

Keeping Ireland Green

12 Stories about the EU and Ireland's Environment



[#EUGreenDeal](#)







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Foreword

The next ten years are critical if we are to address the climate and biodiversity crises which threaten our safe future on this planet. These challenges are the most profound that we face globally, and tackling them will require fundamental changes in how we live our lives.



A stable climate and rich biodiversity are essential to the continued health of our society, economy, species and planet. The European Green Deal commits to delivering net-zero greenhouse gas emissions at EU level by 2050. It also increases the EU-wide emissions reduction target to up to 55% by 2030, to align with the goal of limiting warming to 1.5 degrees Celsius. Our new Programme for Government is also ambitious, and commits to an average 7% per annum reduction in overall greenhouse gas emissions from 2021 to 2030, to achieving net-zero emissions by 2050, and to protecting our biodiversity and natural heritage.

The spread of the Covid-19 pandemic has had a devastating impact on our society. As we work to reignite and renew our economy, we should take the opportunity to accelerate the transition from our dependence on fossil fuels to a decarbonised society. While this journey will be challenging, it will bring new opportunities, making Ireland a more resilient, and sustainable place.

I warmly welcome the publication of this collection of success stories from around the country. These stories emphasise how practical initiatives in every sector can help put us on the right path to ensuring our health, welfare and security, and that of future generations. I hope they will inspire others to join us in the task of decarbonising our country, our continent and our planet.

With the increased scale and depth of this ambition, new strategies will be needed to sustain momentum over time. The Government is committed to working with the EU and all our citizens to bring about the change needed to transform our society. The Green Deal will strengthen our efforts.

- Eamon Ryan T.D.



Minister for Communications, Climate Action and Environment



Introduction

Ireland is world-renowned for its lush green landscapes, unspoiled coastal waters, rolling hills and fertile soils. The environment is vital to our wellbeing. Its protection is crucial to ensure that it provides us with clean air, safe drinking water and healthy, wholesome food that commands a premium internationally, and attracts millions of visitors every year. For both the climate and the environment, the next years will be crucial.

According to the Central Statistics Office, Ireland has been performing below the EU average in several key areas; notably with respect to carbon emissions, bathing water standards and the amount of land designated as protected areas for birds. The Climate Change Advisory Council has warned similarly that “Ireland is currently off course in relation to its EU targets to 2020 and 2030” and risks drifting “further from a pathway that is consistent with a transition to a low-carbon economy and society”.

The Irish public is highly aware of the threat posed by environmental breakdown. Recent Eurobarometer surveys have found that protecting the environment is important for 93% of Irish people and that Irish people perceive climate change and environmental degradation as key issues facing the EU.

The EU is working with Ireland to address these shortcomings. To give a flavour of what can be accomplished, the European Commission Representation in Ireland has compiled this collection of 12 success stories, highlighting the ambition and impact of action taking place around the country. From tackling climate change to protecting endangered species, promoting sustainable farming techniques, cleaning up our oceans and boosting recycling.

In the midst of the Covid pandemic, the EU has made a strategic choice to look ahead and act together to repair the damage and build a better and more sustainable future for the next generation. Our living environment can no longer be taken for granted; urgent action is required to prevent irreversible damage to our planet. Protecting and restoring our environment delivers not only much needed public goods but also boosts economic growth. The European Commission is committed to delivering a Green Deal for Europe: a package of far-reaching reforms and new policy initiatives to make the EU the world’s first “climate-neutral continent” by 2050. It will make the EU’s economic recovery sustainable and inclusive. In leading this green transition by example, we can help convince other countries to move forward with us to a safer and more prosperous future.

There are many great stories north, south, east and west of the country that demonstrate the commitment of the Irish public to preserving their natural environment. The Green Deal will serve to strengthen and build on such efforts.

- Gerry Kiely, Head of the European Commission Representation in Ireland



Farmers protecting nature

“Embrace the green,” says Donal Sheehan, “don’t go against it.”

