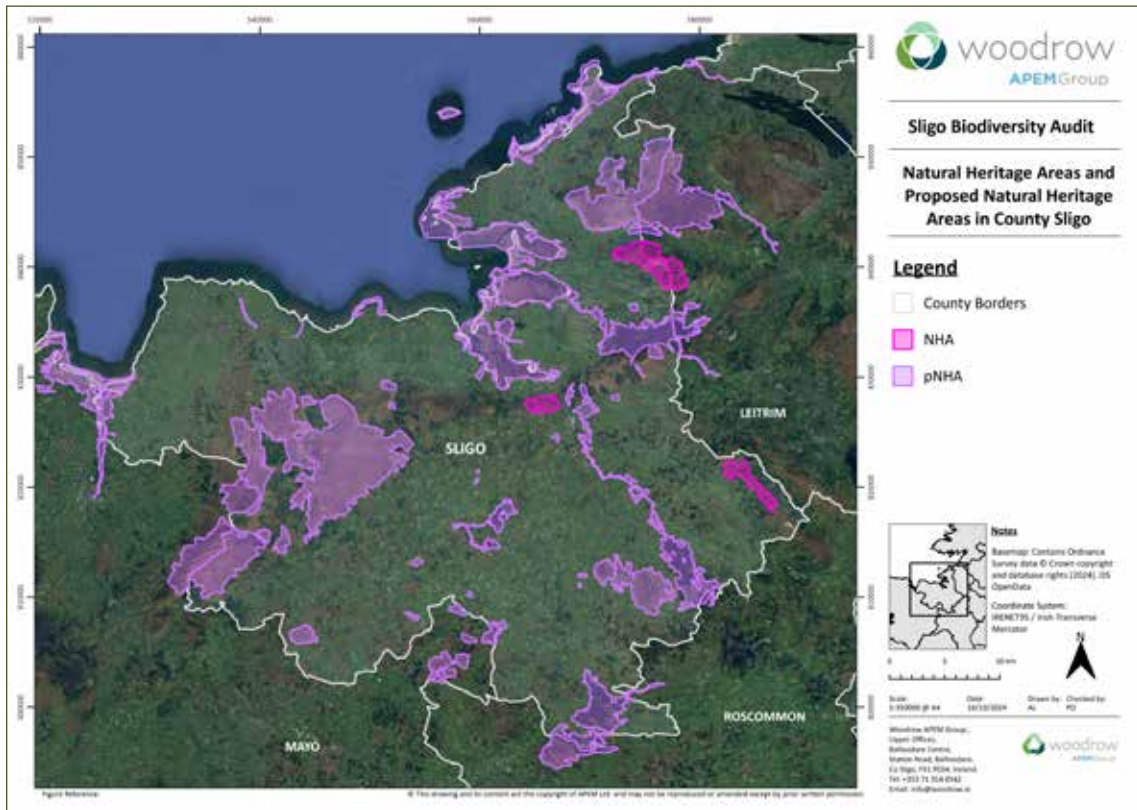




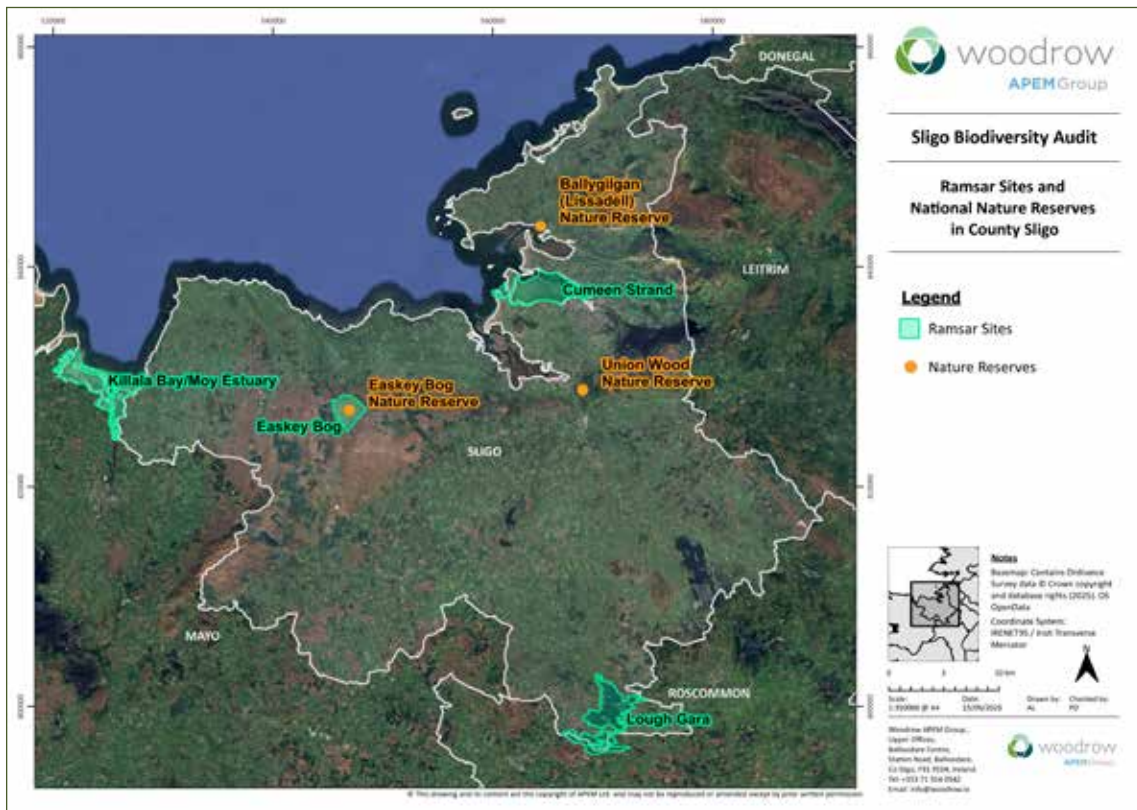
Special Areas of Conservation (SACs) in County Sligo



Special Protection Areas (SPAs) in County Sligo



Natural Heritage Areas and proposed Natural Heritage Areas in County Sligo



Nature Reserves and Ramsar Sites in County Sligo

## Protected species

County Sligo is home to a rich variety of protected flora and fauna. These species are protected under Irish law and the EU Habitats Directive and Birds Directive due to their conservation importance.

Protected Species in County Sligo include mammals (e.g. otter, grey and common seal, common dolphin, and bottle-nosed dolphin, all bat species), birds (e.g. merlin, common tern, corncrake, barnacle goose, hen harrier), fish (e.g. Atlantic salmon, brook, river and sea lamprey and arctic char), a common frog and smooth newt) and invertebrates (freshwater pearl mussel, narrow-mouthed whorl snail and marsh fritillary).

Protected plant species include the Killarney fern and marsh saxifrage.

**See Appendix Three for a full list of species recorded in Sligo given protection under the EU Habitats Directive.**



## Threats to Biodiversity in Sligo

In Ireland and globally, biodiversity is facing a range of pressures due to both natural and man-made factors. These threats and pressures include overgrazing, undergrazing, land abandonment, water, light and air pollution, invasive alien species, recreation, residential, agricultural and commercial development, land drainage, climate change, urban wastewater, river modifications and barriers, and the modification of coastal areas.

The five primary threats to biodiversity are invasive alien species, habitat loss and degradation, overexploitation of resources, pollution, and climate change.



### Habitat loss, fragmentation and degradation

Most of our wildlife habitats only now remain as fragments of the original areas, separated by settlements, roads and agriculture. This fragmentation has resulted in increasing pressure from disturbance through recreational activities, noise and light pollution, road development, urban expansion, invasive species, pollution from agriculture and industry, and the cumulative impacts of climate change. These pressures disrupt wildlife behaviour, reduce habitat quality and undermine the resilience of natural systems. Such activities reduce the ability of species to move from one area to another, across unsuitable habitat, creating 'islands' of wildlife habitat in our landscape. This places increasing importance on features such as hedgerows and river corridors for linking habitats.

Degraded sites support fewer species. Degradation can occur due to water pollution, soil erosion, drainage and changes in nutrient status, physical disturbance such as trampling and introduction of artificial lighting.

### Overexploitation of resources

Land management for agriculture, urban development, forestry and transport can cause species and habitat loss. Overgrazing, land drainage and development reduce the space and resources available for native plants and animals and can lead to local extinctions. This is particularly evident with bird species e.g. Yellowhammer, Corncrake and Lapwing. By making space for biodiversity and incorporating measures within land use planning to reduce the impact, we can allow populations to remain in an area. This

includes protecting existing natural habitats, maintaining ecological corridors, and promoting nature-based solutions.

### Invasive alien species (IAS)

These are animals, plants or pathogens that would not naturally occur in Ireland but have arrived through human activity. They have the ability to survive and thrive, and negatively impact native species by competing for resources (rhododendron forms a thick canopy which prevents the growth of native trees and saplings); disrupting ecosystems (deoxygenating lakes and rivers leads to algal blooms); transmitting harmful pathogens or diseases (squirrel pox virus is fatal to the native red squirrel); and can be harmful to humans (giant hogweed can cause severe skin burns and blistering). IAS often behave in unpredictable ways once introduced and incur significant costs in management and control.

### Pollution

Water, air and soil pollution are one of the major drivers of biodiversity loss, in particular on freshwater and marine habitats. The effects of pollution range from degrading a habitat by impacting water quality and reducing soil health, thereby ensuring it is no longer habitable e.g. noise and light pollution; or causing direct species mortality such as through release of chemicals into a habitat. Wildlife is further affected by light and noise pollution. Inappropriate and excessive use of artificial lighting has serious consequences for wildlife, including birds, insects and bats, while also impacting human health and wellbeing and incurring significant costs. Short- and long-term exposure to pollutants impacts human health and wellbeing. Elevated levels of nutrients – notably phosphorus

and nitrogen – are the principal drivers of declining water quality and biological health in aquatic environments. These nutrient loads are predominantly linked to human activities, including agriculture, wastewater emissions from domestic and urban sources, and forestry-related land use.<sup>10</sup>

### Climate change

Climate change disrupts ecosystem health by altering the distribution of plants, animals, viruses, and even human populations. As ecosystems degrade, the essential ecosystem services they provide – such as food, medicine, and livelihoods – are reduced, with direct consequences for human wellbeing. Rising sea and air temperatures are impacting marine, terrestrial and freshwater ecosystems globally. These changes are accompanied by more frequent and intense extreme weather events, including heavy rainfall, droughts, powerful storms and heatwaves, which contribute to forest and gorse fires, flash flooding and coastal erosion.



10 EPA's Water Quality in 2023, An Indicators Report





Issues facing biodiversity as outlined in the NBAP



# CASE STUDY 1 LIGHT POLLUTION

Light pollution is the inappropriate or excessive use of artificial light, which is visible as:

- Glare – intense, blinding light that reduces visibility.
- Skyglow – brightening of the night sky, especially over urban areas.
- Light trespass – light spilling into areas where it is not intended or needed.

This form of pollution has serious implications for biodiversity. Many species – including birds, insects and bats – depend on the natural cycles of day and night to navigate, feed and reproduce. Disruption of these rhythms can interfere with migration, feeding patterns, and breeding success.

