

Deep Demonstration partnership: Sustainable food systems in Ireland

PRESS KIT

Overview

24

core partners

500+

key actors involved

30+

strategic workshops

The partnership

Decarbonising agriculture and food production is one of the biggest challenges of this century. In Ireland, the agri-food sector contributes [38%](#) to overall greenhouse gas emissions, yet the country [has pledged](#) to cut these by 25% by 2030, and to achieve climate neutrality by 2050, in line with the EU bloc.

[EIT Climate-KIC](#), Europe's largest climate innovation initiative, has led systems change and innovation programmes for over a decade. Since 2022, to support the Irish government bridge the gap between its ambitious commitments and reality, the agency has been applying its '[Deep Demonstration](#)' model of innovation to the entire agri-food and bio-based value chain.

This involves working with hundreds of key actors from both public and private sectors (from farmers, agribusiness, and government agencies to finance, education, and civil society) to develop and deploy a range ('portfolio') of coordinated solutions across four innovation areas:

- Piloting and scaling a fully sustainable business model in dairy farms;
- Developing a nation-wide carbon farming framework;
- Helping regions and value chains take up circular bio-economy models;
- Re-imagining the future of Ireland's land and agri-food systems for 2050.

These areas are underpinned by over 280 on-the-ground projects, stemming from a comprehensive [mapping of the agri-food system](#) and [concrete innovation pathways](#) identified by the partnership in its first phase.

In 2024, the partnership has been extended for another two years to implement these interventions, together with existing and new partners from across the value chain, including Environmental Defense Fund Europe, Teagasc, Bioregional Weaving Lab Waterford, Environmental Protection Agency, Irish Co-operative Organisation Society, University College Dublin, Irish Strategic Investment Fund, and pan-European organisations such as Metabolic and Circle Economy.

Quotes

"I believe that this partnership with EIT Climate-KIC has the potential to bring new, innovative thinking across the sector, whilst supporting our ambitions and accelerate pathways to climate action. The solutions developed and tested will assist our farmers, rural communities and the wider agri-food and bio-based sector to build resilient approaches and solutions to the challenges of climate change and environmental sustainability."

Charlie McConalogue, Minister for Agriculture, Food and the Marine, Ireland



"This strategic partnership with EIT Climate-KIC highlights my department's commitment to co-funding innovative solutions to support climate action in the agri-food sector and society. I particularly welcome the ambition of the partnership to build a portfolio of actions, including trialling new practices and technologies, developing, and incentivising new business models, and improving citizen engagement."

Martin Heydon, Minister of State with responsibility for Research and Development, Farm Safety and New Market Development, Ireland

"The interest and response to our systems innovation approach and partnership has been remarkable. We want to harness this momentum by demonstrating and scaling a solid portfolio of interventions that will accelerate systemic progress and ensure that Ireland leads the world. We invite interested investors and funding partners who want to make a difference at the intersection of farming, innovation, policy and finance to join us in this journey and learn from each other."

Kirsten Dunlop, CEO, EIT Climate-KIC



"We have been closely working with Irish stakeholders through interviews and workshops to gather their views on barriers and opportunities, but also to map the steps needed to realise Ireland's ambition of becoming a global leader in sustainable agri-food systems. Now we are diving into the next phase of the Deep Demonstration, by activating a portfolio of innovation solutions across seven flagship areas. This will help us verify, rapidly and at scale, what works and what doesn't, going through iterations of testing, validation, and learning with partners in the entire value chain."

Saskia Visser, Land use, agri-food and sustainable bio-economy orchestrator & Ireland Deep Demonstration lead, EIT Climate-KIC

Background information

What is the Deep Demonstration partnership and how does it support sustainable food systems in Ireland?

The [Deep Demonstration](#) is an international strategic partnership between Ireland's Department of Agriculture, Food, and the Marine (DAFM) and EIT Climate-KIC, Europe's leading climate innovation initiative, to support national climate action in the agriculture and food sector.

The partnership is supporting Ireland to reach its agricultural emission reduction goal of at least 25% by 2030, while helping the land, agri-food sector and communities to thrive. It is doing so by developing and deploying a portfolio of coordinated innovation actions across four main areas: sustainable dairy, carbon farming, regional circular bio-economy and a new vision for 2050. The Deep Demonstration team includes both EIT Climate-KIC experts and DAFM officials.