The loss of biodiversity in Ireland over the years has been potentially catastrophic, causing the deterioration of globally important habitats and species loss.

Conservation of natural resources, such as biodiversity, is a key component to the objectives of the European Green Deal. While farmers are legally required to reduce their carbon footprint and improve water quality, currently there is no legal obligation to improve biodiversity.

That’s why Cork farmer, Donal Sheehan, created The BRIDE (Biodiversity Regeneration In a Dairying Environment) Project.

“The most innovative feature of the BRIDE Project is the landscape-scale approach to biodiversity,” says Donal. “You have groups of farmers in an area who are encouraged to improve biodiversity.”

This community-based effort requires participants to maintain 10% of their land as a Biodiversity Managed Area (BMA). For instance, some farmers have set aside a small parcel of land to create a pond; others have cultivated native woodland, planted hedgerows, or installed pollinator plots – all with the aim of increasing biodiversity.

“Farmers get bonus points if they have a group rather than an individual solution. The project pays €2,000 per farmer and multiplied by the 44 farms involved in the first year means it paid out nearly €90,000 to help create new habitats.”

The project is co-funded by the European Union and the Department of Agriculture, Food and the Marine through the European Innovation Partnership (EIP) funding initiative and will operate from 2018-2023.

“There wouldn’t be a project without the European Union funding. Funding coming to farmers in the Bride Valley helps local businesses and local communities. That’s why it’s so important.”



Back from the brink



The call of the corncrake used to herald the arrival of spring. But nowadays, most people will likely never hear their ‘crex crex’ song, which gives the corncrake its Latin name, and sounds like drawing a comb across a matchbox.

“The corncrake is unique as a breeding bird in rural Ireland and has been a part of our heritage for many generations,” says Denis Strong, Divisional Manager with the National Parks and Wildlife Service (NPWS). *“We have an obligation to ensure their future in Ireland, as extinction is forever.”*

The bird used to be widespread in Ireland, but there are now only 151 breeding pairs in total found along the north coast and west of Ireland, declining by 85% since the 1970s. Changes in agricultural practices and modern mechanised machinery have led to the rapid decline.

Denis oversees the delivery of the Corncrake Grant Scheme (CGS), a voluntary grant scheme available for landowners with corncrakes calling on or near their land. And from January 2020, he also oversees the new LIFE Atlantic Crex project working on conservation efforts, which will run for five years. The project aims to deliver a 20% increase in the corncrake population by 2024.

The EU LIFE programme has ensured the future of the corncrake as a successful breeding bird in Ireland, providing €4.3m in funding to the NPWS.

“This fund is a vital lifeline and enables us to draw up long-term plans for Crex conservation. The impact of our work to date has ensured the survival of this unique breeding bird and we hope to continue this good work into the future.”



Keeping our coasts clean

“Up to 80% of marine waste is made up of plastic, which doesn’t fully break down,”

says Pauline Ní Luanaigh of Bord Iascaigh Mhara. *“It’s growing in volume and threatening our oceans and shorelines.”*



Fishermen in Ireland have hauled nearly 400 tonnes of marine litter in their fishing nets since 2015 under the Fishing for Litter campaign. That’s equivalent to two Statues of Liberty; 300 cars or one Endeavour space shuttle!

Fishing for Litter aims to reduce waste in the oceans by giving fishing boats reusable bags to collect plastics, debris and other marine litter that gathers in their nets during their normal fishing activities. They unload the bags of litter at the port, which is then recycled or disposed of on land.

Bord Iascaigh Mhara (BIM), Ireland’s seafood development agency, is leading the voluntary Fishing for Litter scheme in Ireland, as part of the wider Clean Oceans Initiative. This helps to address the serious problem of marine waste in our oceans.

“BIM works closely with members of the fishing and wider seafood sector to help reduce, retrieve and re-use marine litter.”

“The scheme aims to raise awareness of the need to protect Ireland’s marine environment against the serious problem of plastics and other waste in our seas.”