Light pollution also affects human health and wellbeing. In Ireland, most public lighting remains on from dusk until dawn, leading to significant financial and environmental costs. Public lighting accounts for up to 35 per cent of a Local Authority's total energy use, costing over €56 million annually. Poorly designed lighting wastes energy, increases carbon emissions, and contributes to climate change.

The good news is that light pollution is the only form of pollution that can be reversed with the flick of a switch!

Sligo County Council is taking meaningful action to reduce light pollution. The County Development Plan 2024–2030 includes a dedicated policy on *Artificial Lighting at Night*, promoting responsible lighting practices in urban and rural areas.

To build capacity and share best practice, the Connacht-based Biodiversity Officer network hosted expert-led workshops for Local Authority staff and organisations involved in lighting infrastructure. Sligo County Council have developed partnerships with organisations such as Dark Sky Ireland, Sligo Sports Partnership, Leave No Trace, Bat Conservation Ireland and Acres CP. Together, we are raising awareness, promoting responsible lighting, and taking action to reduce light pollution and protect dark skies for wildlife and communities.



## CASE STUDY 2 SAND DUNES

Sand dunes are vital natural defences that defend coastlines from the impacts of climate change. They help to guard homes, infrastructure and farmland against storm surges, high waves and flooding. Dunes are also rich habitats, supporting rare and specialised species such as flowering plants, lizards, insects and ground-nesting birds. Many dune systems are recognised internationally as Special Areas of Conservation because of their exceptional biodiversity value.

The resilience of sand dunes depends on their vegetation – particularly species like marram grass. These plants have deep, extensive root systems that anchor and stabilise the sand. As wind carries sand inland, dune grasses slow its movement and trap it, gradually building up hills and ridges. This process is essential for the stability and growth of healthy dune systems.

Despite their resilience, sand dunes are highly sensitive to disturbance. Human activities that damage or remove marram grass accelerate erosion and weaken these delicate ecosystems and the species that depend on them. Key threats include:

- Trampling and heavy recreational use
- Sliding down dune faces
- Wild camping and campfires
- Team sport and training activities
- Uncontrolled dogs disturbing livestock and nesting birds

Sligo County Council is developing a dedicated management plan for the dunes at Killaspugbrone in Strandhill – a Council-owned Special Area of Conservation. These dunes have been especially impacted by storms, human activity, invasive conifer encroachment and a lack of management.

To address the challenges facing coastal communities and County Sligo’s dune systems, we have partnered with:

- Atlantic Technological University
- Climate Action Regional Offices
- University of Galway
- National Parks and Wildlife Service
- Leave No Trace Ireland
- Local businesses and community groups

Together, we are advancing research, education, best-practice and public awareness to promote the sustainable use of dune habitats and secure their long-term role in protecting biodiversity and coastal communities.



# CASE STUDY 3 INVASIVE ALIEN SPECIES

Invasive Alien Species (IAS) are animals, plants or pathogens that do not naturally occur in Ireland but have arrived due to human activity. They represent the second-greatest threat to global biodiversity, second only to habitat destruction.

**Invasive species can be introduced:**

- Intentionally, such as *Rhododendron ponticum* or Japanese knotweed, introduced as an ornamental plant for parks and gardens
- Accidentally, for example through imported plant material, contaminated equipment or ballast water on boats travelling between waterbodies.

Once established, these species are unpredictable, and can spread rapidly in Ireland’s mild climate, thriving without natural predators or environmental controls. Their impact is extensive:

- Outcompeting native species for food, space and resources
- Altering habitats such as clogging river systems and degrading water quality
- Spreading diseases and pathogens
- Predating on native species
- Posing risks to human health, both directly and indirectly

**The economic cost of invasive species to the island of Ireland was estimated at €261 million in 2013.**

Sligo County Council is actively tackling the threat of IAS through strategic partnerships with national and local organisations including:

- National Biodiversity Data Centre
- Invasive Species Ireland
- Inland Fisheries Ireland
- Local Authority Waters Programme – Sligo Rowing Club

Together these groups support research, promote biosecurity, and raise awareness of key measures such as the Check, Clean, Dry protocol as standard for water and land-based recreation.

To aid early detection and reporting, we have IAS swatches – visual tools to help individuals, clubs and organisations identify and report IAS. These swatches have since been adopted by other Local Authorities across Ireland.

Sligo County Council is committed to proactive measures—prioritising the early detection of IAS and advancing targeted strategies to contain and manage both emerging and established IAS across County Sligo.



## CASE STUDY 4

# MAKING SPACE FOR NATURE

Nature is resilient, but it needs space, food and shelter to survive. In a landscape increasingly shaped by human activity, biodiversity depends on green and blue corridors to connect fragmented habitats. These ecological networks include:

- Hedgerows
- Treelines
- Roadside verges
- Boreens and lanes
- Vegetated stone walls
- Railway embankments
- Rivers and ditches
- Greenways
- Wildlife friendly gardens
- Parks and community spaces with unowned areas

With less than 2per cent of native woodland remaining in Ireland, hedgerows are vital lifelines for the survival of species that evolved in a wooded landscape. They offer refuge, food, nesting and roosting sites for insects, birds, badgers, hedgehogs and bats. Hedgerows allow safe movement and protection from predators, especially for bats and small mammals.



Mature trees with cavities provide roosts for bats, nests for barn owls and habitat for insects. As natural sites disappear, many species have adapted to living alongside us in buildings. Swifts, barns owls and bats now rely on buildings using chimneys, crevices and roof spaces as substitutes for natural roosts. The loss or renovation of old stone structures has contributed to wildlife declines, while modern buildings often lack suitable alternatives.

We can make space for nature by integrating wildlife-friendly features like bat bricks and swift boxes into our built environment. This practical step is a goal of the Biodiversity Action Plan, which also aims to map and strengthen Sligo's green and blue networks. By connecting habitats across both rural and urban landscapes, we can support biodiversity, restore ecological resilience, and ensure that wildlife continues to thrive alongside us.





## Biodiversity awareness and education

### Biodiversity Recording and Citizen Science

Citizen Science is the collection of wildlife data by members of the public. It has multiple benefits from enabling long-term monitoring of species trends to inform decision-making, while raising awareness and increasing knowledge and understanding of wildlife, and contributing to global datasets. This research often focuses on monitoring biodiversity, invasive species and climate.



**No one will protect what they don't care about, and no one will care about what they have never experienced.**

Sir David Attenborough



## National Biodiversity Data Centre (NBDC)

The role of the NBDC is to support national initiatives to maintain and enhance biodiversity through the gathering, collation, management and validation of data for biodiversity conservation. The Centre monitors changes in species and habitats across terrestrial, freshwater and marine environments, rivers and wetlands, and invasive alien species. This information supports and informs national and local priorities and conservation projects.

The National Biodiversity Data Centre is Ireland's node to the Global Biodiversity Information Facility, an international network funded by the world's governments which aims to provide open access to biodiversity data. The NBDC coordinates and supports monitoring schemes, including those for butterflies, bumblebees, dragonflies, wild bees, ladybirds, shorelines, rare plants, hedgehogs, Irish stoat, otter and urban foxes.

## Biodiversity Awareness and Training

A key objective of the Biodiversity Action Plan is to raise awareness and appreciation of biodiversity, and to celebrate the diversity of the natural world through training and events. Events will be organised throughout the year for the wider community and interest groups, to promote the sharing of information and best practice on biodiversity conservation in County Sligo. Many events are organised through valued collaboration and partnerships with organisations and NGOs within the county. Events often focus specifically on themed weeks such as National Biodiversity Week, held annually in May, and National Heritage Week, held annually in August.



Promoting Check Clean Dry biosecurity campaign with Sligo Rowing Club and NBDC



Biodiversity Bioblitz at Mullaghmore

### National Biodiversity Week

National Biodiversity Week in Ireland is a ten-day celebration that takes place annually to coincide with the International Day of Biological Diversity on 22nd May. It focuses on connecting people with nature and highlighting the importance of biodiversity. National Biodiversity Week is organised nationally by the Irish Environmental Network (IEN) and funded by the National Parks and Wildlife Service. On a county level, the Biodiversity Action Plan supports a variety of events and activities at a range of habitats throughout the county including nature walks and talks, bat walks, dark sky events, aquatic wildlife identification and biodiversity bioblitzes to record flora and fauna.

### National Heritage Week

National Heritage Week is an annual, nationwide celebration that takes place over nine days from the third weekend in August. It is organised by The Heritage Council to build appreciation for Ireland’s built, natural and cultural heritage through a variety of community-led events and activities. In County Sligo the Biodiversity Action Plan supports the coordination and facilitation of wildlife events around the county. The week aims to foster a deeper connection to Ireland’s heritage and encourage its preservation for future generations.



LAWPRO Heritage Week event on the River Duff



Biodiversity Week Launch event: Birdsong with Seán Ronayne



Chapter 4

# Vision, Objectives and Actions



# Vision

We envision a County Sligo where we make space for nature to **survive** and **thrive** alongside us. Where we weave the **natural world** into every aspect of our landscapes, communities and daily lives and act collectively to **create** resilient wild places to **enhance** our **wellbeing**, adapt to climate change, and safeguard our natural heritage for the **future**.



The actions within the Plan have been divided into the following themes:



## Theme 1

# Knowing

**Objective 1:**  
Strengthen the knowledge base by identifying and filling knowledge gaps through survey and monitoring.

To ensure appropriate and focused action, we need accurate, reliable knowledge of species and habitat distribution, as well as quality and quantity. After all, what gets measured, gets managed. This enables us to prioritise those of national, regional and local importance to ensure effective actions and set short-, medium- and long-term goals to prevent further declines and support recovery.

Data collection and management requires building on the existing close collaboration and partnerships with the National Biodiversity Data Centre, Sligo County Council GIS Officer, Sligo-based wildlife organisations and individuals and National Parks and Wildlife Service.

### Key objectives:

- 1.1 Gather information on species and habitats of conservation concern in County Sligo.
- 1.2 Map species and habitats of conservation concern to support Sligo County Council in decision making.
- 1.3 Develop a county-wide ecological network of sites to protect wildlife corridors.





<b>Theme 1: KNOWING</b>	
<b>Objective 1: Strengthen the knowledge base by identifying and filling gaps through survey and monitoring</b>	
<b>Action</b>	
<b>Objective 1.1 Gather information on species and habitats of conservation concern in County Sligo</b>	
<b>K.1</b>	Review and integrate existing survey data. Commission new studies and surveys to fill knowledge gap on key species, habitats and protected areas.
<b>K.2</b>	Ensure relevant biodiversity survey data is shared with the National Biodiversity Data Centre and National Parks & Wildlife Service.
<b>K.3</b>	Explore ways to incorporate ecological data from historical surveys, and other relevant documents, to create a consolidated biodiversity database to support SCC decision-making.
<b>K.4</b>	Implement and support biodiversity training and participation in citizen science initiatives to increase the evidence base and contribute to protecting biodiversity.
<b>Objective 1.2 Map species and habitats of conservation concern to support Sligo County Council in decision-making</b>	
<b>K.5</b>	Embed key survey recommendations into the planning, design and delivery of relevant SCC projects and operational functions.
<b>K.6</b>	Identify and map County Biodiversity Areas according to Heritage Council guidelines, to support existing, and future County Development Plan policies and objectives. <sup>12</sup>
<b>Objective 1.3 Develop a county-wide ecological network of sites to protect wildlife corridors</b>	
<b>K.7</b>	Develop a county-wide ecological network map to identify and protect wildlife corridors.
<b>K.8</b>	Seek opportunities to enhance connectivity for wildlife across the ecological network through partnerships, land-use planning and community engagement.
<b>K.9</b>	Update existing county hedgerow survey for the purpose of developing hedgerow management guidelines for the county.

