



Table of actions

Each of the seven objectives of the Plan is prefaced with explanatory text and also a cross reference to the relevant Aichi Biodiversity targets and Sustainable Development Goals. Each objective also has a number of targets which group a set of related actions. For each action there is a specified timeframe, lead (in bold) and key partners who have responsibility for implementation, and performance indicators so that achievement of the actions can be tracked. A list of lead and key partners can be found in Appendix I.

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OBJECTIVE

Mainstream biodiversity into decision-making across all sectors

The Convention on Biological Diversity's Cancun Declaration⁴⁹ (CBD, 2016) focuses on the need for governments at the national, regional and local levels to mainstream the conservation and sustainable use of biodiversity for human well-being. This can be achieved through sectoral and cross-sectoral policies, plans and programs, to establish an effective institutional, legislative and regulatory framework that incorporates an approach that is inclusive.

The first strategic objective of this Plan is to strengthen the mainstreaming process. It is important that relevant sectors take biodiversity considerations into account when developing policies and operational plans.

Progress is being made in Ireland in mainstreaming biodiversity and bringing the ecosystem services concept into decision-making across sectors. There is a growing recognition of the wider benefits of considering biodiversity and ecosystem services, in particular, in the agriculture, forestry, marine and tourism sectors. For example, the contribution of natural capital to Ireland's food production sector is showcased through Food Wise 2025⁵⁰ and the Origin Green initiative. Applying sustainability principles to food production will also have environmental benefits. A priority of the Irish Rural Development Programme is restoring, preserving and enhancing ecosystems related to agriculture. The delivery of GLAS (the Green, Low-Carbon, Agri-Environment Scheme) provides support measures in return for environmental commitments and is a key contribution of this sector to the protection of biodiversity. For the marine sector, the current European Maritime and Fisheries Fund is strongly focused on the sustainable use of resources,

preserving marine biodiversity and shifting towards a low-carbon economy. Added to these, developments in the area of Green Infrastructure are being initiated at the local and regional level. Green Infrastructure is a strategically planned network of natural and semi natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services such as water purification, air quality, space for recreation and climate mitigation and adaptation.

Under this Plan further action will be taken to raise awareness within the public sector of the implications of policy and decisions on biodiversity, through for example, the articulation of no net loss biodiversity targets in plans/policies and the appropriate utilisation of ecological expertise. In addition, engagement with the private sector will be improved through the establishment of a national Business and Biodiversity Platform in line with the CBD's Global Business Partnership.

As highlighted in previous Plans, local action is important in tackling biodiversity loss. Local Authorities should review and update their Biodiversity and Heritage Action Plans as well as their Development Plans and policies, giving due consideration to the protection and restoration of biodiversity. To support locally-led action, additional biodiversity-related guidance for Local Authorities will be published, for example, on screening for Appropriate Assessment for Planning Authorities, best practice guidance for use of GIS in Strategic Environmental Assessment (SEA), for cumulative effects assessment and best practice in SEA for infrastructure development.

Over the life of the Plan, Ireland will continue to implement key EU Directives to protect Ireland's environment and wildlife. Obligations under the Nature

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OBJECTIVE

Directives include achieving, restoring and/or maintaining favourable conservation status for protected habitats and species. Apart from the Habitats and Birds Directives^{17,18}, there are substantial biodiversity benefits from implementation of the Marine Strategy Framework Directive¹⁹, Water Framework Directive²⁰, SEA Directive²³ and others. The development of a sectoral adaptation plan for Biodiversity in line with the Climate Action and Low Carbon Development Act 2015 will address the requirements necessary to improve the resilience of biodiversity to climate change.

Under the EU Nature Directives Ireland must contribute to the Natura 2000 network of sites for the protection of Europe's habitats and species (see Objective 6). The Government intends to streamline financial expenditure tracking relating to Natura 2000 and biodiversity more broadly, including linkages to the Prioritised Action Framework for Natura 2000 (PAF)⁵¹. The PAF is a tool used by EU Member States to integrate financing for Natura 2000 into EU financial instruments.

The European Communities (Environmental Liability) Regulations established a framework of environmental liability based on the 'polluter-pays' principle. In Ireland, the EPA has been designated as the competent authority for all aspects of these Regulations. The Regulations prevent and remedy environmental damage by introducing, among other things, a reporting obligation on operators in respect of actual or threatened environmental damage.

In addition to being essential for our survival and well-being, healthy ecosystems are the bedrock of a sustainable economy. Gross Domestic Product (GDP) can give misleading signals about the overall economic performance and well-being of a country as it looks only at income, just one component of economic performance, and not the wealth and assets that

help generate this income. Moreover, GDP does not show the full contribution of natural capital such as forests, wetlands, and agricultural land to the economic well-being of a country. The concept of natural capital accounting has advanced with the aid of the UN Statistical Commission of the System for Environmental and Economic Accounts (SEEA)⁵² which provides an internationally agreed method to account for material natural resources such as timber and fisheries⁵³. Progress in measuring and valuing elements of Ireland's biodiversity will be made under this Plan through the development of a Natural Capital Asset Register and national natural capital accounts.

A 2011 CBD report on the role of economic incentives in shaping environmental behaviour⁵⁴ concludes that the removal of subsidies that lead to environmentally damaging practices, and the promotion of incentive schemes that promote positive ones, can produce economic and environmental benefits if they are properly coordinated and implemented. This Plan seeks to identify policies or practices that may lead to degradation of biodiversity (termed perverse incentives) and to identify appropriate measures to ensure these "perverse incentives" do not contribute to biodiversity loss.

Legislative support is essential to underpin the actions that assist in the conservation of biodiversity. The Plan will be bolstered by further development in this area for example through legislation that addresses the provisions under the recent EU Regulation on invasive species.

Aichi targets that these actions help us achieve:



Sustainable Development Goals these actions help us achieve:



Objective 1

Mainstream biodiversity into decision-making across all sectors

TARGET 1.1:

SHARED RESPONSIBILITY FOR THE CONSERVATION OF BIODIVERSITY AND THE SUSTAINABLE USE OF ITS COMPONENTS IS FULLY RECOGNISED, AND ACTED UPON, BY ALL SECTORS

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OBJECTIVE

Action	Timeframe	Lead/key partners	Performance indicators
1.1.1. Incorporate into legislation the requirement for consideration of impacts on biodiversity to ensure that conservation and sustainable use of biodiversity are taken into account in all relevant plans and programmes and relevant new legislation	2019	DCHG	1. Legislation in place
1.1.2. Public and Private Sector relevant policies will use best practice in SEA, AA and other assessment tools to ensure proper consideration of biodiversity in policies and plans	2017-2021	Public Authorities, Private Sector	1. New policies and plans explicitly state considerations of biodiversity 2. Percentage of policies and plans that take biodiversity into account
1.1.3. 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	2017 -2021	Public Authorities, Private Sector	1. Number of Departments/Agencies articulating a no net loss target in plans and policies
1.1.4. Strengthen ecological expertise in local authorities and relevant Government Departments and agencies	2017-2021	Public Authorities, The Heritage Council	1. Number of full-time biodiversity officers in place in Public Authorities 2. Number of appropriately skilled staff in public bodies
1.1.5. Local Authorities will review and update their Biodiversity and Heritage Action Plans	2017-2021	Local Authorities, DHPLG, The Heritage Council, DBBP	1. Number of Biodiversity and Heritage Plans updated 2. Percentage of biodiversity actions implemented
1.1.6. Local Authorities will review and update their Development Plans and policies to include policies and objectives for the protection and restoration of biodiversity	2017-2021	Local Authorities, DHPLG	1. Number of explicit policies and objectives for biodiversity and ecosystem services in County Development Plans and other local plans per Local Authority

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OBJECTIVE

Action	Timeframe	Lead/key partners	Performance indicators
1.1.7. Develop a Green Infrastructure at local, regional and national levels and promote the use of nature based solutions for the delivery of a coherent and integrated network	2017-2021	Local Authorities	1. Number of nature based solutions employed
1.1.8. Continue to produce guidance on the protection of biodiversity in designated areas, marine and the wider countryside for Local Authorities and relevant sectors	2017-2021	DCHG , EPA, Local Authorities, The Heritage Council	1. Number of guidance documents published
1.1.9. Integrate Natura 2000 and Biodiversity financial expenditure tracking into Government Programmes internal paying agency management procedures including linkage to the Prioritised Action Framework ⁵¹ and this NBAP	2017-2021	Relevant Government Departments	1. Publish financial expenditure for Natura 2000 2. Number of Government Programmes which quantify biodiversity expenditure
1.1.10. Develop a Natural Capital Asset Register and national natural capital accounts by 2020, and integrate these accounts into economic policy and decision-making	2017-2021	CSO, IFNC, DCHG	1. Natural Capital Asset Register developed 2. National natural capital accounts developed 3. Natural capital integrated into economic policy
1.1.11. Initiate natural capital accounting through sectoral and small scale pilot studies, including the integration of environmental and economic statistics using the framework of the UN System of Experimental-Ecosystem Accounting (SEEA)	2017-2021	CSO, IFNC , Irish Water DHPLG, EPA, NESC	1. Number of pilot studies initiated 2. Number of national accounts completed
1.1.12. Establish a national Business and Biodiversity Platform under the CBD's Global Business Partnership	2018	IFNC, BITCI, Sustainable Nation	1. Platform established