The Clean Oceans Initiative and Fishing for Litter campaign are funded under the European Maritime and Fisheries Fund. The scheme underpins EU legislation supporting the protection of the marine environment under the Marine Strategy Framework Directive.

The project has expanded from the original scheme in the Netherlands, to a Europe-wide strategy.

“The fund provides on-board storage facilities and on-shore infrastructure for disposal of all waste recovered at sea. With 224 boats and 12 harbour ports registered, Fishing for Litter has helped to bring about more awareness and industry engagement.”



A climate change solution beneath our feet

Ireland's raised bogs are among Europe's oldest near-natural ecosystems, dating back over 10,000 years. Protected under the EU Habitats Directive, they are home to many rare and endangered flora and fauna, and they are Ireland's greatest carbon stores.

It is estimated that a 15cm thick layer of peat contains more carbon per hectare than a tropical forest. Peat covers over 20% of the landscape in Ireland and is estimated to store over 1,000 million tonnes of carbon. Carbon capture is essential to life on earth.

Over 200 years ago, there were over 800,000 acres of intact raised bogs across the Irish midlands. However, since then, they have been exploited as a source of cheap fuel which depleted the areas. Approximately 8% is deemed suitable for restoration/conservation today and less than 1% is said to be active, living bog (still capable of growing).

Commencing in 2016, The Living Bog Project is the largest raised bog restoration project ever undertaken in Ireland. Ronan Casey, Public Awareness Manager of The Living Bog project, says, *"The five-year project is working on 12 Raised Bog Special Areas of Conservation/Natura 2000 sites across seven counties in the Midlands, to help in the fight against climate change."*

The Living Bog Project plans to re-create over 750 hectares of active raised bog and improve 2,649 hectares of bog habitat – the equivalent of almost 7,000 Croke Parks!

The project has been made possible by the EU LIFE14 Programme for Environment and Climate Action (Nature & Biodiversity) which funds €4.6 million, and the Government which funds €5.4 million.

"The EU funding has helped us to completely restore the eco-hydrological functions of six of the 12 raised bogs," says Ronan.



Farming on the edge



The iconic Aran landscape draws visitors from all over the world, so protecting the beauty and the quality of the islands is of utmost importance. Despite being only 46km² in area (Phoenix Park is longer than the biggest island, Inis Mór!) the Aran Islands are home to 500 plant species – 50% of all Irish flora.

The Aran Islands contain 17 different increasingly rare habitat types listed in the EU Habitats Directive. The AranLIFE project, which ran for four years under the EU's LIFE+ programme, worked with local farmers to support traditional island farming practices and help maintain the islands' significant natural and cultural heritage.

AranLIFE Project Manager, Patrick McGurn says the project was set up to harness farmers' local knowledge and combine it with expertise from scientists. The aim was to improve the quality of farm habitats on the Aran Islands.

"There are presently over 200 farm businesses on the islands, so agriculture is an important part of island life," says Patrick. *"The islands are also vital breeding grounds for several vital plant species, bird species such as the lapwing, and even varieties of butterflies and bees."*



The success of the project was only made possible through the €2.4 million funding under the EU's LIFE+ programme.

"Since the start of the project, we have successfully improved the conservation status of 35% of the priority habitats by developing the best management practices. Ireland's off-shore islands have, and will have uncertainty in the future. However, they are very important aspects of Ireland's culture and the AranLIFE project has been vital in highlighting the natural landscapes of the islands."

Sustaining Irish forests

Forestry in Ireland contributes approximately €2.3 billion to the economy each year and provides approximately 12,000 direct and indirect jobs.



Ireland has a natural competitive advantage in forestry. A mild, wet climate and fertile soils ensure consistently high growth rates, unrivalled anywhere in Europe. Irish forests are very efficient in capturing carbon and producing oxygen for us to breathe. They are an important tool in tackling climate change.