What is the Deep Demonstration partnership doing?

The strategic partnership sees EIT Climate-KIC apply their '[Deep Demonstration](#)' model of innovation to the entire Irish land, agri-food and bio-based value chain. This involves working with stakeholders from public, private, non-governmental and higher education sectors to develop a range of strategic, mutually-reinforcing innovation solutions advancing climate action that are being tested and demonstrated.

The partnership has initially [mapped the Irish land and agri-food system](#) to understand existing partners and initiatives, identifying key 'levers of change' to pull in order to transform the system as a whole. It has then created a framework to connect and integrate these projects, amplifying their impact, as well as identifying and introducing new innovation actions across business, the public sector, and farming communities. This portfolio of mutually-reinforcing innovation projects will be supported by grant funding and private investment capital.

A unique element of this methodology is the rapid 'learning by doing', that captures and shares lessons of what works (and what does not) in each intervention. This shared intelligence enables governments, industry and communities to inform decision-making in an agile, unbiased and more effective way.

What is EIT Climate-KIC?

[EIT Climate-KIC](#) is Europe's leading climate innovation agency and community, using a systems approach to shape innovation to support cities, regions, countries and industries meet their climate ambitions.

Together with partners across the globe, EIT Climate-KIC acts to bridge the gap between climate commitments and current reality by enabling decision-makers and investors to act. They find and implement solutions in integrated ways and mobilise finance. They build skills to accelerate learning and explore innovation, opening pathways to shift mindsets and behaviours. Through radical collaboration, EIT Climate-KIC orchestrates large-scale demonstrations that show what is possible when cycles of innovation and learning are deliberately designed to trigger exponential decarbonisation and build resilient communities.

Deep Demonstration partnership: Seven flagship innovation areas



FLAGSHIP 1 | Vision 2050: re-imagine Ireland's land and agri-food system | ACTIVE

Create a long-term, ambitious vision for Ireland's land and agri-food system, including a broad range of communities and experts (younger generations, citizens and consumers, creative industries and other sectors).



FLAGSHIP 2 | Foster innovation and investment in new value chains to diversify the sector

Identify new, strategic areas for the land and agri-food sector to grow, such as alternative proteins, feed additives that deliver methane reduction, and circular production thanks to fungi and seaweed.



FLAGSHIP 3 | Promote circular bioeconomy models in regions and multiple value chains | ACTIVE

Put rural and coastal communities, regions and cities at the heart of the transition by fostering regenerative and local food production, industrial symbiosis, societal shifts to increase healthier diets, and designing waste out of food production.



FLAGSHIP 4 | Diversify incomes through a carbon farming and nature credit framework | ACTIVE

Develop a national carbon farming and nature credits framework that rewards farmers for their activities that help sequester carbon, enhance soil, water and air quality, and overall increase biodiversity.



FLAGSHIP 5 | Produce and certify climate-neutral beef

Define what a sustainable beef enterprise is, across social, environmental and economic indicators, with the goal of developing an evidence-based, certified model for climate-neutral beef production.



FLAGSHIP 6 | Accelerate emission reduction and sustainability in dairy farms | ACTIVE

Co-develop a model for sustainable dairy production in Ireland and test the different combinations of policy, technology and value chain implications, by implementing it on the ground with dairy farmers.



FLAGSHIP 7 | Grow and diversify the tillage sector

Increase tillage areas, introduce multi-crop farms, and strengthen collaboration with beef and dairy to reduce chemical fertilisers and increase the amount of homegrown protein for food and feed.