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OBJECTIVE

Action	Timeframe	Lead/key partners	Performance indicators
1.1.13. Ensure Origin Green produces tangible benefits for biodiversity with increased emphasis on conservation and restoration of biodiversity	2018	Bord Bia , Teagasc, DAFM	<ol style="list-style-type: none"> 1. Origin Green reports include assessment of biodiversity impacts and benefits 2. Level of support for development of farmland habitat management plans 3. Development of a scientifically-based methodology to assess farmland habitats 4. Development and trialling of a biodiversity Indicator in the Teagasc National Farm Survey 5. Number of Origin Green businesses actively engaged with other biodiversity actions 6. Support of the All-Ireland Pollinator Business and Farm guidelines through the Origin Green
1.1.14. Implement actions from Ireland's Biodiversity Climate Change Sectoral Adaptation Plan	2018-2021	Relevant Government Departments	<ol style="list-style-type: none"> 1. Number of actions implemented
1.1.15. Identify and take measures to minimise the impact of incentives and subsidies on biodiversity loss, and develop positive incentive measures, where necessary, to assist the conservation of biodiversity	2017-2019	Relevant Government Departments	<ol style="list-style-type: none"> 1. Policies and practices that generate perverse incentives identified 2. Number of appropriate reform policies designed and implemented
1.1.16. Establish and implement mechanisms for the payments of ecosystem services including carbon stocks, to generate increased revenue for biodiversity conservation and restoration	2020	Relevant Government Departments	<ol style="list-style-type: none"> 1. Number of mechanisms established for payments for ecosystem services
1.1.17. Develop and implement a National Biodiversity Finance Plan to set out in detail how the actions and targets of this NBAP will be delivered from 2017 and beyond	2017-2021	DCHG, BWG	<ol style="list-style-type: none"> 1. National Biodiversity Finance Plan produced

Action	Timeframe	Lead/key partners	Performance indicators
1.1.18. Monitor the implementation of this Plan	2017-2021	BWG, Biodiversity Forum	1. Number of meetings of BWG 2. Attendance of representatives of departments and agencies 3. Track status of National Biodiversity Indicators 4. Interim report produced

TARGET 1.2:
STRENGTHENED LEGISLATION IN SUPPORT OF TACKLING BIODIVERSITY LOSS IN IRELAND

Action	Timeframe	Lead/key partners	Performance indicators
1.2.1. Review existing legislation and identify gaps	2020	DCHG	1. Review published
1.2.2. Consolidate the Wildlife Acts in a new Bill	2019	DCHG	1. Review of existing legislation published
1.2.3. Review Flora (Protection) Order and Schedule 5 of the Wildlife Act in light of published regional and global Red Lists and other information.	2018	DCHG	1. Reviews completed of Flora Protection Order and Schedule 5 of the Wildlife Act
1.2.4. Ensure the various provisions of the Forestry Act 2014 that strengthen the protection of biodiversity, water and the wider environment are brought into effect on commencement of the Act	2018	DAFM	1. Commencement orders for all provisions of the Act
1.2.5. Publish legislation to address required provisions under the EU Regulation on invasive alien species (No. 1143/2014) and on responsibilities and powers regarding invasive alien species, giving IFI responsibility for aquatic invasive species	2017	DCHG, DCCAE, IFI	1. Legislation published
1.2.6. Ratify the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation to the Convention on Biological Diversity and enact necessary regulations	2018	DCHG	1. The Protocol ratified 2. Regulation enacted
1.2.7 Publish legislation to provide a legal basis for National Parks	2020	DCHG	1. Legislation published



Strengthen the knowledge base for conservation, management, and sustainable use of biodiversity

This Plan will build on the achievements of the second Biodiversity Action Plan by addressing outstanding areas of survey and research to strengthen our biodiversity knowledge base and inform decision-making.

Up-to-date scientific knowledge is essential to make an informed assessment on the status of biodiversity, for insight into the causes of biodiversity loss and for developing the policies and means to halt or reverse losses. During the period of the second Biodiversity Action Plan (2011-2016) there was a significant improvement in our knowledge of conservation of species and habitats. Major research projects were completed in the areas of forestry, agriculture and agri-environment schemes, marine ecosystems, and climate change. A significant amount of monitoring, assessment and research was undertaken to fulfil obligations under the EU Habitats, Birds, Marine Strategy Framework, Maritime Spatial Planning and Water Framework Directives. The national report on the conservation status of species and habitats of EU interest was published in 2013²⁷. Seven Red Lists were published between 2011 and 2016 for species of: large moths⁵⁵, mayflies³², mosses and liverworts⁵⁶, vascular plants⁵⁷, amphibians, reptiles and freshwater fish²⁶, cartilaginous fish⁵⁸ and damselflies and dragonflies³³. In addition, an updated list of Birds of Conservation Concern in Ireland was produced²⁸. Wildlife Manuals were published by the NPWS on a range of topics including monitoring and survey techniques for species and habitats⁵⁹, as well as on mapping and assessment of ecosystems and their services¹⁶. Primary literature has been published on interactions between activities in the marine and designated habitats and species⁶⁰. An online data

management system ("Biodiversity Maps") has now been established where biodiversity data is collated, stored and made available⁶¹. Habitat maps for the marine and terrestrial environments were progressed and the National Vegetation Classification scheme was initiated⁴⁷.

Ireland will continue to support and encourage the volunteer network who play such an important role in biological recording schemes.

Environmental data is being made accessible through implementation of the INSPIRE Directive, and where appropriate, made available through the Irish government's open data portal (data.gov.ie) that was progressed during the period of the second Biodiversity Action Plan. Ireland will continue to implement common data standards, as well as quality assurance procedures, to allow the data to be used for multiple purposes.

Ireland recognises the value of long-term monitoring of species and habitats to generate data that tracks biodiversity change over time and commits to continue long-term monitoring schemes. The existing suite of National Biodiversity Indicators will be built upon to develop state, pressure and response indicators to aid the assessment of Ireland's national and international biodiversity commitments by 2020.

Despite advances in our understanding of Ireland's biodiversity, basic identification and taxonomic skills and knowledge are lacking for many taxonomic groups⁷.

The National Platform for Biodiversity Research published research recommendations for agriculture and soils⁶², freshwaters⁶³, marine⁶⁴,

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peatland⁶⁵, and invasive species⁶⁶. The EPA Research Strategy for 2014-2020⁶⁷ is centred on climate change, water and sustainability. The DAFM Strategic Research Plan for the forestry sector up to 2017 and this includes scope (under Theme 3.6) for research in woodlands, forests and associated ecosystem services, including those relating to biodiversity and water⁶⁸. The Agri-Food sector research plan (SHARP)⁶⁹ focuses on sustainable production whilst supporting implementation of the Water Framework Directive (WFD) and Marine Strategy Framework Directive (MSFD) and biodiversity goals.

There is consensus among scientists that climate change is likely to become one of the most significant drivers of biodiversity loss by the end of the century⁷⁰. More information is required on the impacts of climate change to ecosystem services and on the role of biodiversity and habitats play in both mitigation and adapting to climate change. For example, protecting biodiversity can help limit greenhouse gas concentrations because forests, peatlands and other habitats are major stores of carbon. Moreover, healthy ecosystems, e.g. coastal wetlands, can be employed to buffer against coastal erosion. Ecosystem approaches should be an integral part of the overall mitigation and adaptation effort.

To guide the future biodiversity research agenda the Government, academia and research National Platform for Biodiversity Research institutions will be re-established to undertake a review of biodiversity research needs in 2019. The existing forest research programme on forest biodiversity, carbon accounting, and the interaction of climate change and forest systems will be continued and a Marine Research Strategy has been published in 2017. The importance of research into the valuation of ecosystem services has been recognised and the topic has been incorporated within the EPA STRIVE research programme.