<sup>12</sup> County Biodiversity Areas Sites will exist alongside County Biodiversity Sites, designated within the Sligo County Development Plan

## Theme 2

# Acting

**Objective 2:  
Conserve and restore  
biodiversity and support  
ecosystem services through  
direct actions led by Sligo  
County Council.**

These efforts will focus on projects and practices within Sligo County Council owned and managed land to support habitat restoration, protect native species and develop sustainable land management practices.

### Key objectives:

- 2.1 Protect and enhance vulnerable sand dune habitats.
- 2.2 Conserve protected and priority species and habitats.
- 2.3 Continue to implement conservation measures and demonstrate best practice on lands in Council ownership.
- 2.4 Identify and implement pollinator-friendly Initiatives.
- 2.5 Produce an Invasive Alien Species (IAS) Action Plan to manage and control key IAS in County Sligo.





<b>Theme 2: ACTING</b>	
<b>Objective 2: Conserve and restore biodiversity and support ecosystem services through direct actions led by Sligo County Council</b>	
<b>Action</b>	
<b>Objective 2.1 Protect and enhance vulnerable sand dune habitats</b>	
<b>A.10</b>	Develop and implement a management plan for Killaspugbrone dunes, to support the Conservation Objectives of the Special Area of Conservation within SCC ownership. <sup>13</sup>
<b>A.11</b>	Share best practice and promote coastal resilience balancing sustainable tourism, climate adaptation and the protection of dune habitats.
<b>Objective 2.2 Conserve protected and priority species and habitats</b>	
<b>A.12</b>	Develop best-practice management guidelines for key habitats and species for use by relevant stakeholders.
<b>A.13</b>	Implement the Cleveragh Demesne Conservation Management Plan (within Lough Gill SAC) to support the conservation objectives for the site. <sup>13</sup>
<b>Objective 2.3 Continue to implement conservation measures and demonstrate best practice on lands in Council ownership</b>	
<b>A.14</b>	Undertake an ecological audit of SCC-owned lands to identify enhancement opportunities.
<b>A.15</b>	Implement pilot projects incorporating best practice for nature-based solutions, habitat creation, tree planting, pollinator-friendly habitat and hedgerow management.
<b>A.16</b>	Identify opportunities and incorporate suitable habitats for bats, swifts and raptors within buildings and structures.
<b>A.17</b>	Promote the use of native trees, hedgerows and plants within SCC communities and organisations.
<b>A.18</b>	Provide training to SCC to support the reduced use of chemical pesticides by 50 per cent by 2030.
<b>Objective 2.4 Identify and implement pollinator-friendly Initiatives</b>	
<b>A.19</b>	Map areas of value for pollinators, prioritising Council-owned land.
<b>A.20</b>	Implement actions to support pollinators as set out by the All-Ireland Pollinator Plan Council Partner agreement.
<b>A.21</b>	Upskill communities and organisations in implementing actions for pollinators through awareness, training and participation in citizen science.
<b>Objective 2.5 Produce an Invasive Alien Species (IAS) Action Plan to manage and control key IAS in County Sligo</b>	
<b>A.22</b>	Produce an IAS Plan for the county with monitoring protocols, training, awareness raising and development of best practice for biosecurity, control and removal.
<b>A.23</b>	Develop an IAS Pathway Action Plan for the Unshin River SAC and its tributaries. <sup>13</sup>

<sup>13</sup> All plans and projects located within or adjacent to Natura 2000 sites will be screened for Appropriate Assessment to evaluate potential impacts on site integrity.

## Theme 3

# Promoting

**Objective 3:**  
Increase awareness and appreciation of biodiversity through training and education.

These efforts will focus on fostering a deeper understanding of the importance of biodiversity, its role in healthy ecosystems, and the steps agencies, local communities and individuals can take to protect and enhance local wildlife and habitats. Engagement will be facilitated in collaboration with partners including the Sligo PPN.

### Key objectives:

- 3.1 Increase public engagement and awareness of biodiversity.
- 3.2 Support biodiversity education and research in schools, universities and through community programmes.





**Theme 3: PROMOTING**

**Objective 3: Increase awareness and appreciation of biodiversity through training and education**

**Action**

**Objective 3.1 Increase public engagement and awareness of biodiversity**

- P.24** Increase public engagement and awareness of biodiversity through National Biodiversity Week and National Heritage Week and relevant global and national environmental days.
- P.25** Promote biodiversity events, campaigns and activities through SCC website, social media channels, newspaper and radio campaigns.
- P.26** Support educational initiatives and raise awareness through collaborations with educational institutions, NGOs and state agencies.
- P.27** Establish a Sligo Biodiversity Club to promote biodiversity engagement, action, inclusivity, and shared expertise.

**Objective 3.2 Support biodiversity education and research in schools, universities and through community programmes**

- P.28** Develop partnerships with education providers to increase expertise within the county through 'train the trainer' programmes.
- P.29** Promote the work of Sligo Libraries and collaborate to develop biodiversity training, education and awareness projects.



## Theme 4

# Practising

**Objective 4:**  
Mainstream biodiversity into decision-making through best practice and policy within Sligo County Council.

Sligo County Council seeks to identify and take opportunities to integrate and mainstream biodiversity considerations into all relevant service areas and functions. The Biodiversity Action Plan seeks to raise awareness among elected members, senior management and staff to commit to biodiversity initiatives in the county following and demonstrating best practice.

As well as direct loss of species and habitats, development has the potential to impact negatively on biodiversity through fragmenting habitats and wildlife corridors, isolating populations, and degrading existing habitats through light pollution and increasing disturbance. Theme 4 seeks to embed best practice within the planning and development process in order to safeguard biodiversity and work towards biodiversity net gain.

### Key objectives:

- 4.1 Assist in achieving biodiversity objectives within Sligo County Council and implementing national plans and policies.
- 4.2 Integrate biodiversity best practice in planning and development.
- 4.3 Embed best-practice biodiversity management across all sections of Sligo County Council.
- 4.4 Promote recreational activities that protect and preserve biodiversity in County Sligo.





<b>Theme 4: PRACTISING</b>	
<b>Objective 4: Mainstream biodiversity into decision-making through best practice and policy within Sligo County Council</b>	
<b>Action</b>	
<b>Objective 4.1 Assist in achieving biodiversity objectives within SCC and implementing national plans and policies</b>	
<b>Pr.30</b>	Embed early consideration of biodiversity within SCC operations.
<b>Pr.31</b>	Support the implementation of biodiversity-related objectives and policies included within the County Development Plan, Local Area Plans, County Sligo Heritage Strategy, the Climate Action Plan and the National Planning Framework through training and upskilling of relevant areas.
<b>Pr.32</b>	Support the implementation of national and regional strategies and plans, e.g. 4th National Biodiversity Action Plan; Habitats Directive; Water Framework Directive; the forthcoming Nature Restoration Plan; Sustainable Development Goals and relevant policies and legislation.
<b>Objective 4.2 Integrate biodiversity best practice in planning and development</b>	
<b>Pr.33</b>	Support the integration of best-practice measures within the planning process through guidelines, training, data management and mapping.
<b>Pr.34</b>	Promote the use of nature-based solutions for new developments and other projects.
<b>Objective 4.3 Embed best-practice biodiversity management across all sections of SCC</b>	
<b>Pr.35</b>	Incorporate best practice for biodiversity across all departments, incorporating existing guidance and developing new methodologies and training where necessary.
<b>Pr.36</b>	Support biodiversity assessment at the earliest stages through the development of biodiversity mapping and checklists for plans and projects.
<b>Objective 4.4 Promote recreational activities that protect and preserve biodiversity in County Sligo</b>	
<b>Pr.37</b>	Develop and where possible implement best-practice guidance for recreational activities that protect and preserve biodiversity in County Sligo with a focus on sensitive habitats including sand dunes.
<b>Pr.38</b>	Support initiatives to assess, monitor and raise awareness of the ecological impacts of recreation, focusing on invasive alien species (IAS), nature-based solutions and dark-sky-friendly practices.

## Theme 5

# Partnerships

**Objective 5:**  
**Protect and restore biodiversity through partnerships with State Agencies, organisations and community groups.**

Sligo County Council will continue to build a network of strong partnerships with State Agencies, educational institutions, environmental organisations and local community groups. Through collaborative efforts, we will implement conservation strategies across sectors and habitats and promote sustainable practices that benefit local ecosystems and wildlife.

### Key objectives:

- 5.1 Enhance collaboration and knowledge sharing at a county level.
- 5.2 Restore and enhance rivers and stream habitats to support biodiversity and fish passage.
- 5.3 Support biodiversity-friendly farming practices on agricultural land.
- 5.4 Support the delivery of biodiversity programmes in partnership with National Parks & Wildlife Service and NGOs.
- 5.5 Support community-led conservation





<b>Theme 5: PARTNERSHIPS</b>	
<b>Objective 5: Protect and restore biodiversity through partnerships with State Agencies, organisations and community groups</b>	
<b>Action</b>	
<b>Objective 5.1 Enhance collaboration and knowledge sharing at a county level</b>	
<b>Par.39</b>	Facilitate the County Sligo Biodiversity Working Group to enable dissemination, collaboration, and development of best practice.
<b>Par.40</b>	Implement and review the County Sligo Biodiversity Action Plan 2025–2030 with the support of Biodiversity Working Group.
<b>Objective 5.2 Restore and enhance rivers and stream habitats to support biodiversity and fish passage</b>	
<b>Par.41</b>	Identify opportunities to restore the natural geomorphology of rivers and streams. Support the work of IFI National Barriers Program and local habitat development projects.
<b>Par.42</b>	Support the work of SCC that is aligned with the Water Framework Directive by supporting initiatives to protect high (Blue Dot) and good status water bodies.
<b>Objective 5.3 Support biodiversity-friendly farming practices on agricultural land</b>	
<b>Par.43</b>	Support partners in delivering conservation management for agricultural land, commonage and high nature value areas through projects.
<b>Par.44</b>	Develop partnerships to support biodiversity-friendly practices and knowledge transfer between landowners, organisations and conservation programmes (e.g. hedgerow management; riparian zones, nest boxes and bat roosts).
<b>Objective 5.4 Support the delivery of biodiversity programmes in partnership with National Parks &amp; Wildlife Service and NGOs</b>	
<b>Par.45</b>	Support the implementation of actions from NPWS and DAFM programmes relevant to County Sligo, e.g. Corncrake LIFE, Curlew EIP, Breeding Water EIP, Life on Machair, WaterLands, Wild Atlantic Nature, NPWS Farm Plan schemes.
<b>Par.46</b>	Develop partnerships with State Agencies, landowners and organisations to support community actions for peatland management and restoration.
<b>Objective 5.5 Support community-led conservation</b>	
<b>Par.47</b>	Support community groups in developing Local Biodiversity Action Plans (LBAPs) through the provision of training, and by highlighting funding opportunities.
<b>Par.48</b>	Develop partnerships with NGOs, faith communities, clubs, organisations and community groups to support community-led biodiversity projects.
<b>Par.49</b>	Establish and progress partnerships to integrate biodiversity conservation initiatives across sectors, e.g. Community Foundation Ireland (CFI), Hare’s Corner, Sligo Dioceses, HSE, GAA Green clubs.
<b>Par.50</b>	Provide training to community and voluntary groups to support reduction of the use of chemical pesticides, by 50 per cent by 2030.
<b>Objective 5.6 Promote the protection and preservation of marine and coastal ecosystems</b>	
<b>Par.51</b>	Support the conservation of marine habitats and ecosystems in line with national plans and policies.
<b>Par.52</b>	Promote the work of State Agencies and organisations; raise awareness of national campaigns, policies and plans.