However, Irish forests face threats, with increased storm events resulting in a higher risk of trees being blown down. Drier, hotter summers increase the risk of fire and damaging insects. To help tackle this, the SLM Silva Fund was developed.

Paul McMahon, Managing Partner of SLM Partners, an investment management firm for ecological forestry and farming systems, says, *“The aim of the fund is to acquire existing forest properties in Ireland and implement a more sustainable form of forest management, known as Continuous Cover Forestry. This approach avoids clearfelling (the removal of all trees from an area chosen for harvesting). Instead, it relies on selective harvesting of individual trees and natural regeneration, to develop more natural and diverse forests.”*

The European Investment Bank invested in the fund via its Natural Capital Financing Facility (NCF), which is part-funded by the European Commission. *“The NCF is also making a technical assistance grant available that will be used to fund training, monitoring and research activities in Ireland,”* says Paddy.



Paul adds, *“Continuous Cover Forestry can have a number of positive impacts on soil health, water quality, biodiversity and resilience to a changing climate, while also delivering an attractive financial return.”*



Developing a circular economy in Irish agriculture

Our current farming system is not sustainable - it is far too reliant on nitrogen and phosphorus fertilisers which can cause environmental pollution and negatively affect quality of life.

To tackle this, Dr Patrick Forrestal, Senior Research Scientist at Teagasc, Soils, Environment and Land Use Department, is leading the research for Nutri2Cycle, which has demonstrated that farmers can take steps to boost their income, while also protecting the environment.

“The Nutri2Cycle project brings together 18 partners around Europe to improve the efficiency of nutrients in the soil, along with the capture of carbon,” says Patrick. *“We assess and create more efficient and sustainable farm businesses, which optimises the recovery of nutrients and recycling across Europe.”*

In Ireland, the project runs until 2022. It examines how manure and leftover materials from dairy product manufacture (such as cheese-making) can be incorporated into farming practices to produce crops. This provides a circular loop for the critical nutrients, while also potentially capturing carbon in the soil.

Currently in Ireland, a field experiment has been established on a fertile farm in Co Wicklow. The first year has demonstrated that farmers can save money on fertilisers, while maintaining crop amounts using recycled nutrient sources.

“This is a win-win for the environment and the farm business. It was the European Commission which brought together a focus group on nutrient recycling, which formed the core of the Nutri2Cycle consortium. The project has also received funding from the European Union’s Horizon 2020 research and innovation programme. The EU has played a vital role in facilitating this work.”



Sustainable dairy processing and the circular bio-economy

Milk production in Ireland has grown substantially in recent years, both as a result of the removal of milk production quotas in the EU in 2015, and the increasing demand for whey protein globally.



Whey is one of the primary proteins found in dairy products, and it has a range of health benefits for our bodies.

The European dairy industry processes millions of tonnes of whey annually, to produce proteins, lactose, and powders for human and animal nutrition.

Bill Morrissey, Project Manager for the AgriChemWhey project at Glanbia, says, *“Whey permeate (WP) and delactosed whey permeate (DLP) are low-value by-products of dairy processing and are a key challenge for the dairy industry. They lack effective, reliable disposal routes and this creates challenges since the expansion of milk production in the EU’s post-milk-quota era.”*

This underscores the need for new technologies to manage the associated waste streams.

The AgriChemWhey project is developing technology to convert excess WP and DLP into cost-competitive, sustainable lactic acid. The lactic acid can be used in bio-based products including biodegradable plastics.

The innovative technology, developed by Glanbia Ireland, will provide both the dairy industry and wider society with an opportunity for greater resource efficiency.

“This is an example of the circular bio-economy in action. It will mean less food waste, more products from the same starting material (milk), and the integration of food and non-food material production,” says Bill.

The project received €22m in funding from the Bio-Based Industries Joint Undertaking (BBI JU) under the European Union’s Horizon 2020 research and innovation programme – the first dairy industry project to be awarded funding under the programme.