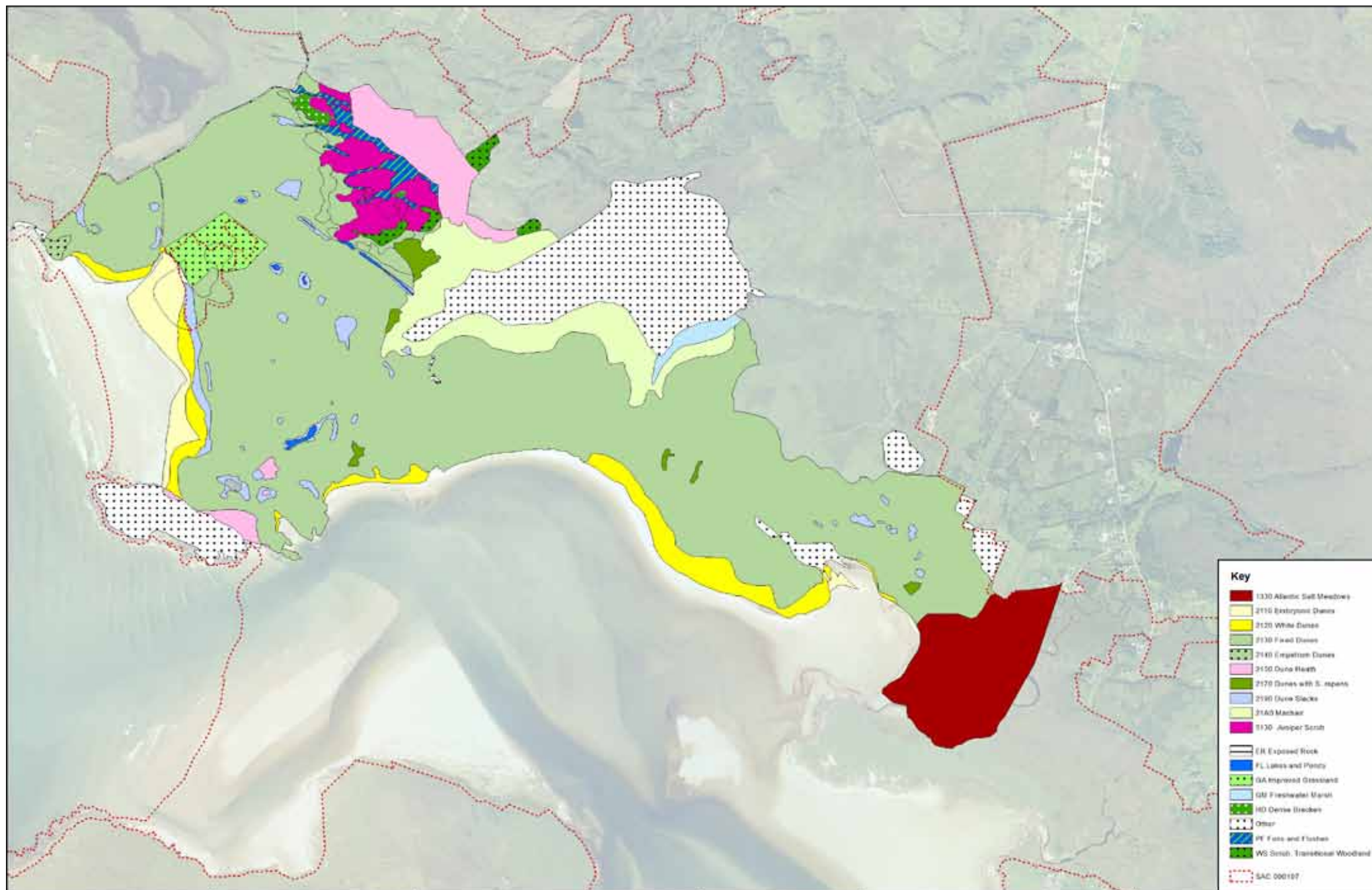
Aichi targets that these actions help us achieve:



Sustainable Development Goals that these actions help us achieve:



Progress has been made with habitat monitoring and mapping
Sheskinmore habitat map by Jochen Roller



Objective 2

Strengthen the knowledge base for conservation, management, and sustainable use of biodiversity

TARGET 2.1:

KNOWLEDGE OF BIODIVERSITY AND ECOSYSTEM SERVICES HAS SUBSTANTIALLY ADVANCED OUR ABILITY TO ENSURE CONSERVATION, EFFECTIVE MANAGEMENT, AND SUSTAINABLE USE BY 2021

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OBJECTIVE

Action	Timeframe	Lead/key partners	Performance indicators
2.1.1. Review priority needs for biodiversity research in 2019	2019	EPA, DCHG, Academia and Research Institutions, eNGOs, Government Agencies	1. Review of biodiversity research needs published
2.1.2. Develop a classification scheme for terrestrial vegetation and marine and freshwater communities	2020	DCHG, NBDC	1. Number of Irish vegetation communities/marine communities classified
2.1.3. Complete national terrestrial habitat, land cover, land use, and ecosystem service maps	2021	DCHG, OSI, EPA, Heritage Council, Teagasc, DAFM	1. Data standards agreed 2. Habitat maps produced and made available 3. Extent of area mapped 4. Maps developed and made available for use
2.1.4. Implement common data standards and quality assurance procedures in line with the INSPIRE Directive and ensure that data and mapping on rare, threatened and protected species and habitats are freely available	2020	DCHG, Marine Institute, EPA, Heritage Council, NBDC, DPER	1. Number of datasets published and open to interoperable standards 2. Number of datasets used in different domains (e.g. research papers, mapping products)
2.1.5. Support research on economic and societal valuations and non-economic valuations of ecosystem services and benefits and how biodiversity underpins these values	2017-2021	EPA, DCHG, DAFM, IFNC, NESC, CSO, Academia and Research Organisations, BnM	1. Number of relevant research projects initiated

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Action	Timeframe	Lead/key partners	Performance indicators
2.1.6. Undertake surveys and assessments of status, trends and distribution of all habitats and species of EU interest and additional habitats and species of national and regional importance	2017-2021	DCHG, EPA, IFI, NBDC, Academia and Research Institutions, eNGOs	<ol style="list-style-type: none"> 1. Reports on status of habitats and species of EU interest 2. Level of funding for monitoring habitats and species of interest 3. Number of surveys of habitats and species undertaken 4. Number of Red Data lists
2.1.7. Support and encourage the volunteer network and local communities to carry out biological recording and other citizen science projects	2017-2021	Relevant Government Departments and agencies, NBDC, eNGOs, Community groups	<ol style="list-style-type: none"> 1. Number of records submitted 2. Number of participants in volunteer organisations 3. Number of projects where data is gathered by citizen scientists
2.1.8. Ensure that international collaborative funding opportunities are effectively targeted to assist implementation of this NBAP through consultation between funders, researchers and users of research	2017-2021	DCHG, DCCAE, EPA, Academia and Research Institutions	<ol style="list-style-type: none"> 1. Number of international cooperative funding programmes in which Ireland is a partner 2. Number and value of grants won
2.1.9. Enhance knowledge of the most significant direct and indirect causes of biodiversity and ecosystem service loss including combined and cumulative stressors; develop and test prevention and mitigation options	2017-2021	DCHG, Academia and Research Institutions, EPA, DAFM, DCCAE, DHPLG	<ol style="list-style-type: none"> 1. Number of relevant research programmes 2. Number of published research papers and reports
2.1.10. Continue forest research programme on forest biodiversity, the delivery of wider ecosystem services (e.g. protection of water), carbon accounting and the interaction of climate change and forest systems	2017-2021	DAFM, COFORD, Forest Service, Academia and Research Institutions	<ol style="list-style-type: none"> 1. Number of published research papers and reports 2. Funding levels

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Action	Timeframe	Lead/key partners	Performance indicators
2.1.11. Build and maintain the human resources, systems and infrastructure needed to identify, obtain, collate and curate the biological specimens that are the basis for taxonomic knowledge through training programmes	2017-2021	Academia and Research Institutions, DCHG, Botanic Gardens, NBDC, CIEEM, BSBI	1. Number of training courses 2. Number of qualified taxonomists
2.1.12. Hedgerow surveys will be continued by Local Authorities	2017-2021	Local Authorities, DCHG, DHPLG, Woodlands of Ireland, NBDC, HLAI	1. Length of hedgerow surveyed
2.1.13. Undertake Red List assessments for taxonomic groups (for which sufficient data can be gathered) and repeat existing Red List assessments at appropriate intervals	2017-2021	DCHG, DAERA, NBDC, CEDaR, IFI	1. Number of Red Lists completed
2.1.14. Build upon Red List assessments to identify conservation priority species and identify knowledge gaps for those prioritised species	2017-2021	DCHG, NBDC , IFI,	1. Number of completed Red Lists processed to identify conservation priority species
2.1.15. Identify and map nationally important Key Biodiversity Areas (KBAs) of Ireland's terrestrial and marine territories, including Ecologically or Biologically Significant Marine Areas (EBSAs)	2017-2021	NBDC, DCHG, Marine Institute, DAFM, DCCAE	1. Number of KBAs/EBSAs identified
2.1.16. Prioritise needs for research arising from the Biodiversity Climate Change Sectoral Adaptation Plan	2017-2021	EPA, DCCAE, Academia and Research Institutions, DCHG, Marine Institute	1. Number of long-term datasets on climate change impacts

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Action	Timeframe	Lead/key partners	Performance indicators
2.1.17. Encourage long-term monitoring schemes to enable tracking of biodiversity change over time	2017-2021	DCHG , NBDC, EPA, Academia and Research Institutions, relevant eNGOs	1. Number of long-term monitoring programmes
2.1.18. Conduct research into the threat posed to Ireland's marine biodiversity by marine litter including microplastics, ocean acidification, light and noise	2017-2021	Academia and Research Institutions , DHPLG, EPA, Marine Institute, DCHG	1. Number of published papers and reports 2. Number of research projects completed and results published 3. Level of funding
2.1.19. Update the Marine Research Strategy	2017	Marine Institute, DAFM	1. Updated Marine Research Strategy
2.1.20. Explore biodiversity offsets as a means to achieve no net loss of biodiversity under this Plan and as a source of revenue for biodiversity conservation and restoration	2018	DCHG, DHPLG	1. Review published
2.1.21. Identify areas/instruments and tax enablers that could be developed to incentivise biodiversity/conservation project funding by the private sector	2017-2021	Academia, research institutes, relevant public bodies	1. Number of instruments/tax enablers identified
2.1.22. Research and gather information on biodiversity implications of synthetic biology and novel genetic techniques to inform policy and regulatory issues	2017-2021	Academia, research institutes, relevant public bodies	1. Number of relevant publications
2.1.23 Encourage the use of emerging technology especially in barcoding and genomic research to acquire relevant knowledge on Irish species	2017-2021	Academia, research institutes, relevant public bodies	1. Number of relevant publications
2.1.24. Build on the National Biodiversity Indicators to develop state, pressures, and response indicators to allow assessment of Ireland's national and international biodiversity commitments by 2020, including this the 3rd NBAP, the EU Biodiversity Strategy, the Convention on Biological Diversity, and the Sustainable Development Goals	2019	NBDC , DCHG	1. Number of operational indicators

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OBJECTIVE

Increase awareness and appreciation of biodiversity and ecosystem services

Increased awareness and understanding of biodiversity issues will be important for enhancing proactive behaviour and engaging all relevant bodies in actions outlined in this Plan. Stakeholder participation will be key in reaching the targets and therefore the aim will be to enhance training, communication, cooperation and concerted action between all relevant sectors, (government, landowners, business, farming, forestry, scientific and conservation communities, etc.) in support of biodiversity conservation. This has to be a two-way process and it is also vital that conservation practitioners understand and appreciate the needs and aspirations of landowners, rural communities and businesses.