## Implementation and monitoring

The implementation of the Biodiversity Action Plan will be coordinated and overseen by the Sligo Biodiversity Working Group with the support of the Sligo Biodiversity Officer. The Plan will be funded by Sligo County Council in partnership with The Heritage Council and the Department of Housing, Local Government and Heritage.

The Heritage Council *Local Authority Biodiversity Action Plan Fund* is designed to support the development and implementation of the Biodiversity Action Plan.

The *Local Biodiversity Action Fund* is administered by the National Parks and Wildlife Service at the Department of Housing, Local Government and Heritage. It provides funding to support the delivery of the National Biodiversity Action Plan such as invasive species control, habitat restoration, species and habitat surveys and biodiversity awareness and training.

Efforts will be made to identify and secure funding through other relevant grant schemes as they become available.



County Sligo Biodiversity Working Group

## County Sligo Biodiversity Working Group

The County Sligo Biodiversity Working Group was established in May 2024. This non-statutory advisory group is a partnership between local government, state agencies, farming organisations, education and training agencies and biodiversity organisations to support the development and implementation of the Sligo Biodiversity Action Plan 2025–2030.



Heritage Council Funding Report 2024

**Table 5: List of organisations represented on the County Sligo Biodiversity Working Group:**

Organisation
Atlantic Technical University
Birdwatch Ireland (Heritage Forum Representative)
Coillte
Elected member, Sligo County Council
Inland Fisheries Ireland
Irish Farmers Association
Local Authority Waters Programme (LAWPRO)
National Parks and Wildlife Service
PPN representative – Natural Heritage expert
Sligo County Council – Biodiversity Officer
Sligo County Council – Climate Team
Sligo County Council – Planning Department
Sligo County Council – Senior Heritage Office
Sligo County Council – Parks Department
Teagasc (Heritage Forum Representative)

Partnership working is key to ensuring successful implementation of the Biodiversity Action Plan actions. In addition, monitoring progress and measuring success is a vital part of the biodiversity process and will be achieved by measuring both indicators and targets (see Appendix seven for full table). The Sligo BAP proposes actions over an initial five-year period, which will be reviewed at the end of this period in consultation with all partners. Targets set for the Plan follow the SMART methodology (specific, measurable, achievable, relevant, and time-bound). Additional targets may be developed as implementation is progressed. Local Authorities are required to report annually on progress made on actions within the 4th NBAP deemed relevant for their work (Appendix 3).

Progress on the Plan will be monitored through a quarterly reporting system, facilitating strategic planning and budgeting, and timely evaluation of actions and outcomes.



Heritage Week walk along River Duff with LAWPRO



Biodiversity & Water Quality workshop with Ballisodare Fishing Club



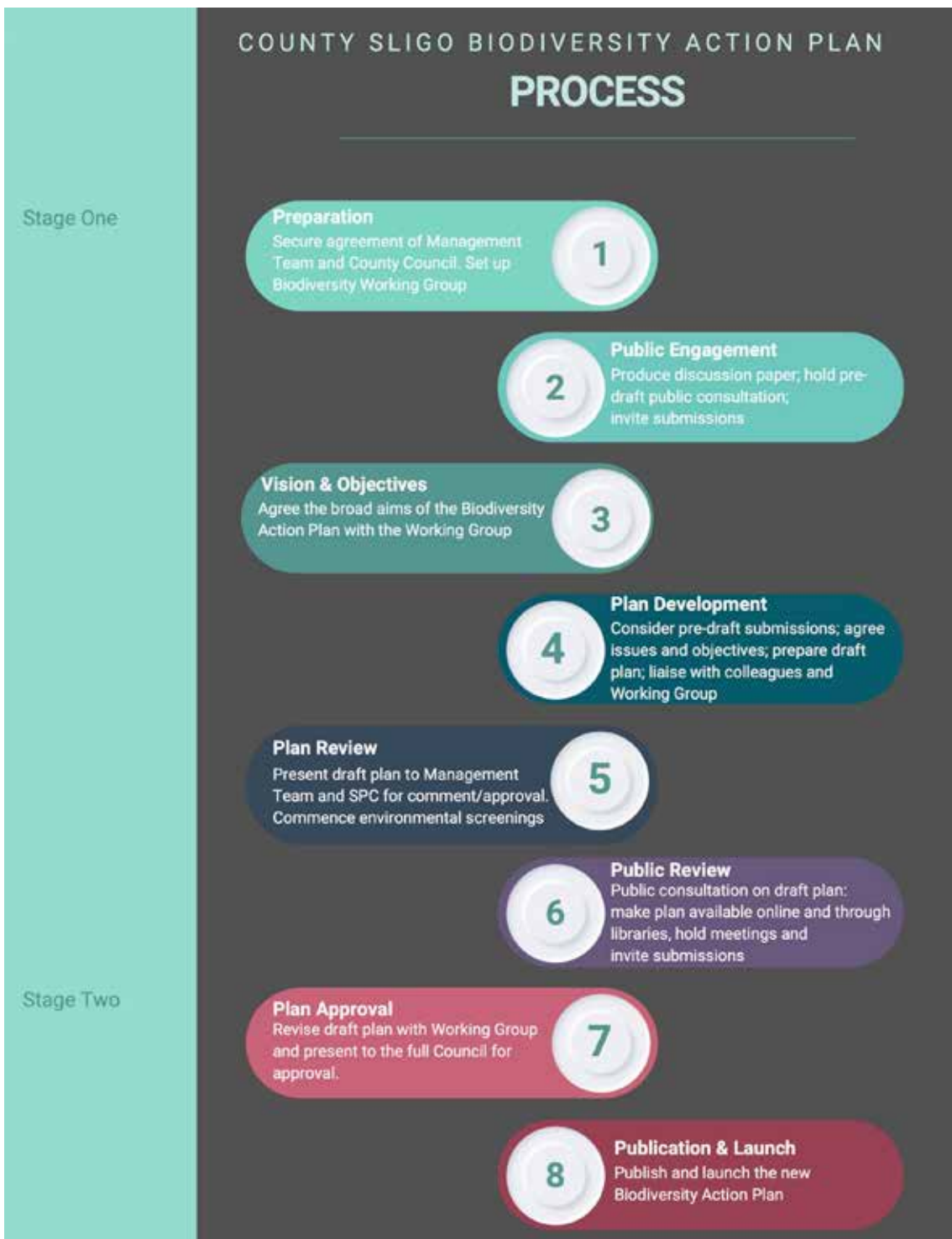
# Appendices



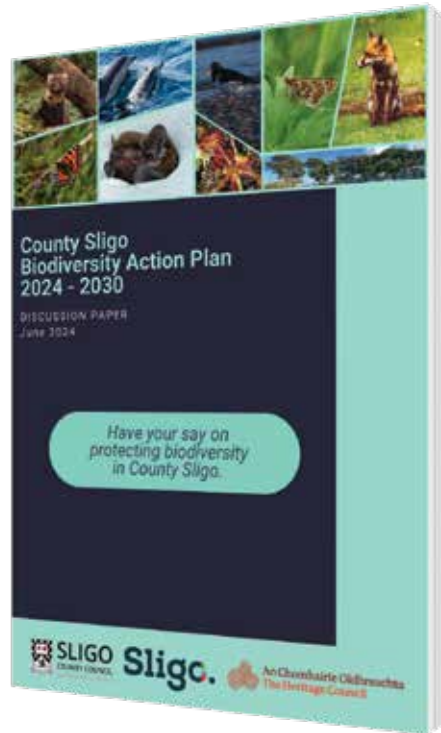
## Appendix One: Sligo Biodiversity Action Plan 2025-2030 Consultation Process

The County Sligo Biodiversity Action Plan was prepared following The Heritage Council’s Local Authority Biodiversity Action Plan Guidelines 2023.

Table 6: Key steps in drafting the BAP process



During the pre-draft and draft public consultation period, public events were held at Sligo libraries and online, where the general public were invited to give their views on the challenges facing biodiversity in the county and highlight the key priorities. A discussion paper was prepared to outline the threats to biodiversity in County Sligo.



Discussion Paper for pre-draft public consultation



Public consultation at Ballymote Library



Public consultation at Sligo Library

## Stage 1: Pre-Draft Plan

Plan preparation
Presented to Sligo Heritage Forum (Sept 2023)
Presented to Strategic Policy Committee 3 (Planning, Community and Economic Development) (Nov 2023)
Presented to Sligo County Council (Nov 2023)
Review of previous Biodiversity Action Plan 2010–2015 (2023/2024)
Review of biodiversity datasets such as habitat and species surveys (from Sept 2024)
Presented to Sligo Heritage Forum (April 2024)
Presented to Strategic Policy Committee 3 (Planning, Community and Economic Development) (May 2024)
Established Biodiversity Working Group (May 2024)
Discussion Paper prepared (May 2024)
Public engagement
Presented to Sligo Municipal Districts: Ballymote-Tubbercurry · Borough District of Sligo · Sligo-Drumcliff (May 2024)
Public consultation: In-person Presentation and information sessions were held at three Sligo Libraries.
One online session held. Online submissions invited.
Meeting with Biodiversity Working Group to establish priorities (July 2024)
Plan development
Reviewed submissions; agreed themes and objectives and actions with BWG (Sept 2024–Dec 2024)
Presented to Sligo Heritage Forum (Feb 2025)
Agreed vision with Biodiversity Working Group (March 2025)
Presented to Sligo Heritage Forum and Biodiversity Working Group (May 2025)
AA and SEA screening of actions (May 2025)
Plan review
Presented to Strategic Policy Committee 4 (Placemaking) (June 2025)
Presented to Management Team and Sligo County Council (July 2025)