A circular way of living



The Rediscovery Centre, Ireland's National Centre for the Circular Economy, is inspiring people to transition to a circular economy, a system aimed at eliminating waste and recycling resources. But how and why?

Dr Sarah Miller, Chief Executive Officer of the Rediscovery Centre, explains, *"Our current linear economic system, one based on unfettered consumption, is not a sustainable one. Precious natural resources are extracted, at great financial and environmental costs, to create items that are unnecessary or used for a short amount of time and then disposed of."*

"Encouraging the reuse, repair, and recycling of products and product components, as well as moving away from wasteful single-use items, will save money, create jobs, and reduce waste and carbon emissions. Adopting circular principles will be an important step in winning the fight against our current environmental crisis."

The Rediscovery Centre, in partnership with Dublin City Council, received €1.8 million from WISER (Working with Industrial Spaces to Exemplify Reuse) LIFE to transform an old, industrial boiler house in Ballymun into a unique experiential learning centre and a 3D textbook to promote sustainable living and circular principles.

"The European Commission funding allowed the Rediscovery Centre to develop a demonstration eco-facility, and a centre of excellence in sustainability, to base our operations in," says Sarah. *"The new Ballymun Boiler House incorporates educational exhibits, renewable and efficient energy systems, sustainable building materials, and much more."*

"The Centre houses workshops for our four reuse social enterprises; Rediscover Furniture, Rediscover Fashion, Rediscover Paint, and Rediscover Cycling, which puts life back into unwanted bikes. We also have the Circular Economy Academy, a national mentoring-and-support programme for social enterprises and community organisations that are interested in moving their activities towards sustainability and embracing the circular economy."



Reducing agricultural greenhouse gasses

“Agriculture can have a negative environmental impact, as the emissions from animal production (such as meat and milk) can be a significant source of greenhouse gasses (GHG), especially ammonia,” says Professor Kevin McDonnell, from University College Dublin. *“And, with the growing human population, there is an increased demand for meat protein.”*

The EU-funded LIFE Farm4More project – co-ordinated by principal investigator Professor McDonnell, alongside colleagues Dr Joseph Sweeney and Dr Fionnuala Murphy – aims to reduce the effects of agricultural animal protein production on climate change. This can be achieved by producing biorefinery protein products (such as plant-based protein) as direct animal protein feed substitutes.



“With Farm4More, we are using grass to make conventional baled silage and allowing it to ferment for 40-60 days. We then press the grass and extract the liquid material. The press cake (solids remaining after liquid) is used as a feed alternative to grass silage. We add some biochar (which stores carbon) from straw/wood materials, and monitor the intake and emissions from the livestock being fed. The liquid material that we extract from the grass has a high level of sugars and amino acids, and we can use this in pig and poultry diets as a grass substitute for soybean feed product, that is currently being produced outside of the EU and imported into Europe.”

Fifty-five percent of the project has been funded by the European Commission, and while trials are ongoing and take time, the research to date is positive.

“It indicates that the animals will have a comparative performance on the press cake, compared with conventional grass silage,” explains Kevin. *“This alternative grass-silage, animal protein production model can significantly improve not only animal protein production efficiency, but GHG emissions for meat and dairy production too.”*

Making better use of our natural resources

The bioeconomy refers to the use of renewable biological resources from land and sea – such as crops, forests, fish, animals and micro-organisms – to produce food, materials and energy.

A strong bioeconomy will help Ireland and Europe to live sustainably. The production and exploitation of biological resources is a key aspect of the transition towards a carbon-neutral society.

Launched in 2018, BiOrbic (previously known as BEACON) is Ireland's national Bioeconomy Research Centre. Funded by Science Foundation Ireland, with financial support from the EU, the €18 million research centre aims to develop new technologies and processes to sustain the use of our natural resources and grow the economy.

“We need to integrate production of food, feed and materials/chemicals so that we reduce waste, reduce greenhouse gas emissions, recycle, conserve our natural habitats and increase biodiversity,” says Kevin O'Connor, Professor of Biomolecular and Biomedical Science at University College Dublin and Director of BiOrbic.