The Eurobarometer results from 2007⁷¹, 2013⁷², and 2015⁷³ show strong support from the Irish and European public for the conservation of biodiversity and the services it provides. However, in 2015 35% of the Irish people interviewed for Eurobarometer had never heard of the term biodiversity and more than 90% would like better information about the importance of biodiversity⁷³.

There is a growing number of activities aimed at increasing awareness and appreciation of biodiversity and ecosystem services within schools. Since the addition of the biodiversity theme to the Green-Schools programme in 2010, over 600 schools have been awarded a biodiversity flag. Green Campus and Neat Streets also work closely with third level and second level establishments, respectively. The number of entries into the Biological and Ecological Category of the BT Young Scientist and Technology Exhibition has



Abbeyleix bog project – community engagement 



◀ National Biodiversity Data Centre Annual Recorder's Event (Liam Lysaght)

increased from 221 entries in 2002 to 604 entries in 2017. Bord na Móna has a primary schools education programme called Eco-Rangers and BurrenBeo Trust runs Ecobeo which is a programme for primary schools in the Burren. Irish Peatland Conservation Council (IPCC) runs educational school tours, visits, field studies and teacher training workshops as well as publishing a variety of education resources on their website. IFI runs 'Something Fishy' – an educational programme delivered to over 100 primary schools each year. A number of National Parks have education programmes delivered to thousands of school children each year and the EPA have developed a suite of education programmes including a Senior Cycle Geography multi-media pack. The Marine Institute has developed the Explorers Education Programme to work with over 15,000 primary school students during 2017 from over 10 coastal counties promoting ocean literacy and awareness

of marine biodiversity. Ireland's zoos and aquaria also deliver education programmes around biodiversity. Added to this the Environmental Education Unit of An Taisce is introducing the international Learning About Forests (LEAF) programme to Ireland.

Increasing awareness and appreciation also need to be expanded beyond the education system to the wider community. Woodlands of Ireland has focused attention on Ireland's native woodland resource and promoted the management and creation of native woodlands nationally. One of the seven categories of the Tidy Towns award is 'Wildlife, Habitats, and Natural Amenities' and there are now two special awards around biodiversity (The Pollinator Award and Tree Project Award), while 2016 was the first year of the Pollinator Award in the Tidy Towns with 57 entries. Community grass

roots initiatives are also going to be important in delivering the objectives of this Plan. An example of this is An Taisce Green Communities that has been supporting a network of some 30 community groups since 2008. In 2017 Green Communities will initiate Environmental Community Training within County Limerick and will see Tidy Towns Groups, Community Councils, Residents Associations, Community Gardens, and other voluntary groups engaging with practical environmental training. This training will be delivered as part of a two year project comprising biodiversity and climate change. Business in the Community Ireland (BITCI) work with the private sector to increase awareness and understanding of the importance of embedding biodiversity into their decision-making.

The United Nations has declared May 22 as International Day for Biological Diversity to increase understanding and awareness of biodiversity issues. There are a large number of events held in Ireland around that time including Ireland's National Biodiversity Week (organised by NPWS and the Irish Environmental Network), Bioblitz (organised by the National Biodiversity Data Centre), and other local events such as Kildare Biodiversity Week.

Effective communication requires the information to be tailored to key audiences and the use of appropriate media (e.g. social media, web-based, radio, TV etc.) to share these messages. As part of implementing this Plan, a communication campaign is foreseen aimed at increasing public and sectoral understanding of the value of biodiversity.

Aichi Targets that these actions help us to achieve:



Sustainable Development Goals that these actions help us to achieve:



(Lorcan Scott)

Objective 3

Increase awareness and appreciation of biodiversity and ecosystem services

TARGET 3.1:

ENHANCED APPRECIATION OF THE VALUE OF BIODIVERSITY AND ECOSYSTEM SERVICES AMONGST POLICY MAKERS, BUSINESSES, STAKEHOLDERS, LOCAL COMMUNITIES, AND THE GENERAL PUBLIC

Action	Timeframe	Lead/key partners	Performance indicators
3.1.1. Engage with local communities and stakeholders to help achieve the objectives of this plan	2017-2021	Relevant government departments and agencies, eNGOs, community groups including CWF, and SECAD	1. Consultation with community groups undertaken
3.1.2. Enhance training, communication, cooperation and concerted action between relevant sectors in support of biodiversity conservation	2021	Relevant government departments and agencies, eNGOs and community groups	1. Establishment and delivery of courses at various NFQ levels accessible across the country 2. Visits to natural heritage attractions 3. Number of biodiversity-related day events and number of people involved. 4. Number of people surveyed through the Eurobarometer that have understand the term 'biodiversity' 5. Number of local community groups involved in conservation projects 6. Number of training courses
3.1.3. Raise awareness in private sector organisations of impacts and dependencies on biodiversity and ecosystem services	2017-2021	Private sector organisations including: IFNC, BITCI, Ibec, ISME, IFA, IOOA, Sustainable Nation	1. Biodiversity issues reported in non-financial reporting 2. Guidelines and support tools are available to inform private sector action
3.1.4. Support radio, TV, web-based and other media products that emphasise or are centred around showcasing biodiversity, its importance, and current or future challenges		DCHG, DCCAE, EPA, Heritage Council, NBDC, Academia, eNGOs	1. Number of media products centred around biodiversity

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Action	Timeframe	Lead/key partners	Performance indicators
3.1.5. Establish an island-wide Biodiversity Awards initiative where local, sectoral and educational projects or groups with a “biodiversity enhancement” focus compete for innovative prizes that will support their ongoing work and provide a springboard for public awareness and participation	2018	DCHG, DAERA	1. Biodiversity awards initiative established
3.1.6. Include biodiversity and ecosystem services in relevant courses in primary, secondary and tertiary level education	2018-2021	DES, Academia and Research Institutions, DCHG, An Taisce, eNGOs, Heritage Council	1. Inclusion of biodiversity and ecosystem services in primary and secondary curriculum 2. Number of students taking science or biology at Junior and Senior Cycle levels respectively 3. Number of students studying biodiversity related topics at the tertiary level
3.1.7. Develop and implement a communications campaign in support of public and sectoral understanding of the value of biodiversity and full implementation of this NBAP	2020	Relevant Government Departments and agencies , Local Authorities	1. Number of media mentions for launch, achievements and future actions 2. Reach of dedicated media attention (how many people are reached) 3. Number of DCHG staff assigned as communication officers 4. Number of events in National Biodiversity Week 5. Eurobarometer
3.1.8. Engage landowners, farming and aquaculture sectors to promote the benefits of conservation and sustainable use of biodiversity	2021	DCHG, DAFM, DHPLG, Marine Institute, Teagasc, LIFE projects, farmer representative groups and eNGOs	1. Level of understanding at local and national level by landowner and land-user groups of measures to support biodiversity

Conserve and restore biodiversity and ecosystem services in the wider countryside

Most of our biodiversity and ecosystem services are in the wider countryside and are facing multiple pressures. Ireland's report to the EU on the condition of habitats and species of European interest showed that the main pressures and threats to biodiversity are: agricultural intensification, natural system modifications (drainage, illegal burning, reclamation, land use change, coastal protection), invasive and problematic species, and human intrusion and disturbances²⁷.

Responses to these pressures on biodiversity and ecosystem services include the EU Directives on Water, Habitats, Birds, and Nitrates, Regulation on Invasive Alien Species, and reform of the Common Agricultural Policy (CAP). Ongoing monitoring of the implementation of these policies shows that substantial progress has been made although there is still much to be done to conserve and restore biodiversity and ecosystem services in the wider countryside. At a national level, the current major policies to address declines in biodiversity in the wider countryside include: the Rural Development Programme (RDP) which provides for agri-environment schemes⁴³, the National Peatland Strategy⁴⁵, and the European Maritime and Fisheries Fund.

This Plan will build on the achievements made to date to protect and restore Ireland's biodiversity and ecosystem services. Target 4.1 focuses on the role of agriculture, rural development and forestry policies which are also critical to the delivery of Objective 6. A central priority of the Irish RDP is restoring, preserving and enhancing ecosystems related to agriculture and forestry. Ireland will continue to develop and implement agri-environment schemes such as GLAS and Locally Led Agri-Environment Schemes (LLAES) with an increasing results-based focus and ensure that a measurable net gain for biodiversity is attained.