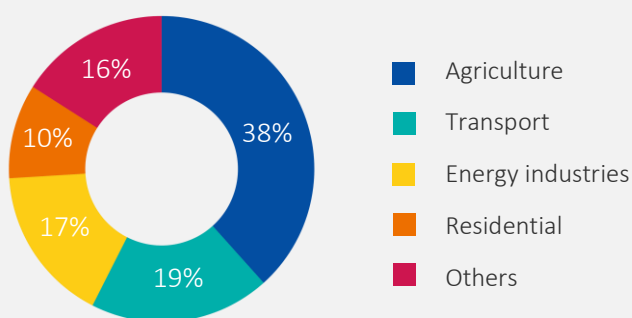
Facts and figures

Ireland's land and agri-food system

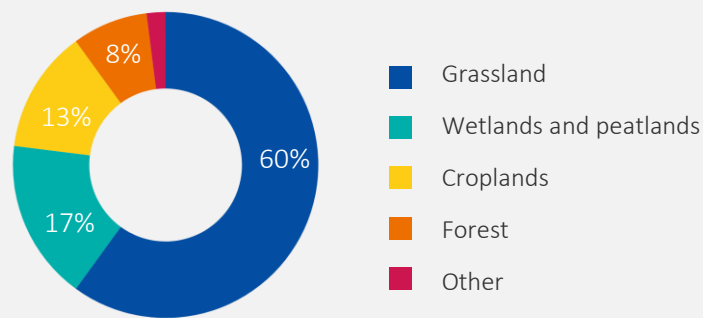
Source: [Irish Environmental Protection Agency \(2023\)](#)

- Total emissions in Ireland (2022) were estimated at **60.76 million tonnes CO₂eq**. Of these, **38.4%** came from agriculture.
- **1.2% decrease in agricultural emissions** from 2021 to 2022 was mainly due to a sharp decrease in fertiliser use (-14%). However, emissions went up by 14.1% in the last ten years (2012-2022).
- Dairy cow numbers were up (+0.9%) as well as milk production (+0.7%).

Greenhouse gas emissions share by sector in 2022



Ireland's land use in 2021

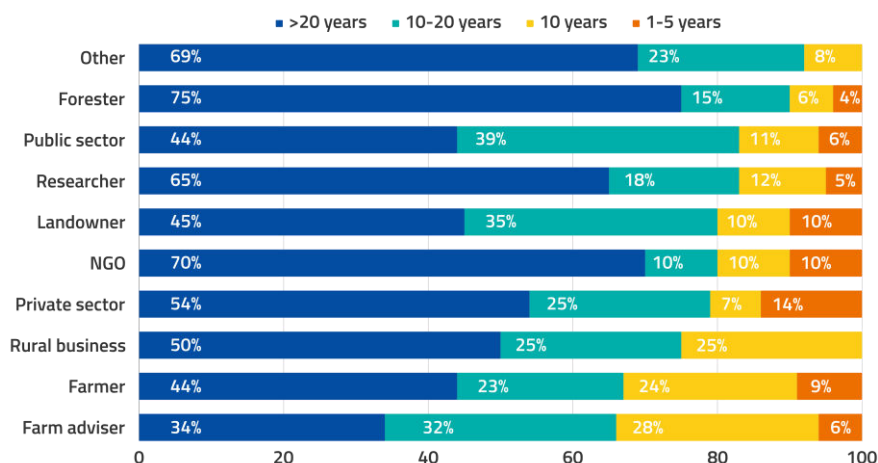


Emission reduction projection by 2030:

- 4% to 22.8 Mt CO₂eq under the With Existing Measures scenario
- 20% to 19 Mt CO₂eq with the implementation of Ireland's Climate Action Plan

A national carbon farming framework for Ireland

- Developing a national carbon farming framework is one of the enabling actions listed in Ireland's Climate Action Plan.
- Based on the results of a nation-wide public consultation gathering around 400 responses and on bilateral engagements and workshops with almost 200 individuals, respondents highlighted the need for **a long-term, holistic framework that includes a range of payments for ecosystem services**.





Consultative group members



An Roinn Fiontar,
Trádála agus Fostaíochta
Department of Enterprise,
Trade and Employment



An Roinn Comhshaoil,
Aeráide agus Cumarsáide
Department of the Environment,
Climate and Communications



An Roinn Breisoidéachais agus Ardoideachais,
Taighde, Nuálaíochta agus Eolaíochta
Department of Further and Higher Education,
Research, Innovation and Science



Roinn an Taoisigh
Department of the Taoiseach



An Chomhairle Náisiúnta Eacnamaíoch agus Shóisialta
National Economic & Social Council



Implementation partners





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