## Stage 2: Draft Plan

Public review
In-person presentation and information sessions held at three Sligo Libraries.
One online session took place. Online submissions invited.
Reviewed submissions and incorporate amendments (Aug 2025)
Plan approval
Revised draft plan with Biodiversity Working Group (Sept 2025)
Presented to Biodiversity Working Group and Heritage Forum (Sept 2025)
Presented to Strategic Policy Committee 4 (Placemaking) (Sept 2025)
Presented to Management Team and Sligo County Council (Sept–Oct 2025)
Publication
Published and launched the County Sligo Biodiversity Action Plan (Nov/Dec 2025)

## Appendix Two: NBAP Actions Relevant for Local Authorities

Target	Number	Action
<b>Objective 1: Adopt a Whole-of-Government, Whole-of-Society Approach to Biodiversity</b>		
By 2024, cross-departmental capacity and capability required to achieve biodiversity targets reviewed.	1B3	All relevant Departments and Government Bodies will explore the biodiversity expertise and training requirements across government to ensure the appropriate expertise is available to implement this Plan.
By the end of 2026, all Local Authorities will have a Biodiversity Action Plan in place.	1C6	All Local Authorities will have a Biodiversity Action Plan adopted by the end of 2026 which is subject to regular review and revision processes in line with relevant guideline standards.
By 2026, Ireland has mainstreamed the engagement of the public and stakeholders in biodiversity-related environmental policy implementation and the conservation of biodiversity.	1D12	DAFM, DHLGH and other relevant stakeholders will build and enhance engagement with terrestrial, freshwater, coastal and marine stakeholders and the wider community to promote the benefits of biodiversity and ecosystem services, and the responsible, sustainable use of resources.
<b>Objective 2: Meet Urgent Conservation and Restoration Needs</b>		
By 2030, in line with the EU Biodiversity Strategy, the use and risk of pesticides is reduced by 50 per cent by 2030.	2B6	DAFM, Local Authorities and other relevant stakeholders will implement existing and new measures to reduce chemical pesticide use, in line with the EU regulatory framework for pesticides.
By 2027, a diversified national and local native plant stock is available for tree and landscape planting schemes.	2B12	Local Authorities, Transport Infrastructure Ireland (TII), NPWS and OPW will encourage a more reliable supply and use native species, varieties, and landraces from appropriate native sources in their landscaping works, where possible.

By 2030, in line with the EU Biodiversity Strategy, the decline of pollinators is halted and reversed.	2B13	NBDC with partners in Northern Ireland and other actors listed in the All-Ireland Pollinator Plan 2021–2025 will implement appropriate actions listed in the Plan and support farmland pollinator conservation activities post-2025.
By 2025, nature-based solutions are contributing to national climate ambitions.	2C7	To support the National Climate Objective of achieving a climate resilient, biodiversity-rich, environmentally sustainable and climate-neutral economy, DECC, DAFM, DHLGH, Local Authorities, and Climate Action Regional Offices will promote terrestrial nature-based solutions in national, regional and local rural and urban programmes.
By 2027, protection and restoration measures detailed in Ireland’s third RBMP are implemented to ensure that our natural waters are sustainably managed; that freshwater resources are protected so that there is no further deterioration; and where required, Ireland’s rivers, lakes and coastal water bodies are restored to at least good ecological status.	2D1	Relevant bodies such as DHLGH, DAFM, Local Authorities and partners will deliver a RBMP to better protect, enhance and monitor the ecological status of water during the third cycle of the RBMP.
By 2027, optimised benefits in Flood Risk Management planning and drainage schemes are in place.	2D5	OPW will work with relevant authorities to ensure that Flood Risk Management planning and associated Strategic Environmental Assessment (SEA), EIA and Appropriate Assessment (AA), minimises loss of biodiversity and ecosystem services through policies to promote more catchment-wide and non-structural Flood Risk Management measures.
By 2030, 300km of rivers are restored to a free-flowing state.	2D21	DHLGH, Inland Fisheries Ireland, OPW and other relevant bodies will explore the restoration of 300km of rivers to a free-flowing state.

By 2030, IAS are controlled, managed, and where possible, eradicated.	2H2	NPWS, together with other relevant Departments and public bodies, will develop national plans to implement aspects of the EU IAS Regulation and relevant national legislation, as well as work on cooperative plans where there is an all-island or North-South aspect for IAS impacts.
By the end of 2027, the biocultural value of green and blue urban environments (GBUE) in all local authority areas is enhanced.	3A3	Local Authorities will work to identify and respond to opportunities for enhancing the biocultural value of GBUE through appropriate design strategies, the use of visual and performing arts, and enhancing equity of access and promoting use of GBUE by community groups, and integrating cultural services in local biodiversity action plans.
By 2030, shared responsibility for the conservation of biodiversity acted on.	3C1	All Public Authorities and private sector bodies move towards no net loss of biodiversity through strategies, planning, mitigation measures, appropriate offsetting and/or investment in Blue-Green infrastructure.
By 2030, the objectives of the NBAP, where relevant, are aligned with and integrated, within the statutory land use plans of the Regional Assemblies and Planning Authorities and within LBAPs.	3C3	All Regional Spatial and Economic Strategies, City and County Development Plans, Local Area Plans and LBAPs shall be aligned with the objectives of the NBAP, where relevant.
By 2030, biodiversity and related data is widely accessible.	4B7	NPWS and other relevant bodies will ensure that biodiversity and related data adheres to national open data policy.
<b>Objective 5: Strengthen Ireland’s Contribution to International Biodiversity Initiatives</b>		
By 2025, the All-Island Pollinator Plan (AIPP) is supported.	5A5	Relevant bodies will continue to support and utilise the All-Ireland Pollinator Plan.

## Appendix Three: Habitats Directive Species Recorded in Sligo

Common name	Scientific name	Annex II (a&b); IV (a&b); V (a&b)
(Atlantic whiteside) white-sided dolphin *	<i>Lagenorhynchus acutus</i>	Annex IV(a)
(Great) killer whale (Orca) *	<i>Orcinus orca</i>	Annex IV(a)
Allis shad	<i>Alosa alosa</i>	Annex II(a) & V
Atlantic salmon	<i>Salmo salar</i>	Annex II(a) only in freshwater & V
Bottle-nosed (bottlenose) dolphin	<i>Tursiops truncatus</i>	Annex II(a) & IV(a)
Brook lamprey	<i>Lampetra planeri</i>	Annex II(a)
Brown long-eared bat	<i>Plecotus auritus</i>	Annex IV(a)
Common (harbour) porpoise	<i>Phocoena phocoena</i>	Annex II(a) & IV(a)
Common dolphin	<i>Delphinus delphis</i>	Annex IV(a)
Common frog	<i>Rana temporaria</i>	Annex V
Common pipistrelle	<i>Pipistrellus sp.</i>	Annex IV(a)
Common seal	<i>Phoca vitulina</i>	Annex II(a) & V
Cuvier's beaked (goosebeak) whale *	<i>Ziphius cavirostris</i>	Annex IV(a)
Daubenton's bat	<i>Myotis daubentoni</i>	Annex IV(a)
Eurasian otter	<i>Lutra lutra</i>	Annex II(a) & IV(a)
False killer whale *	<i>Pseudorca crassidens</i>	Annex IV(a)
Freshwater pearl mussel	<i>Margaritifera margaritifera</i>	Annex II(a) & V
Gervais' (Gulf-Stream) beaked whale *	<i>Mesoplodon europaeus</i>	Annex IV(a)
Geyer's whorl-snail	<i>Vertigo geyeri</i>	Annex II(a)
Grey seal	<i>Halichoerus grypus</i>	Annex II(a) & V
Humpback whale *	<i>Megaptera novaeangliae</i>	Annex IV(a)
Irish hare (mountain hare Irish subspecies)	<i>Lepus timidus hibernicus</i>	Annex V
Killarney fern	<i>Trichomanes speciosum</i>	Annex II(b)
Leathery turtle *	<i>Dermodochelys coriacea</i>	Annex IV(a)

Leisler's bat	<i>Nyctalus leisleri</i>	Annex IV(a)
Loggerhead turtle *	<i>Caretta caretta</i>	Annex II(a) priority species & IV(a)
Long-finned (longfin) pilot whale *	<i>Globicephala melaena (melas)</i>	Annex IV(a)
Marsh fritillary	<i>Euphydryas (Eurodryas) aurinia</i>	Annex II(a)
Minke (piked) whale	<i>Balaenoptera acutorostrata</i>	Annex IV(a)
Narrow-mouthed whorl snail	<i>Vertigo angustior</i>	Annex II(a)
Natterer's bat	<i>Myotis nattereri</i>	Annex IV(a)
Petalwort	<i>Petalophyllum ralfsii</i>	Annex II(b)
Pine marten	<i>Martes martes</i>	Annex V
Risso's (grey) dolphin	<i>Grampus griseus</i>	Annex IV(a)
River lamprey	<i>Lampetra fluviatilis</i>	Annex II(a) & V
Sea lamprey	<i>Petromyzon marinus</i>	Annex II(a)
Soprano pipistrelle	<i>Pipistrellus sp.</i>	Annex IV(a)
Sowerby's (North Sea) beaked whale *	<i>Mesoplodon bidens</i>	Annex IV(a)
Sperm whale *	<i>Physeter macrocephalus (catodon)</i>	Annex IV(a)
	<i>Sphagnum spp.</i>	Annex V
Stag's-horn clubmoss	<i>Lycopodium clavatum</i>	Annex V
Striped dolphin (Euphrosine)*	<i>Stenella coeruleoalba</i>	Annex IV(a)
Sturgeon *	<i>Acipenser sturio</i>	Annex II(a) priority species & IV(a)
Varnished hook-moss (shining sicklemoss)	<i>Hamatocaulis vernicosus (Drepanocladus vernicosus)</i>	Annex II(b)
Whiskered bat	<i>Myotis mystacinus</i>	Annex IV(a)
White-clawed crayfish	<i>Austropotamobius pallipes</i>	Annex II(a) & V

\* Rare / incidental records

**Annex IIa** Animal species of community interest whose conservation requires the designation of SACs  
**Annex IIb** Plant species of community interest whose conservation requires the designation of SACs  
**Annex IVa** Animal species of community interest in need of strict protection  
**Annex IVb** Plant species of community interest in need of strict protection  
**Annex Va** Animal species of community interest whose taking in the wild and exploitation may be subject to management measures  
**Annex Vb** Plant species of community interest whose taking in the wild and exploitation may be subject to management measures

## Appendix Four: Designated Sites in Sligo

Site name	SAC	SPA	Ramsar	NHA
Ardboline and Horse Islands, Yellow Strand and Ballintemple				■
Ardboline Island & Horse Island		■		■
Aughris Head		■		■
Ballisodare Bay	■	■		■
Ballintemple		■		
Ballygilgan		■		
Ben Bulbin, Gleniff & Glenade Complex	■			■
Bricklieve Mountains & Keishcorran	■			■
Bunduff Lough & Machair/Trawalua/Mullaghmore	■			■
Carrane Hill Bog				■
Cloongoonagh Bog				■
Colgagh Lough				■
Crockauns/Keelogyboy Bogs				■
Cumeen Strand/Drumcliff Bay (Sligo Bay)	■	■	■	■
Drumaskibbole				■
Dunneill River				■
Easkey River				■
Feenagh and Bunnamuck Loughs				■
Fin and Riskeen Loughs				■
Flughany Bog	■			■
Glencar Cliffs				■
Greenan Fen				■