4 OBJECTIVE

The ecosystem services and environmental public goods provided by High Nature Value (HNV) farming are becoming more widely recognised, due to the growing awareness that biodiversity is usually higher on farmland that is managed at a lower intensity. This can include habitats and species that fall outside designation under the Habitats and Birds Directives. This has been aided by recent work that identified areas in Ireland with strong HNV farmland potential⁷⁴ and descriptions of the types of HNV farmland that occur in Ireland⁷⁵. This will aid the development of measures to maintain and enhance its biodiversity and ecosystem services. The characterisation and distribution of High Nature Value (HNV) farmland in Ireland (www.high-nature-value-farmland.ie) can enable better design and targeting of measures to particular HNV landscape types. More targeted results-based management of HNV farmland can maintain and enhance its associated biodiversity and ecosystem services.

Progress towards implementing a number of existing strategies and action plans relating to agriculture, rural development and forestry will be made under Target 4.1. These include the All-Ireland Pollinator Plan, national Genetic Conservation Strategies for plants and animals, BirdWatch Ireland's Group Species Action Plans for birds⁷⁶, and the biodiversity action plan from Bord na Móna. The new Forestry Programme 2014-2020⁷⁷ includes higher support for broadleaf planting and also measures to promote the creation

4

OBJECTIVE

of new native woodlands and the appropriate restoration management of existing native woodlands, to promote associated biodiversity and other ecosystem services especially water protection⁷⁸.

The National Botanic Gardens, the Trinity College Botanic Gardens and the Irish Seed Savers' Association, together with Ireland's zoos and other private and State collections, play an important role as gene banks and living collections. The National Botanic Gardens is also the focal point for the National Strategy for Plant Conservation, which will be updated under this Plan and is modelled on the Global Strategy for Plant Conservation.

Implementation of key EU Directives, such as the Water Framework Directive and Nitrates Directive, will reduce pressure on biodiversity by protecting the quality of our water, air and soils and reducing diffuse pollution (e.g. from pesticides, nitrates). Target 4.2 refers to a significant reduction of pollutant pressures on terrestrial and freshwater biodiversity. In addition, it is important to ensure that benefits for biodiversity are optimised in Flood Risk Management Planning and drainage schemes to ensure a positive rather than negative impact of these activities on biodiversity (Target 4.3).

This Plan sets out a number of actions in Target 4.4 to ensure that harmful invasive alien species are controlled and there is reduced risk of spread of new species. The establishment of a multi-agency working group to bring together all relevant parties to meet on an all-island basis is a key action to achieve this target. Added to this the implementation and adoption of international commitments, such as the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention), will help control harmful invasive alien species and reduce the risk of spread of new species.

Target 4.6 focuses on improving the enforcement of Wildlife Law. It includes publishing a Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) national enforcement plan that will incorporate actions from the EU Action Plan against Wildlife Trafficking⁷⁹.

Aichi Targets that these actions help us achieve:



Sustainable Development Goals that these actions help us achieve:



Giant hogweed invasive alien species (Lorcan Scott) ^

Himalayan balsam invasive alien species (Lorcan Scott) >



Objective 4

Conserve and restore biodiversity and ecosystem services in the wider countryside

TARGET 4.1:

OPTIMISED OPPORTUNITIES UNDER AGRICULTURE AND RURAL DEVELOPMENT, FORESTRY AND OTHER RELEVANT POLICIES TO BENEFIT BIODIVERSITY

4

OBJECTIVE

Action	Timeframe	Lead/key partners	Performance indicators
4.1.1. Development and implementation of agri-environment schemes (AES) under the current and next Rural Development Programme (i.e. Green, Low Carbon, Agri-environment Scheme (GLAS) and locally led AES (LLAES). Ensure AES achieve a quantifiable net gain for biodiversity and ecosystem services including significant habitat maintenance and restoration measures	2017-2021	DAFM , Teagasc	<ol style="list-style-type: none"> 1. Length/area of habitats under AES measures 2. Ecological monitoring tools implemented which allow for quantifying real ecological benefits of AES 3. Area of semi-natural/natural habitat maintained/restored
4.1.2. Describe High Nature Value (HNV) farmland and develop measures and support tools to maintain and enhance its biodiversity and ecosystem services	2017-2021	DAFM, DCHG, Teagasc, Heritage Council, Academia and Research Institutions	<ol style="list-style-type: none"> 1. Monitoring programme for extent, distribution and quality of HNV farmland agreed and implemented 2. Extent of area identified as HNV 3. Expenditure on biodiversity related AES measures in HNV areas
4.1.3. Implement Bord na Móna's Biodiversity Action Plan 2016-2021 and any revisions of the Plan	2017-2021	BnM	<ol style="list-style-type: none"> 1. Number of actions implemented
4.1.4. Implement actions in the Forestry Programme 2014-2020, ensuring maximised positive outcomes for biodiversity and ecosystem services and restoration of areas impacted by inappropriate forestry, including the implementation of recommendations of HYDROFOR study ⁸⁰ .	2017-2020	DAFM	<ol style="list-style-type: none"> 1. Achievement of 30% target for broadleaf afforestation 2. Uptake of the Native Woodland Establishment Scheme and the Native Woodland Conservation Scheme 3. New Environmental Afforestation Requirements in place that are fully compliant with EU Directives 4. Area of forestry under restoration measures

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OBJECTIVE

Action	Timeframe	Lead/key partners	Performance indicators
4.1.5. Progress implementation of BirdWatch Ireland's Group Species Action Plans for birds (e.g. lowland farmland birds, riparian birds, woodland and scrub birds, upland birds and Lake, Fen and Turlough birds)	2017-2021	BWI and other partners listed in their plans	1. Number of actions undertaken and delivered 2. Population trends in targeted species
4.1.6. Review, update and publicise the National Plant Conservation Strategy including updating the strategy in line with current global targets	2017-2020	Botanic Gardens, DCHG	1. Number of targets achieved
4.1.7. Implement the National Genetic Conservation Strategies for animals and plants	2017-2020	DAFM , Irish Seed Savers Association	1. Number of species, varieties, or landraces for which conservation measures are being undertaken
4.1.8. Implement the All-Ireland Pollinator Plan including: making the Irish countryside more pollinator friendly; raising awareness of pollinators; supporting beekeepers and growers; expanding knowledge of pollinators; and collecting evidence to track changes ⁸¹	2015-2020	NBDC and other actors listed in the plan	1. Number of actions implemented 2. Status of pollinator populations 3. Delivery of pollinator actions in agri-environmental plans 4. Area of land under organic production
4.1.9. Implement "Deer Management Strategy in Ireland - A Framework for Action" ⁸²	2017-2021	Irish Deer Management Forum, DAFM	1. Area of woodland with appropriate deer management

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OBJECTIVE

TARGET 4.2:

PRINCIPAL POLLUTANT PRESSURES ON TERRESTRIAL AND FRESHWATER BIODIVERSITY SUBSTANTIALLY REDUCED BY 2020

Action	Timeframe	Lead/key partners	Performance indicators
4.2.1. Continue to protect, enhance and monitor the ecological status of water during the second cycle of the Water Framework Directive (2015-2021) including reducing risks to water quality and utilising ecological expertise in decision-making, and in analysis of cumulative effects	2017-2021	EPA, DAFM DHPLG, IFI, DCHG, Local Authorities, Academia and Research Institutions, Waterways Ireland, Marine Institute	1. The status of water quality in Ireland 2. Number of River Basin Management Plan (Programme of Measures) measures implemented
4.2.2. Irish Water to implement its Water Services Strategic Plan (2015-2040), in particular its objective to protect and enhance the environment	2017-2021	Irish Water DHPLG	1. Environmental monitoring of the implementation of the plan
4.2.3. Implement recommendations of EPA STRIVE Report Series No. 99 (Management Strategies for the Protection of High Status Waterbodies) ⁸³ including, amongst other measures: prioritisation for protection measures; planning/licensing control; assessment of cumulative impacts; and integrated monitoring and protection	2017-2021	EPA , Local Authorities, DAFM	1. High status catchment delineation and prioritisation for protection measures 2. Establishment of a monitoring system 3. Centralised GIS database or activities database 4. Trends in status

TARGET 4.3:
OPTIMISED BENEFITS FOR BIODIVERSITY IN FLOOD RISK MANAGEMENT PLANNING AND DRAINAGE SCHEMES

Action	Timeframe	Lead/key partners	Performance indicators
4.3.1. Ensure that Flood Risk Management (FRM) planning and associated SEA, EIA and AA, minimises loss of biodiversity and ecosystem services through policies to promote more catchment-wide and non-structural flood risk management measures	2017-2021	OPW	<ol style="list-style-type: none"> 1. Assessment to identify and promote natural flood management techniques that may be suitable for application in Ireland 2. Inclusion of catchment-wide and non-structural measures within the options assessed by Flood Risk Management Plans
4.3.2. All significant drainage (arterial drainage), including both initial drainage and maintenance drainage will be assessed for its implications for biodiversity, particularly for wetlands	2017-2021	OPW, IFI	<ol style="list-style-type: none"> 1. Inclusion of biodiversity considerations in drainage programs 2. Number of assessments on drainage works

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OBJECTIVE

TARGET 4.4:
HARMFUL INVASIVE ALIEN SPECIES ARE CONTROLLED AND THERE IS REDUCED RISK OF INTRODUCTION AND/OR SPREAD OF NEW SPECIES