“Can we reduce the use of plastics by substituting them with natural materials that can be recycled and can be composted? Can we make greener plastics from waste, reducing greenhouse gas emissions in their production, so that they can be recycled and composted? This is the new bioeconomy.”

BiOrbic has made significant progress in its efforts to develop Ireland's bioeconomy. In 2018, researchers discovered a blend of biodegradable plastic that completely breaks down under typical home-composting conditions. The discovery provides an exciting opportunity to create novel sustainable plastics that perform in multiple positive ways for society while reducing waste.

“The EU is incredibly important in supporting our research objectives,” says Kevin. *“We hope that increased investment in the bioeconomy will help diversify Irish business activities and reduce carbon emissions in Ireland.”*





Dedicated to an Irish hero

Mary Elmes, who saved more than 200 Jewish children from the Nazi concentration camps, has been honoured with the opening of a pedestrian bridge in her native Cork. Mary, known as the 'Irish Oskar Schindler', was an aid worker who helped children flee France in the boot of her car.

John Stapleton, Senior Engineer in the Infrastructure Development Directorate at Cork City Council, says that when Mary Elmes was chosen, they were surprised that her story of courage wasn't that well-known.

It is expected that up to 11,000 pedestrians and cyclists will benefit each day from the improved connectivity offered by the new bridge, travelling between the busy City Centre and Victorian Quarter.

John says, *"We're trying to invest in pedestrian and cycling infrastructure in the city centre to encourage people to use that as their mode of transportation."*

"It's been a phenomenal success and it's actually become an attraction. We put seating on the bridge to create a tranquil space, right in the heart of the city. We are also planning to add cycle lanes leading to and away from the bridge, so it looks like it will continue to be successful."



Cork City Council delivered the project with a €1.5 million European Regional Development Fund grant under the Southern and Eastern Regional Programme 2014-20.

"We have received funding from the EU, the National Transport Authority, and Cork City Council have also contributed. It was really a collaboration of parties, but the EU grant was the trigger that allowed us to progress the project."



Getting in touch with the EU

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📍 Information Centres:

Europe Direct Clones

98 Avenue Clones,
Co. Monaghan H23 RW70
cloneslibrary@monaghancoco.ie

Europe Direct Blanchardstown

Civic Centre Blanchardstown Centre,
Dublin 15
europedirect@fingalcoco.ie

Europe Direct Portlaoise

Dunamais House, Lyster Square,
Portlaoise,
Co. Laois R32 X702
europedirect@laoiscoco.ie

Europe Direct Letterkenny (and Gweedore)

Oliver Plunkett Road Letterkenny,
Co. Donegal F92 R273
eudirect@donegallibrary.ie

Europe Direct Ballinasloe (and Carraroe)

Ballinasloe Library, Society Street
Ballinasloe,
Co. Galway H53 T320
Ballinasloe@galwaylibrary.ie

Europe Direct Waterford

Lady Lane
Co. Waterford X91 V045
europedirect@waterfordcity.ie

Europe Direct Sligo

Stephen Street Co. Sligo F91 X264
europedirect@sligococo.ie

Europe Direct Nenagh

O'Rahilly Street, Nenagh
Co. Tipperary E45 AK50
nenaghlibrary@tipperarycoco.ie

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📍 European Commission and Parliament:

The European Commission Representation in Ireland

Europe House, 12-14 Mount Street Lower, Dublin 2
www.euireland.ie

The European Parliament Liaison Office in Ireland

Europe House, 12-14 Mount Street Lower, Dublin 2
www.europarl.ie



For further information please contact:

***The European Commission
Representation in Ireland***

Europe House, 12-14 Mount Street
Lower, Grand Canal Dock,
Dublin D02 W710

Tel: +353 1 6341111

Website:

www.euireland.ie

Email:

eu-ie-info-request@ec.europa.eu



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