Inishmurray		■		■
Killala Bay/Moy Estuary	■	■	■	■
Knockalongy & Knockachree Cliffs	■			■
Knockmullin Fen				■
Knocknarea Mountain and Glen				■
Lough Arrow	■	■		■
Lough Dargan				■
Lough Gara		■	■	■
Lough Gill	■			■
Lough Hoe Bog	■			■
Lough Nabrickeagh Bog	■			■
Meharth Lough				■
Moylough Turlough				■
Ox Mountains Bogs *Easkey Bog	■		■*	■
Quarryfield West Turlough				■
River Moy	■			
Slieveward Bog		■		■
Sligo/Leitrim Uplands				
Streedagh Point Dunes	■			■
Templehouse & Cloonacleigha Loughs	■			■
Turloughmore (Sligo)	■			■
Union Wood	■			■
Unshin River	■			■

## Appendix Five: County Biodiversity Sites

Site name	Grid reference	General description
Achonry Bog	G574 154	Bog
Ardloy and Aghalenane Loughs	G 730 172	Lake and fen
Ballinacarrow (Bhoovergah) Fen	G 629 200	Fen
Ballinacarrow Fen	G 643 218	
Ballyconnell 1	G 591 458	Fen
Bartragh Marsh	G 276 289	Marsh
Boathole Lough and Lough Corran	G 698 205	Lake and raised bog
Bunnafedia A	G 554 319	Fen
Carrowmore Lough	G 673 339	Lake with reedbeds and transition mire
Carrownabanny Lough	G 557 234	Lake with reedbeds and transition mire
Cartronhugh	G 740 282	Species-rich wet grassland
Cleavry Lough	G 745 147	Lake with reedbeds, transition mire and fen
Cloughfin and Blind Lough	G 710 241	Lake with reedswamp
Cloonerco Bog	G 719 524	Cut-away lowland blanket bog
Collooney Marsh	G 682 254	Marsh
Coolbeg Bog	G 668 430	Poor fen and flush
Cuilleencroobagh Lough	G 726 177	Transition mire and quaking bog
Curragh Marsh	G 676 309	Lake with reedbeds
Curry West	G 461 518	Cut-over bog
Curryfule Raised Bog 1	G 499 491	Raised bog
Curryfule Raised Bog 2	G 501 408	Raised bog

Drangan Bog	G 637 477	Transition mire with wet woodland/scrub
Drumcliff Bog	G 685 419	Wet grassland with poor fen and flush
Drummaskibbole Reedbeds	G 683 312	Non-calcareous springs and reedbeds
Folleesh Lough	G 602 292	Lake with reedbed and wet woodland/scrub
Grogagh Disused Quarry	G 678 480	Former sand and gravel quarry with ponds
Kinkillew	G 748 229	Poor fen and woodland
Kintogher fen and flush	G 681 408	Spring and flush
Knockroe Lough	G 709 236	Lake with extensive reedbeds
Lackagh Fen	G 697 220	Fen
Lisnarawer Fen	G 579 313	Fen
Lisnarawer Fen North	G 583 320	Fen
Lough Naskea	G 355 903	Lake with reedbeds and fen
Loughmeenaghan	G 741 160	Lake with reedbeds, fen and marsh
Lugnagall Flush	G 725 417	Calcareous/petrifying springs
Oghambaun Turlough	G 537 108	Turlough
Punchbowl Lough	G 674 313	Lake with swamp, reedbeds and transition mire
Springfield Marsh and Reedbed	G 685 401	Marsh and reedbed
Strandhill	G 622 357	Reedbed with willow scrub and wet woodland
Swallow Hole near Riverstown	G 739 173	Turlough
Toberscanavan Lough	G 680 323	Lakes with reedbeds, fen and transition mire
Tobertelly Heath	G 534 153	Wet heath
Tunnagh Lough	G 764 239	Lake with extensive reedbeds

Sources: County Sligo Wetland Survey 2008 and County Sligo Wetland Survey 2009

## Appendix Six: List of abbreviations

<b>ATU</b>	Atlantic Technical University
<b>NBAP</b>	National Biodiversity Action Plan
<b>BCI</b>	Bat Conservation Ireland
<b>BSBI</b>	Botanical Society Britain & Ireland
<b>CARO</b>	Climate Action Regional Office
<b>CBA</b>	County Biodiversity Area
<b>CBD</b>	Convention on Biological Diversity
<b>CDP</b>	County Development Plan
<b>DAFM</b>	Department of Agriculture, Food and the Marine
<b>HC</b>	Heritage Council
<b>HD</b>	Habitats Directive
<b>IEN</b>	Irish Environmental Network
<b>IFI</b>	Inland Fisheries Ireland
<b>LAP</b>	Local Area Plan
<b>LAWPRO</b>	Local Authority Waters Programme
<b>MI</b>	Marine Institute
<b>MSLETB</b>	Mayo Sligo Leitrim Education and Training Board
<b>NBDC</b>	National Biodiversity Data Centre
<b>NGOs</b>	Non Governmental Organisations
<b>NHA</b>	Natural Heritage Area
<b>NPWS</b>	National Parks and Wildlife Service
<b>pNHA</b>	Proposed Natural Heritage Area
<b>PPN</b>	Public Participation Network
<b>SAC</b>	Special Area of Conservation
<b>SCC</b>	Sligo County Council
<b>SPA</b>	Special Protection Area
<b>SRC</b>	Sligo Rowing Club

## Appendix Seven: Table of Actions, Partners, Supporting Policy, Indicators

Theme 1: Knowing			
Objective 1: Strengthen the knowledge base by identifying and filling gaps through survey and monitoring			
	Action	Partners	Indicators
Objective 1.1 Gather information on species and habitats of conservation concern in County Sligo			
K.1	Review and integrate existing survey data. Commission new studies and surveys to fill knowledge gap on key species, habitats and protected areas.	SCC GIS Officer; NBDC; NPWS; ATU; NGOs	Number of new biodiversity surveys commissioned annually. Percentage of existing data sets reviewed and updated. List of priority species/habitats surveyed. Remaining wetland sites surveyed. Completion of County Sligo Biodiversity Audit.
K.2	Ensure relevant biodiversity survey data is shared with the National Biodiversity Data Centre and National Parks & Wildlife Service.	SCC; NBDC; NPWS	Number of datasets submitted to NBDC and NPWS annually.
K.3	Explore ways to incorporate ecological data from historical surveys and other relevant documents, to create a consolidated biodiversity database to support SCC decision-making.	SCC GIS Officer; ATU; NBDC; NGOs	Inventory of historic survey documents identified and reviewed. Number of datasets digitised and added to the database.
K.4	Implement and support biodiversity training and participation in citizen science initiatives to increase the evidence base and contribute to protecting biodiversity.	SCC; NBDC; NPWS; MSLETB; Coillte; Sligo PPN; NGOs	Number of training sessions/ events held annually. Number of participants engaged in citizen science projects. Number of species records submitted through citizen science platforms.
Objective 1.2 Map species and habitats of conservation concern to support Sligo County Council in decision making			
K.5	Embed key survey recommendations into the planning, design and delivery of relevant SCC projects and operational functions.	SCC GIS Officer; SCC all Depts.	Proportion of new SCC projects that integrate biodiversity survey recommendations.

<b>K.6</b>	Identify and map County Biodiversity Areas according to Heritage Council guidelines and incorporate into County Development Plan policies and objectives.	SCC GIS Officer; SCC Planning Section; HC; NBDC; NPWS	Number of LIBS identified and mapped on SCC internal maps. Inclusion of CBAs in County Development Plan updates.
<b>Objective 1.3 Develop a county-wide ecological network of sites to protect wildlife corridors</b>			
<b>K.7</b>	Develop a county-wide ecological network map to identify and protect wildlife corridors.	SCC GIS Officer; NBDC; NGOs; Teagasc; ACRES: LAWPRO; IFI	Completion of ecological network map. Number of corridors identified and classified by ecological value.
<b>K.8</b>	Seek opportunities to enhance connectivity for wildlife across the ecological network through partnerships, land use planning and community engagement.	SCC GIS Officer; NBDC; NGOs; Teagasc; ACRES: LAWPRO; IFI	Use of map by SCC Depts. Number of partnerships established with landowners, NGOs and communities. Area of land managed or restored to support corridor connectivity.
<b>K.9</b>	Update existing county hedgerow survey for the purpose of developing hedgerow management guidelines for the county.	SCC GIS Officer; NGOs; Teagasc; Coillte; Acres; LAWPRO; NPWS	Updated hedgerow survey complete. Publication of county hedgerow management guidelines. Number of stakeholders trained on hedgerow best practices.

<b>Theme 2: Acting</b>			
<b>Objective 2: Conserve and restore biodiversity and support ecosystem services through direct actions led by Sligo County Council</b>			
	<b>Action</b>	<b>Partners</b>	<b>Indicators</b>
<b>Objective 2.1 Protect and enhance vulnerable sand dune habitats</b>			
<b>A.10</b>	Develop and implement a management plan for Killaspugbrone dunes, to support the Conservation Objectives of the SACs within SCC ownership.	SCC Climate Team; Parks Dept; NPWS; ATU; CARO; University of Galway	Management plan completed and published. Number of conservation objectives addressed. Regular monitoring of habitat and species underway.
<b>A.11</b>	Share best practice and promote coastal resilience balancing sustainable tourism, climate adaptation, and the protection of dune habitats.	SCC Climate Team; NPWS; ATU; CARO; University of Galway	Number of coastal resilience events held or supported. Awareness and adoption of best-practice guidance materials. Inclusion of dune resilience in tourism and climate policy documents.
<b>Objective 2.2 Conserve protected and priority species and habitats</b>			
<b>A.12</b>	Develop best-practice management guidelines for key habitats and species for use by relevant stakeholders.	SCC; NPWS; NBDC; NGOs	Number of habitat/species guidelines published. Number of stakeholders utilising guidelines.
<b>A.13</b>	Implement the Cleveragh Demesne Conservation Management Plan (within Lough Gill SAC) to support the conservation objectives for the site.	SCC Parks Dept; NPWS; Coillte	Change in habitat condition over time (Lough Gill SAC). Area of invasive species removed.

<b>Objective 2.3 Continue to implement conservation measures and demonstrate best practice on lands in Council ownership</b>			
<b>A.14</b>	Undertake an ecological audit of SCC-owned lands to identify enhancement opportunities.	SCC all Depts; Uisce Eireann	Audit completed and mapped. Number of enhancement opportunities identified. Audit findings integrated into land-use planning.
<b>A.15</b>	Implement pilot projects incorporating best practice for nature-based solutions, habitat creation, tree planting, pollinator-friendly habitat and hedgerow management.	SCC all Depts; Uisce Eireann; LAWPRO;	Number of pilot projects implemented. Area of habitat restored or enhanced (hectares).
<b>A.16</b>	Identify opportunities and incorporate suitable habitats for bats, swifts, and raptors within buildings and structures.	SCC all Depts; NGOs; Community Groups; Sligo PPN	Number of buildings retrofitted with biodiversity-friendly features. Number of species using installed habitats (monitored annually).
<b>A.17</b>	Promote the use of native trees, hedgerows and plants within SCC, communities and organisations.	SCC Parks Dept; SCC Planning Section; Community Groups	Number. of community planting initiatives using native species. Percentage of new plantings that are native species. Uptake of guidelines or planting resources.
<b>A.18</b>	Provide training to SCC to reduce the use of chemical pesticides, by 50 per cent by 2030.	SCC relevant Depts. Sligo PPN; Community Groups	Number of staff trained annually. Percentage reduction in pesticide use (baseline vs. annual usage) Adoption of alternative weed/pest management methods.