Action	Timeframe	Lead/key partners	Performance indicators
4.4.1. Ratify the International Convention for the Control and Management of Ships' Ballast Water and Sediments	2017	DTTAS, DFAT	<ol style="list-style-type: none"> 1. Ratification of the Convention in 2017
4.4.2. Develop national and whole island plans to implement the EU Invasive Alien Species (IAS) Regulation and relevant sections of Ireland's EU (Birds and Natural Habitats) Regulations 2011 including: development and adoption of biosecurity plans in relevant state bodies; a Rapid Response Protocol for the island of Ireland; coordination and collation of invasive species surveillance and monitoring data; and work with Northern Ireland and UK authorities on invasive species of mutual concern	2017-2021	DCHG, DAERA NBDC, IFI, TII, Waterways Ireland, Local Authorities, local community groups, eNGOs and the Loughs Agency	<ol style="list-style-type: none"> 1. Number of state bodies with biosecurity plans 2. Rapid Response protocol for Ireland developed 3. Number of new IAS recorded and established

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OBJECTIVE

Action	Timeframe	Lead/key partners	Performance indicators
4.4.3. Continue and enhance measures for eradication, where feasible, control and containment of invasive species	2017-2021	IFI, DCHG, Local Authorities , TII, Waterways Ireland, National Botanic Gardens, local community groups	1. Number of successfully controlled invasions
4.4.4. Encourage horticultural nurseries to produce native species, varieties and landraces from appropriate native sources for public and private sector plantings. Public bodies will endeavour to plant native species in order to reduce importation of non-native species, varieties and landraces	2017-2021	DAFM, Coillte, Local Authorities, TTI, DCHG, OPW	1. Number of new plantings that exclusively use native plants for landscaping 2. Quantities of nurseries supplying traceable documentation of Irish provenance plant material
4.4.5. Continue to produce Risk Assessments for potentially invasive non-native species	2017-2021	NBDC , DCHG	1. Number of Risk Assessments completed for potentially invasive non-native species
4.4.6. Publish legislation to address required provisions under the EU Regulation on invasive alien species (No. 1143/2014) and on responsibilities and powers regarding invasive alien species, giving IFI responsibility for aquatic invasive species	2017-2021	DCHG , DCCAE, IFI, NBDC	1. Legislation published and enacted
4.4.7 Work with horticultural and pet trades to prevent the introduction and spread of invasive alien species	2017-2021	DCHG , NBDC	1. Communication undertaken

TARGET 4.5:
IMPROVED ENFORCEMENT OF WILDLIFE LAW

Action	Timeframe	Lead/key partners	Performance indicators
4.5.1. Enhance understanding and role of DAFM, An Garda Síochána, Revenue's Customs Service and the judiciary in enforcing Wildlife legislation, including provision of specific training and guidance	2017-2021	DCHG, An Garda Síochána, Revenue's Customs Service, DAFM, Dept of Justice	1. Number of training courses and trainees 2. Number of joint operations between listed bodies
4.5.2. Provide adequate training in Wildlife Crime detection and enforcement to all DCHG enforcement staff	2017-2021	DCHG	1. Number of training courses and trainees
4.5.3. Publish national CITES enforcement plan	2017	DCHG , An Garda Síochána, Revenue's Customs Service, DAFM	1. CITES enforcement plan published
4.5.4. Continue to enforce the Wildlife Acts and Regulations, in particular the Habitat Regulations	2017-2021	DCHG , An Garda Síochána, Revenue's Custom Service, EPA	1. Number of seizures/prosecutions 2. Number of targeted operations
4.5.5. Continue to enforce and report upon implementation of the European Communities (Environmental Liability) Regulations	2017-2021	EPA	1. Article 18 register maintained by EPA 2. Report to European Commission submitted
4.5.6. Train enforcement officers in other agencies that operate in the field on wildlife law	2017-2021	DAFM, Agricultural Inspectors, Fisheries Officers, EPA	1. Number of officers trained

4
OBJECTIVE



Conserve and restore biodiversity and ecosystem services in the marine environment

Ireland has a wealth of marine biodiversity from its inshore waters to the ocean depths and its marine Exclusive Economic Zone (EEZ) far exceeds its land area. Marine industries in Ireland are worth €1.3 billion annually to the Irish economy and provide around 17,000 jobs⁸⁴. Ireland's tourism industry also relies on a clean and unspoilt marine and coastal environment.

The current state of Ireland's marine environment is highlighted in Ireland's reports on the Habitats Directive and the Marine Strategy Framework Directive (MSFD) in 2013. Of the marine habitats assessed under the Habitats Directive, only sandbanks and sea caves were assessed as being in 'favourable' status. Estuaries, tidal mudflats, large shallow inlets and bays were assessed as being in 'inadequate' status. Reefs (in particular deepwater reefs) and lagoons were in 'bad' status²⁷. Further monitoring and reporting on the ecological status of Ireland's marine habitats will be forthcoming in 2018 under the MSFD and the Water Framework Directive (WFD), which will give a clearer picture of the state of Ireland's marine environment.

Pressures from human activities on Ireland's coastal and marine biodiversity and ecosystem services arise from a growing range of sources including nutrient and chemical discharge from human activities (for example from industry, agriculture, municipal wastewater) and through direct physical disturbance and habitat degradation from pollution, litter, man-made noise and light⁸⁵. These pressures are mainly in transitional and coastal waters. Fishing impacts on both pelagic (i.e., water column) and seabed communities, particularly for species with low growth rates, soft substrates or cold water coral reefs, and some areas have been heavily impacted by this activity⁸⁵. There are also concerns about the level of by-catch of birds

and marine mammals in certain fisheries. Fish populations are generally improving since reform of the Common Fisheries Policy (CFP) and more sustainable management of fish populations with the setting of Maximum Sustainable Yield (MSY) for commercial species⁸⁶. There are also provisions in the revised CFP for the establishment and implementation of clear conservation measures where adverse environmental impacts from fishing are thought to occur, with a view to ensuring better marine ecosystem and biodiversity protection. Climate change and ocean acidification present considerable threats to the marine environment and may modify effects of other pressures and facilitate further establishment and spread of invasive species.

5 OBJECTIVE



Grey seal (Oliver Ó Cadhla) 



Exposed intertidal sandbanks in Wexford Harbour (Oliver Ó Cadhla) 

The protection of our marine ecosystems and compliance with national and international environmental legislation and full implementation of the MSFD, WFD, Habitats and Birds Directives and revised CFP will help achieve Ireland's Vision for Biodiversity (i.e. that Ireland's marine biodiversity and ecosystems are conserved and restored, delivering benefits essential for all sectors of society). The development and implementation of effective Marine Spatial Planning for Ireland's coastal zone and EEZ waters will assist in the identification and improved protection of threatened habitats and species in accordance with the EU Maritime Spatial Planning Directive (2014/89/EU)⁸⁷ and MSFD. The European Maritime Fisheries Fund (EMFF) contains measures such as investments in the protection and restoration of marine flora and fauna, improvements to the selectivity of fishing gear, and schemes to improve the environmental performance of aquaculture.

Aichi targets that these actions help us achieve:



Sustainable Development Goals that these actions help us achieve:



Objective 5

Conserve and restore biodiversity and ecosystem services in the marine environment

TARGET 5.1:

PROGRESS MADE TOWARDS GOOD ECOLOGICAL AND ENVIRONMENTAL STATUS OF MARINE WATERS OVER THE LIFETIME OF THIS PLAN

Action	Timeframe	Lead/key partners	Performance indicators
5.1.1. Develop and implement a Marine Spatial Plan for Ireland	2017-2021	Inter-Departmental Marine Coordination Group, DHPLG	1. Reports on implementation of the Integrated Marine Plan (IMP) 2. Compliance with EU Maritime Spatial Planning Directive (2014)
5.1.2. Implement measures to achieve good ecological and environmental status of marine and coastal habitats as required by the Habitats Directive, Water Framework Directive and Marine Strategy Framework Directive (MSFD) and in line with the OSPAR Convention (Convention for the protection of the marine environment in the North-East Atlantic)	2017-2021	DHPLG, DCCAE, Marine Institute, DAFM, Irish Water, Local Authorities, IFI, DCHG, EPA, An Taisce	1. Progress on measures under MSFD 2. River Basin Management Plans (RBMP) completed 3. Number of Blue Flag beaches 4. Number of Green Coast Awards 5. Number of sites where untreated sewage is discharged
5.1.3. Implement OSPAR recommendations on Habitats and Species	2017-2021	DHPLG, DFA, Marine Institute, DCHG	1. Number of OSPAR recommendations implemented
5.1.4. Promote the incorporation of ecological engineering features in new and existing structures such as coastal defences	2017-2021	OPW, Local Authorities, Research Institutes	1. Number of new ecological engineering projects

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OBJECTIVE

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OBJECTIVE

TARGET 5.2:

FISH STOCK LEVELS MAINTAINED OR RESTORED TO LEVELS THAT CAN PRODUCE MAXIMUM SUSTAINABLE YIELD, WHERE POSSIBLE, NO LATER THAN 2020

Action	Timeframe	Lead/key partners	Performance indicators
5.2.1. Continue to ensure the Common Fisheries Policy (CFP) and marine fisheries provide for the conservation of fish species and marine biodiversity	2017-2021	DAFM	<ol style="list-style-type: none"> 1. Number of fish stocks fished within their maximum sustainable yield (MSY) 2. Adoption and implementation of CFP landings obligation and development of multi-annual plans. 3. Programme in place to monitor accidental capture of non-target species
5.2.2. Implement stock recovery plans for any fish stocks outside safe biological limits, and management plans to maintain other stocks at safe biological levels as determined by the standards for Good Environmental Status in the Marine Strategy Framework Directive	2017-2021	DAFM	<ol style="list-style-type: none"> 1. Number of over-exploited stocks in Irish waters 2. Number of multi-annual plans in place 3. Number of stocks within safe biological limits
5.2.3. Adopt and implement provisions under Common Fisheries Policy (CFP) for the establishment of appropriate management measures (e.g. no-take zones) that conserve biodiversity and fish stock levels	2017-2021	DAFM	<ol style="list-style-type: none"> 1. Number of management actions e.g. no-take zones implemented 2. CFP legislation on technical measures adopted and implemented
5.2.4. Take concerted action to combat illegal, unreported and unregulated fishing	2017-2021	SFPA, IFI	<ol style="list-style-type: none"> 1. Number of patrols 2. Number of interceptions 3. Provision of annual reports detailing information on illegal, unreported and unregulated fishing



6

OBJECTIVE

Expand and improve management of protected areas and species

Protected areas are central to conservation policy worldwide. They enable us to protect key habitats and species and provide refuges for the movement and migration of species. Globally, protected areas are believed to provide livelihoods for 1.1 billion people. Protected areas are the primary source of drinking water for over a third of the world's largest cities and play a major role in ensuring global food security. It has been estimated that investment in creating and managing protected areas across the world will yield returns of the order of 25:1 to 100:1. Governments around the world are increasingly looking at protected areas not only to conserve biodiversity but also to secure vital ecosystem services and enable adaptation to the impacts of climate change.