<b>Objective 2.4 Identify and implement pollinator-friendly Initiatives</b>			
<b>A.19</b>	Map areas of value for pollinators, prioritising Council-owned land.	SCC GIS Officer; SCC Parks Dept; NBDC	Pollinator habitat mapping completed.  Number of pollinator-friendly zones designated.
<b>A.20</b>	Implement actions to support pollinators as set out by the All-Ireland Pollinator Plan Council Partner agreement.	GIS Officer; SCC Parks Dept; NBDC; Community Groups	Percentage of actions from the AIPP implemented.  Area managed for pollinators on SCC land.
<b>A.21</b>	Upskill communities and organisations in implementing actions for pollinators through awareness, training and participation in citizen science.	SCC Parks Dept; NBDC; NPWS; Community Groups	Number of training or awareness events held.  Number of participants trained.  Number of community-led pollinator projects initiated.
<b>Objective 2.5 Produce an Invasive Alien Species (IAS) Action Plan to manage and control key IAS in County Sligo</b>			
<b>A.22</b>	Produce an IAS Plan for the county with monitoring protocols, training, awareness raising and development of best practice for biosecurity, control and removal.	SCC relevant Depts; IFI; NBDC; NPWS; ATU; LAWPRO; SRC; Angling Clubs	IAS Plan published and adopted.  Number of IAS species identified and prioritised.  Number of awareness events and training delivered.  Monitoring protocols developed.
<b>A.23</b>	Develop an IAS Pathway Action Plan for the Unshin River SAC and its tributaries.	SCC relevant Depts; IFI; NBDC; NPWS; ATU; LAWPRO; SRC; Angling Clubs	Pathway plan completed.  Number of pathway-specific actions implemented.  Change in IAS presence or abundance in Unshin River catchment.

<b>Theme 3: Promoting</b>			
<b>Objective 3: Increase awareness and appreciation of biodiversity through training and education</b>			
	<b>Action</b>	<b>Partners</b>	<b>Indicators</b>
<b>Objective 3.1 Increase public engagement and awareness of biodiversity</b>			
<b>P.24</b>	Increase public engagement and awareness of biodiversity through National Biodiversity Week and National Heritage Week and relevant global and national environmental days.	SCC Climate Team; Parks Dept; NBDC; HC; IEN; Coillte; LAWPRO; ATU; Sligo PPN; Community Groups; NGOs, PPN	No. of events held during National Biodiversity & Heritage Weeks. No. of participants attending events. Media coverage or social media reach statistics. No of events held for Environmental Days, e.g. World Wetland Day; Hedgerow Week; World Ocean Day.
<b>P.25</b>	Promote biodiversity events, campaigns and activities through SCC website, social media channels, newspaper and radio campaigns.	SCC Climate Team; Parks Dept; NBDC; HC; IEN; Coillte; LAWPRO; ATU; Sligo PPN; Community Groups; NGOs; PPN	No. of biodiversity posts/articles published. Engagement metrics. No. of campaigns or features aired on local radio/newspapers.
<b>P.26</b>	Support educational initiatives and raise awareness through collaborations with educational institutions, NGOs and State Agencies.	SCC relevant Depts; MSLETB; NGOs; HC; Coillte; LAWPRO; ATU; Sligo PPN; Community Groups; NGOs	Number of initiatives or projects supported. Number of partner organisations involved. Number of students/community members engaged.
<b>P.27</b>	Establish a Sligo Biodiversity Club to promote biodiversity engagement, action, inclusivity and shared expertise.	NGOs; ATU; LAWPRO; NGOs; Coillte; NBDC; Community Groups	Club established and active. Number of members and events organised annually. Cross-county projects or collaborations initiated.
<b>Objective 3.2 Support biodiversity education and research in schools, universities and through community programs</b>			
<b>P.28</b>	Develop partnerships with education providers to increase expertise within the county through 'train the trainer' programmes.	An Taisce; ATU; HC; NPWS; MSLETB; Coillte; GAA Green Clubs	Number of formal partnerships established with education providers. Number of trainers/educators trained.
<b>P.29</b>	Promote the work of Sligo Libraries and collaborate to develop biodiversity training, education and awareness projects.	Sligo Libraries; NGOs; MSLETB	Number of biodiversity-themed events or workshops held in libraries. Number of collaborative projects with schools, community groups or NGOs.

Theme 4: Practising			
Objective 4: Mainstream biodiversity into decision making through best practice and policy within Sligo County Council			
	Action	Partners	Indicators
Objective 4.1 Assist in achieving biodiversity objectives within SCC and national plans and policies			
Pr.30	Embed early consideration of biodiversity within Sligo County Council operations.	SCC all Depts.	Number of council operations with biodiversity consideration. Percentage of projects assessed for biodiversity impact. Number of staff trained in early biodiversity processes.
Pr.31	Support the implementation of biodiversity-related objectives and policies included in the County Development Plan, Local Area Plans, County Sligo Heritage Strategy, the Climate Action Plan and the National Planning Framework through training and upskilling in relevant areas.	SCC all Depts.	Number of biodiversity training sessions completed. Number of plans with biodiversity objectives applied.
Pr.32	Support the implementation of national and regional strategies and plans, e.g. 4th NBAP, Habitats Directive, Water Framework Directive; the forthcoming Nature Restoration Plan; Sustainable Development Goals and relevant policies and legislation.	SCC all Depts. NPWS; HC	Number of policies updated to align with national strategies. Number of partnerships supporting biodiversity goals.

<b>Objective 4.2 Integrate biodiversity best practices in planning and development</b>			
<b>Pr.33</b>	Support the integration of best-practice measures within the planning process through guidelines, training, data management and mapping.	SCC Planning Section; SCC GIS Officer	Number of guidelines developed and distributed.  Level of uptake of measures within planning process.
<b>Pr.34</b>	Promote the use of nature-based solutions for new developments and other projects.	SCC relevant Depts.; Planning Section; LAWPRO;	Number of projects incorporating nature-based solutions.  Number of awareness campaigns promoting nature-based solutions.
<b>Objective 4.3 Embed best-practice biodiversity management across all sections of SCC</b>			
<b>Pr.35</b>	Incorporate best practice for biodiversity across all departments, incorporating existing guidance and developing new methodologies and training where necessary.	SCC all Depts.	Number of departments adopting biodiversity best practices.
<b>Pr.36</b>	Support biodiversity assessment at the earliest stages through the development of biodiversity	SCC relevant Depts.	Percentage of projects utilising biodiversity mapping at design stage.  Number of projects with early-stage biodiversity assessments.
<b>Objective 4.4 Promote recreational activities that protect and preserve biodiversity in County Sligo</b>			
<b>Pr.37</b>	Develop and where possible implement best practice guidance for recreational activities that protect and preserve biodiversity in County Sligo with a focus on sensitive habitats including sand dunes.	SCC relevant Depts. ATU, Sligo Sports Partnership; Mountaineering Ireland; Leave no Trace; NBDC; NGOs; Dark Sky Ireland	Number of best-practice guidance documents developed for recreation.  Number of recreational areas applying biodiversity measures.
<b>Pr.38</b>	Support initiatives to assess and monitor and raise awareness of the ecological impacts of recreation, focusing on invasive alien species (IAS), nature-based solutions and dark-sky-friendly practices.	SCC relevant Depts. ATU, Sligo Sports Partnership; Mountaineering Ireland; Leave no Trace; NBDC; NGOs; Dark Sky Ireland	Number of awareness events or campaigns conducted.  Instances of invasive species management and dark-sky-friendly projects.

<b>Theme 5: Partnerships</b>			
<b>Objective 5: Protect and restore biodiversity through partnerships with State Agencies, organisations and community groups</b>			
	<b>Action</b>	<b>Partners</b>	<b>Indicators</b>
<b>Objective 5.1 Enhance collaboration and knowledge sharing at a county level</b>			
<b>Par.39</b>	Facilitate the County Sligo Biodiversity Working Group to enable dissemination, collaboration and development of best practice.	SCC relevant Depts. BWG members	Number of meetings held. Number of best-practice documents shared. Level of stakeholder participation in working group activities.
<b>Par.40</b>	Implement and review the County Sligo Biodiversity Action Plan 2025–2030 with the support of Biodiversity Working Group.	All	Action Plan milestones achieved. Participation and collaboration of Working Group and partners.
<b>Objective 5.2 Restore and enhance rivers and stream habitats to support biodiversity and fish passage</b>			
<b>Par.41</b>	Identify opportunities to restore the natural geomorphology of rivers and streams. Support the work of IFI National Barriers Program and local habitat development projects.	LAWPRO; Inland Fisheries Ireland; OPW; NPWS	Number of river and stream restoration projects identified. Number of barriers removed or mitigated. Fish passage improvements documented.
<b>Par.42</b>	Support the work of SCC that is aligned with the Water Framework Directive by supporting initiatives to protect high (Blue Dot) and good status water bodies.	LAWPRO; Inland Fisheries Ireland; OPW; NPWS; Uisce Éireann	Number of initiatives supporting high and good status water bodies. Alignment with actions within Water Action Plan 2024
<b>Objective 5.3 Support biodiversity-friendly farming practices on agricultural land</b>			
<b>Par.43</b>	Support partners in delivering conservation management for agricultural land, commonage and high nature value areas through projects.	Teagasc; ACRES; IFA; NPWS; DAFM; LAWPRO; NGOs	Number of conservation projects supported. Number of partners engaged.

<b>Par.44</b>	Develop partnerships to support biodiversity-friendly practices and knowledge transfer between landowners, organisations and conservation programmes (e.g. hedgerow management; riparian zones, nest boxes and bat roosts).	Teagasc; ACRES; IFA; NPWS; DAFM; LAWPRO; NGOs	Number of partnerships established and delivering actions. Number of knowledge transfer events held.
<b>Objective 5.4 Support the delivery of biodiversity programs in partnership with National Parks &amp; Wildlife Service and NGOs</b>			
<b>Par.45</b>	Support the implementation of actions from NPWS and DAFM programs relevant to County Sligo, e.g. Corncrake LIFE, Curlew EIP, Breeding Water EIP, Life on Machair, Waterlands, Wild Atlantic Nature, NPWS Farm Plan schemes.	NPWS; NBDC; Acres; ATU; Wild Atlantic Nature; LAWPRO; Teagasc	Number of programme actions supported and implemented. Reported improvements in target species or habitats.
<b>Par.46</b>	Develop partnerships with State Agencies, landowners and organisations to support community actions for peatland management and restoration.	NPWS; NBDC; Acres; ATU; Wild Atlantic Nature; LAWPRO; Teagasc; IPCC	Number of peatland restoration projects supported. Number of active partnerships. No. of peat free initiatives supported.
<b>Objective 5.5 Support community-led conservation</b>			
<b>Par.47</b>	Support community groups in developing Local Biodiversity Action Plans (LBAPs) through the provision of training, and by highlighting funding opportunities.	All relevant Depts. Tidy Towns; NGOs; CFI; PPN;	Number of community groups trained. Number of Local Biodiversity Action Plans developed.
<b>Par.48</b>	Develop partnerships with NGOs, faith communities, clubs, organisations and community groups to support community-led biodiversity projects.	Tidy Towns; NGOs; CFI; PPN; Dioceses; Creative Sligo; Healthy Ireland; HSE	Number of partnerships formed. Number of community biodiversity projects supported and in progress/completed.

<b>Par.49</b>	Establish and progress partnerships to integrate biodiversity conservation initiatives across sectors, e.g. Community Foundation Ireland (CFI), Hare's Corner, Sligo Dioceses, HSE, GAA Green clubs.	Tidy Towns; BurrenBeo Trust; CFI; PPN; Dioceses; Creative Sligo; Healthy Ireland; HSE; GAA	Number of cross-sector partnerships established. Number of integrated conservation initiatives in progress/completed.
<b>Par.50</b>	Provide training to community and voluntary groups to support reduction of the use of chemical pesticides, by 50 per cent by 2030.	NBDC; Sligo PPN; Community Groups; NGOs	Frequency of training sessions delivered to target groups. Improvement in participants' knowledge and skills after training.
<b>Objective 5.6 Promote the protection and preservation of marine and coastal ecosystems</b>			
<b>Par.51</b>	Support the conservation of marine habitats and ecosystems in line with national plans and policies.	SCC relevant Depts. ATU; MI; NGOs; An Taisce; LAWPRO; CAROs; IFI	Alignment of marine conservation activities with national plans and policies.
<b>Par.52</b>	Promote the work of State Agencies and Organisations; Raise awareness of national campaigns, policies and plans.	ATU; MI; NGOs; An Taisce; LAWPRO; CAROs; IFI	Collaboration and coordination between State Agencies and Organisations. Engagement in supporting awareness campaigns.

**Image credits:**  Photography  Artwork

Cover Page	Common frog	<i>Rana temporaria</i>	Ruth Hanniffy
	Snow-capped Ben bulben		Ruth Hanniffy
	Humpback whale	<i>Megaptera novaeangliae</i>	Robert Vaughan
	Devils-bit scabious	<i>Succisa pratensis</i>	Robert Vaughan
	Marsh fritillary	<i>Euphydryas aurinia</i>	Robert Vaughan
	Narrow-mouthed Whorl snail	<i>Vertigo angustior</i>	Robert Vaughan
	Common Lizard	<i>Zootoca vivipara</i>	Robert Vaughan
	Chough	<i>Pyrhocorax pyrrhocorax</i>	Robert Vaughan
Inside front & back cover	Brown long-eared bat	<i>Plecotus auritus</i>	Aga Grandowicz
	Swift	<i>Apus apus</i>	Aga Grandowicz
	Marsh fritillary	<i>Euphydryas aurinia</i>	Aga Grandowicz
	Humpback whale	<i>Megaptera novaeangliae</i>	Aga Grandowicz
	Greenland white-fronted goose	<i>Anser albifrons flavirostris</i>	Aga Grandowicz
	Common tern	<i>Sterna hirundo</i>	Aga Grandowicz
Page 3	Humpback whale	<i>Megaptera novaeangliae</i>	Robert Vaughan
Contents	Lapwing	<i>Vanellus vanellus</i>	Honeybear
	Periwinkle	<i>Littorina littorea</i>	Honeybear
	Marsh fritillary	<i>Eurodryas aurinia</i>	Honeybear
	Grey seal pup	<i>Halichoerus grypus</i>	Honeybear
	Juniper	<i>Juniperus communis</i>	Honeybear
Page 4	Merlin	<i>Falco columbarius</i>	Robert Vaughan
Page 7	Dog whelk	<i>Nucella lapillus</i>	Honeybear
Acknowledgements	Marsh fritillary	<i>Eurodryas aurinia</i>	Robert Vaughan
Page 10	Pine marten	<i>Martes martes</i>	Ruth Hanniffy
Page 11	Marsh fritillary	<i>Eurodryas aurinia</i>	Robert Vaughan
	Devils-bit scabious	<i>Succisa pratensis</i>	Robert Vaughan
Page 12	Oystercatcher	<i>Haematopus ostralegus</i>	Ruth Hanniffy
Page 15	Curllew	<i>Numenius arquata</i>	Honeybear
Page 16	Sea thrift	<i>Armeria maritima</i>	Honeybear
Page 18	Compass jellyfish	<i>Chrysaora hysoscella</i>	Ruth Hanniffy
Page 19	Common lizard	<i>Zootoca vivipara</i>	Robert Vaughan
Page 20	Irish stoat	<i>Mustela erminea hibernica</i>	Ruth Hanniffy
	Emerald damselfly	<i>Lestes sponsa</i>	Ruth Hanniffy
Page 22	Peacock butterfly	<i>Inachis io</i>	Ruth Hanniffy
Page 23	Skylark with chicks	<i>Alauda arvensis</i>	Honeybear
	Wild carrot	<i>Daucus carota</i>	Honeybear
Page 25	Common dolphin	<i>Delphinus delphis</i>	Ruth Hanniffy
Page 26	Garavogue river		Ruth Hanniffy
Page 27	White-clawed Crayfish	<i>Austropotamobius pallipes</i>	Robert Vaughan
Page 28	Common carder bee	<i>Bombus pascuorum</i>	Honeybear
Page 29	Bar-tailed godwit	<i>Limosa lapponica</i>	Honeybear
	Glasswort	<i>Salicornia</i>	Honeybear
	Six-spot burnet moth	<i>Zygaena filipendulae</i>	Honeybear
Page 30	Knocknarea and Oyster Island from Rosses Point		Ruth Hanniffy
Page 33	Cormorant	<i>Phalacrocorax carbo</i>	Ruth Hanniffy

Page 34	Bottlenose dolphin	<i>Tursiops truncatus</i>	Honeybear
	Lyme grass	<i>Leymus arenarius</i>	Honeybear
	Marram grass	<i>Ammophila arenaria</i>	Honeybear
	Perwinkle	<i>Littorina littorea</i>	Honeybear
Page 35	Curlew	<i>Numenius arquata</i>	Honeybear
	Carder darter	<i>Sympetrum striolatum</i>	Honeybear
	Sea thrift	<i>Armeria maritima</i>	Honeybear
	Harbour seal	<i>Phoca vitulina</i>	Honeybear
Page 36	Humpback whale	<i>Megaptera novaeangliae</i>	Ruth Hanniffy
Page 37	Pygmy shrew	<i>Sorex minutus</i>	Robert Vaughan
Page 38	Sphagnum mosses with Ben Bulben	<i>Sphagnum spp.</i>	Robert Vaughan
	Chough	<i>Pyrrhocorax pyrrhocorax</i>	Robert Vaughan
Page 39	Union Wood Nature Reserve		Ruth Hanniffy
	Ballisodare estuary		Ruth Hanniffy
	Curlew chick		Honeybear
Page 40	Common hermit crab	<i>Pagurus bernhardus</i>	Honeybear
	Killaspugbrone dunes		Ruth Hanniffy
Page 40 + 41	Rosses Point Blue Flag beach sign		Honeybear
Page 41	Dunlin	<i>Calidris alpina</i>	Honeybear
Page 42	Bunduff		Ruth Hanniffy
	Half-moon bay, Hazelwood		Ruth Hanniffy
	Irish hare	<i>Lepus timidus subsp. Hibernicus</i>	Honeybear
Page 43	Unshin River		Ruth Hanniffy
	Strandhill		
Page 44	Peatland		Ruth Hanniffy
	Ben Bulben		
Page 45	Marsh fritillary	<i>Euphydryas aurinia</i>	Honeybear
	Pools on Ben bulben		Ruth Hanniffy
	Inishmurray		Ruth Hanniffy
Page 46	Minke whale	<i>Balaenoptera acutorostrata</i>	Ruth Hanniffy
	Sanderling	<i>Calidris alba</i>	Honeybear
Page 47	Hedgerows with Ben Bulben		Ruth Hanniffy
	Leisler's bat	<i>Nyctalus leisleri</i>	Ruth Hanniffy
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	Lapwing	<i>Vanellus vanellus</i>	Honeybear
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	Barn owl	<i>Tyto alba</i>	Ruth Hanniffy
	Light-bellied brent geese	<i>Branta bernicla hrota</i>	Ruth Hanniffy
Page 52	Strandhill sand dunes		Ruth Hanniffy
Page 53	Underwater environment, Streedagh		Ruth Hanniffy
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Page 57	Streedagh dunes		Ruth Hanniffy
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Page 60	Purple loosestrife	<i>Lythrum salicaria</i>	Ruth Hanniffy
Page 64	Common frog	<i>Rana temporaria</i>	Ruth Hanniffy

Page 65	Merlin	<i>Falco columbarius</i>	Robert Vaughan
Page 66	Pyramidal orchid	<i>Anacamptis pyramidalis</i>	Robert Vaughan
	Six-spot burnet moth	<i>Zygaena filipendulae</i>	Robert Vaughan
Page 68	Stonechat	<i>Saxicola rubicola</i>	Ruth Hanniffy
	Green-veined white	<i>Pieris napi</i>	Ruth Hanniffy
Page 69	European Shag	<i>Phalacrocorax aristotelis</i>	Honeybear
Page 70	Downy emerald dragonfly	<i>Cordulia aenea</i>	Ruth Hanniffy
	Irish hare	<i>Lepus timidus hibernicus</i>	Ruth Hanniffy
	Farmland below Ben Bulben		Ruth Hanniffy
Page 71	Common hermit crab	<i>Pagurus bernhardus</i>	Honeybear
Page 72	Small copper butterfly	<i>Lycaena phlaeas</i>	Ruth Hanniffy
	Field gentian	<i>Gentianella amarella</i>	Ruth Hanniffy
	Seabirds diving on fish		Ruth Hanniffy
Page 73	Grey seal	<i>Halichoerus grypus</i>	Honeybear
	Sunset from Strandhill		Ruth Hanniffy
Page 74	Red fox	<i>Vulpes vulpes</i>	Ruth Hanniffy
	Lough Easkey		Ruth Hanniffy
Page 75	Harebell	<i>Campanula rotundifolia</i>	Honeybear
Page 76	Northern fulmar	<i>Fulmarus glacialis</i>	Ruth Hanniffy
	Strandhill beach and sand dunes		Ruth Hanniffy
	Seabirds off Mullaghmore		Ruth Hanniffy
Page 77	Harbour porpoise	<i>Phocoena phocoena</i>	Honeybear
Page 80	Ben Bulben		Ruth Hanniffy
Appendices	Mullaghmore		Ruth Hanniffy
	Chough	<i>Pyrrhocorax pyrrhocorax</i>	Robert Vaughan



Illustration by Slick Fish Design