Several categories of protected areas exist in Ireland providing varying degrees of protection to the species and habitats they contain. The most significant and extensive are the Special Areas of Conservation (SACs) under the Habitats Directive and Special Protection Areas (SPAs) under the Birds Directive. To date, 430 SACs and 154 SPAs have been protected in Ireland covering 1,949,253 ha in total, of which 907,754 ha is terrestrial/freshwater. All Public Authorities who have a role in licensing or planning have legal obligations to ensure that activities under their remit do not have negative impacts on SACs and SPAs (see Objective 1).

The basic designation for nationally important areas for wildlife is Natural Heritage Area (NHA). Currently the only statutorily designated NHAs are for peatland sites. Based on the "Review of the Raised Bog NHA Network", published in 2014, it is intended that there will be a total of 127 statutorily designated peatland NHAs and 7 sites that are partly designated peatland NHAs.

The term 'proposed NHA' (or pNHA) originated with 1,235 sites that were advertised in 1994-1995. Subsequently, 308 became cSACs (candidate SACs) outright, a further 192 were subsumed as subsites into cSACs and/or SPAs, 100 became designated peatland NHAs, and 3 were delisted. This leaves 632 'stand-alone' pNHAs. Their importance is recognised in all County Development Plans and in other local area development plans.

Ireland's six National Parks are important resources for both wildlife conservation and for Ireland's tourism and recreation industries. Nature Reserves are important areas for wildlife that are protected under Ministerial order. Most of these are state-owned.

Significant progress was made during the period of the second Plan such as publishing a Prioritised Action Framework for the Natura 2000 network and setting conservation objectives for SACs. This work then fed into the development of agri-environment objectives for the current Rural Development Plan. Progress was made toward the conservation of peatland sites with publication of the National Peatlands Strategy in 2016 with the National Raised Bog SAC Management Plan 2017-2022 which outlines the way forward for conservation and restoration of important peatland sites, planned for publication shortly subject to government approval. Monitoring of habitats and species of EU interest has increased our knowledge of the status of these habitats and species and over the lifetime of this plan further progress will be made toward ensuring conservation of protected areas and species.

Ireland's existing network of Marine Protected Areas (MPAs) has an important role to play in the maintenance of biodiversity and achievement of Good Environmental Status (GES) by 2020 as required by the Marine Strategy Framework Directive. Currently some Natura 2000 sites designated under the Birds Directive or the Habitats Directive, and also meeting OSPAR objectives,





Fish pass (Lorcan Scott)

are part of that network but a further coherent and representative extension of this network of protected sites is envisaged to take place approximately within the lifetime of this Plan. Ongoing scientific research, marine spatial planning and biodiversity priorities will help to identify those sites that represent the best candidates for future MPA designation.

Species of conservation concern will be identified following the Red list process or noted as part of trend analysis (e.g. Curlew). A review will be undertaken

to determine which species would benefit from the development of a Threat Response Plan or Species Action Plan. Existing Plans will continue to be implemented.

Ongoing *ex-situ* conservation programmes will be supported as they are an important mechanism to assist the wild recovery of biodiversity.

Aichi Targets that these actions help us achieve:



Sustainable Development Goals that these actions help us to achieve:



ex-situ conservation of Bryum moss (Christine Campbell) 

Objective 6

Expand and improve management of protected areas and species

TARGET 6.1:
NATURA 2000 NETWORK DESIGNATED AND UNDER EFFECTIVE CONSERVATION MANAGEMENT BY 2020

Action	Timeframe	Lead/key partners	Performance indicators
6.1.1. Complete designation process for Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), in particular, for marine coastal and offshore SPAs	2017-2020	DCHG	1. Percentage of sites designated by Statutory Instrument
6.1.2. Develop and utilise licensing and consent systems to facilitate sustainable activities within Natura 2000 sites	2017-2020	DCHG, DAFM, DHCPLG, Local Authorities, EPA	1. Licensing and consent systems in place and compliant with Habitats and Birds Directives
6.1.3. Publish detailed site-specific conservation objectives for Natura 2000 sites	2017-2020	DCHG	1. Number/proportion of sites for which conservation objectives have been published
6.1.4. Manage National Parks and Nature Reserves to a high standard	2017-2020	DCHG	1. Status of habitats and species in these properties
6.1.5. Implement the National Peatland Strategy ⁴⁵	2017-2021	DCHG , BnM	1. Area of raised, lowland, and upland blanket bog under restoration 2. Number of peatland sites with restoration activities completed 3. Trends in status of peatland habitats
6.1.6. Implement the National Raised Bog Special Areas of Conservation (SAC) Management Plan (2017-2022) ⁴⁶	2017-2021	DCHG , BnM	1. Number of sites within raised bog SAC network where restoration measures have commenced/been undertaken 2. Area of raised bog under restoration 3. Sustainable and effective management system in place for raised bog SAC network 4. Successful completion of Raised bog LIFE project on 12 SAC sites

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OBJECTIVE

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OBJECTIVE

Action	Timeframe	Lead/key partners	Performance indicators
6.1.7. Implement the conservation measures necessary to achieve the published conservation objectives for Natura 2000 sites. Develop and implement additional measures as necessary to achieve favourable conservation status both nationally and at site level	2017-2021	DCHG , DAFM, Teagasc, EPA, Local Authorities, other public bodies who own/manage SACs/ SPAs	1. Number of farms implementing appropriate agri-environment measures in protected and other targeted areas 2. Number of relevant measures undertaken by forestry, freshwater fisheries and water sector
6.1.8. Implement measures to ensure that, taking account of climate change, there are no significant adverse effects from marine fisheries and aquaculture in and adjacent to Natura 2000 sites	2021	DAFM , Marine Institute	1. Number of habitats and species of EU interest reported to be impacted by fisheries/aquaculture 2. Mitigation plans and other conservation measures for marine fisheries in and adjacent to Natura 2000 sites as required
6.1.9. Review and update the Prioritised Action Framework for Natura 2000	2018	DCHG	1. Prioritised Action Framework updated
6.1.10. Continue to collect information on sites to be considered towards the protection and enhancement of the Natural Heritage Area network	2017-2021	DCHG	1. Number of sites assessed

TARGET 6.2:

SUFFICIENCY, COHERENCE, CONNECTIVITY, AND RESILIENCE OF THE PROTECTED AREAS NETWORK SUBSTANTIALLY ENHANCED BY 2020

Action	Timeframe	Lead/key partners	Performance indicators
6.2.1. Increase connectivity of the protected areas network using appropriate buffer zones, corridors, stepping stones and/or flyways	2021	DCHG, Local Authorities, BnM, eNGOs, DAFM	1. Number/extent of features established to improve connectivity and resilience of protected areas 2. Management activities in place for increasing connectivity where appropriate 3. Number of County Development Plans with policies on connectivity

Action	Timeframe	Lead/key partners	Performance indicators
6.2.2. Extend the Marine Protected Area network	2021	DHPLG, DCHG, DCCAE	1. Number of additional areas designated

TARGET 6.3:

NO PROTECTED SPECIES IN WORSENING STATUS BY 2020; MAJORITY SPECIES IN, OR MOVING TOWARDS, FAVOURABLE STATUS BY 2020

Action	Timeframe	Lead/key partners	Performance indicators
6.3.1. Draw up threat response plans for selected species of conservation concern and for bird species identified in the 2017 EU Action Plan for nature, people and the economy	2017-2021	DCHG	1. Number of threat response plans developed
6.3.2. Set up a Curlew task force	2017	DCHG, DAFM, BWI, relevant civil society stakeholders	1. Action Plan initiated
6.3.3. Develop, adopt and implement restoration programmes for Lamprey, Shad species, Salmon, Sea trout and Eels. Improve passage of migratory fish species and review effectiveness of existing passes and impacts of existing and potential hydroelectric dams and address other barriers to fish movement. Put in place traceability scheme for Eel	2017-2020	IFI, Marine Institute, Forest Service, Irish Water, OPW, ESB	1. Management plans published for Salmon and Sea Trout 2. Traceability scheme for Eel in place 3. Number of effective fish passes 4. Status of selected fish species
6.3.4. Implement species action plans, including for: Red Squirrel, Red Grouse, Grey Partridge, Hen Harrier and reintroduced raptors and initiate further management actions as necessary	2017-2021	DCHG, GET, IGPCT, BWI, DAFM	1. Population levels of target species 2. Number of management actions initiated in response to population trends
6.3.5. Identify and subsequently fill critical gaps in ex-situ conservation programmes for wild species, in line with best practice	2017-2021	DAFM, DCHG, Fota Wildlife Park, Tayto Wildlife Park, National Botanic Gardens, Dublin Zoo, BWI	1. Number of threatened species in ex-situ conservation



Strengthen international governance for biodiversity and ecosystem services

An all-Ireland approach is necessary to safeguard biodiversity on this island. Biodiversity does not recognise political boundaries. Ireland's land border with Northern Ireland and marine border with the UK results in many species moving between the two territories. There is already substantial North/South dialogue and co-operation on biodiversity issues and it is envisaged that this will continue, as reflected in the actions in this chapter and previous chapters, including for tackling wildlife crime and fulfilling international commitments.

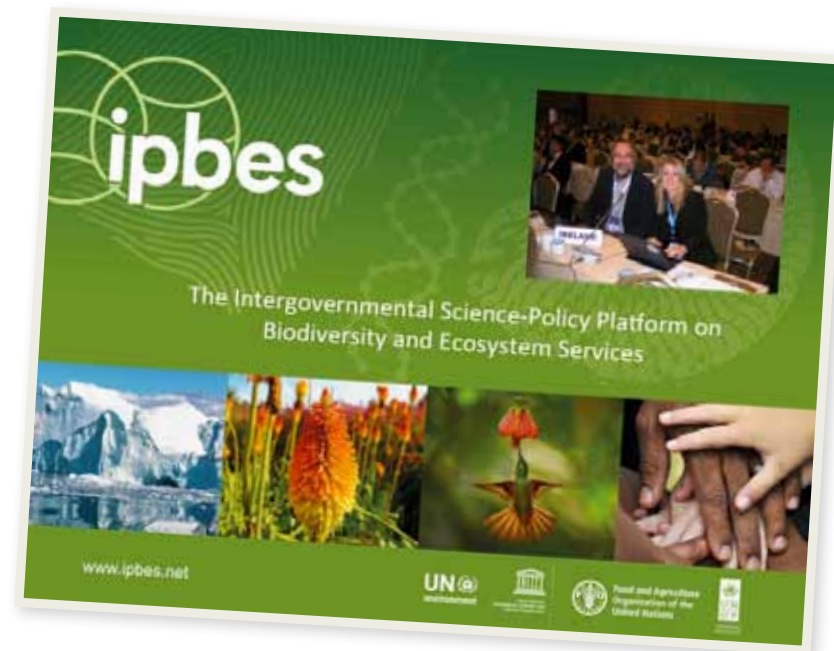
In addition to the actions set out above to conserve biodiversity in Ireland, there is also a role to be played globally through: the overseas aid programme; minimising trade in endangered species; reducing trade in commodities in cases where production causes damage to biodiversity; Ireland's involvement in important global issues such as climate change and access to genetic resources; and acting as an advocate for biodiversity in international forums.

The UN Convention on Biological Diversity's (CBD) Strategic Plan for Biodiversity 2011-2020, including the Aichi Biodiversity Targets, focused international efforts to alleviate global biodiversity decline. The fourth Global Biodiversity Outlook (GBO4) published in 2014 provided a mid-term assessment of implementation of the Strategic Plan and its targets. It reports that there has been significant progress towards meeting some components of the majority of these targets¹. However, in most cases this progress will not be sufficient to achieve the targets set for 2020 and additional action is required to keep the Strategic Plan for Biodiversity 2011-2020 on course¹.

The major pressures on biodiversity globally include: loss, degradation and fragmentation of natural habitats; overexploitation of biological resources; pollution; the impacts of invasive alien species on ecosystems and the services they provide to people; and climate change and the acidification of the oceans¹. Some ecosystems are being pushed towards critical thresholds or tipping points. If these thresholds are passed, there is a real risk of dramatic loss of biodiversity and degradation of a broad range of services on which people depend for their livelihoods and well-being.

Through its Overseas Development Aid Programme, administered by Irish Aid, Ireland has the opportunity to widen the scope of its activities to embrace biodiversity conservation, and in so doing, take advantage of the skills base in life sciences that Ireland possesses.

7 OBJECTIVE



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OBJECTIVE

Ireland has signed and ratified a number of international conventions, treaties, protocols and other agreements that seek to provide a global response and approach to protecting biodiversity and ecosystem services including: the CBD, the UN Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Bonn Convention (on conservation of migratory species of wild animals) (CMS), the Global Strategy for Plant Conservation (GSPC), OSPAR Convention (North-East Atlantic), International Convention for the Regulation of Whaling, and the Ramsar Convention (on wetlands). Ireland is also a member of the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), a Party to the UN Framework Convention on Climate Change and has adopted the Sustainable Development Goals (SDG). Ireland is implementing the Lima Action Plan for UNESCO's Man and the Biosphere Programme and its World Network of Biosphere Reserves (2016-2025). Meeting the Aichi Biodiversity Targets would contribute significantly to broader global priorities addressed by the post-2015 development agenda; namely, reducing hunger and poverty, improving human health; and ensuring a sustainable supply of energy, food and clean water. The SDGs reaffirm the importance of biodiversity for human well-being and apply equally to developed countries, such as Ireland, and undeveloped countries.

Aichi targets that these actions help us achieve:



Sustainable Development Goals that these actions help us achieve:



Rhino horn seized at Dublin Airport 

Objective 7

Strengthen international governance for biodiversity and ecosystem services

TARGET 7.1: STRENGTHENED SUPPORT FOR BIODIVERSITY AND ECOSYSTEM SERVICES IN EXTERNAL ASSISTANCE

Action	Timeframe	Lead/key partners	Performance indicators
7.1.1. Biodiversity will be made a component of Ireland's development cooperation programme; and support to, and cooperation with, developing countries shall take into account biological diversity through the application of the CBD	2017-2021	DFAT	1. Amount allocated to biodiversity components and biodiversity specific Irish Aid grants



TARGET 7.2: ENHANCED CONTRIBUTION TO INTERNATIONAL GOVERNANCE FOR BIODIVERSITY AND ECOSYSTEM SERVICES

Action	Timeframe	Lead/key partners	Performance indicators
7.2.1. International agreements (including CBD, CITES, CMS, OSPAR, ICES, GSPC, Ramsar, IPBES and NASCO) will be serviced to ensure that Ireland plays a role in the future of international biodiversity policy, particularly in the area of mainstreaming biodiversity and ecosystem services across all sectors	2017-2021	DCHG, DHPLG, DFAT, Academia and Research Organisations	1. Number of participants at meetings 2. Reporting obligations fulfilled
7.2.2. Continue to contribute data and information to European and international networks (including Global Biodiversity Information Facility, and European Environment Agency) to support conservation research and policy	2017-2021	DCHG, NBDC	1. Number of networks provided with data from Ireland

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OBJECTIVE

TARGET 7.3: ENHANCED COOPERATION WITH NORTHERN IRELAND ON COMMON ISSUES

Action	Timeframe	Lead/key partners	Performance indicators
7.3.1. Continue communication and harmonized action at an all-island level on issues of common concern including for the implementation of international legislation and tackling wildlife crime	2017-2021	DCHG, DAERA	1. Number of all-island initiatives
7.3.2. Cooperation and coordination (where possible and relevant) on Species and Habitat surveillance initiatives under the Habitats and Birds Directives (e.g., All-Ireland seal surveys, All-Ireland cetacean strandings scheme, All-Ireland Red List for Birds (BoCCI), All-Ireland Brent Research Group)	2017-2021	DCHG, DAERA, British/Irish Council, NBDC, CEDaR, eNGOs	1. Number of long-term all-island monitoring schemes
7.3.3. Further cooperation on and co-ordination of All-Island Species Protection Plans and Red List assessments	2017-2021	DCHG, DAERA	1. Number of new plans developed 2. Number of actions undertaken for existing plans 3. Number of all-Ireland Red List assessments undertaken

TARGET 7.4: REDUCTION IN THE IMPACT OF IRISH TRADE ON GLOBAL BIODIVERSITY AND ECOSYSTEM SERVICES

Action	Timeframe	Lead/key partners	Performance indicators
7.4.1. Adopt measures to significantly reduce negative impacts of trade on biodiversity and to enhance positive impacts	2017-2021	DCHG, DFAT, DAFM	1. Knowledge of the pressures placed on biodiversity by trading activity and trade routing 2. Measures implemented to reduce or offset those pressures and their impacts
7.4.2. Ensure CITES Regulations are effectively implemented and enforced	2017-2021	DCHG, Revenue's Custom Service	1. Annual reports submitted 2. Biennial reports submitted
7.4.3. Implement legislation to control imports of illegally harvested timber into Ireland. Facilitate exchange of best practice in private and public sector procurement policies favouring wood products from sustainable sources, including certifiable wood products	2017-2021	DAFM, DFAT	1. Legislation drafted and enacted
7.4.4. Investigate potential measures to prevent, minimise and/or mitigate deforestation due to non-wood imports	2017-2021	DAFM, Bord Bia, DFAT, BnM	1. Number of measures identified