

# CASE STUDY: Policy Impact

## A roadmap for Ireland's first Bioeconomy Action Plan

Circular Bioeconomy Outlook Study 2030–2050

Prof. Kevin O'Connor, BiOrbic, University College Dublin



### Impact Summary

- Provided a roadmap for a sustainable and circular bioeconomy in Ireland out to 2050.
- Directly informed Ireland's first National Bioeconomy Action Plan (2023-2025).
- Highlighted the economic, environmental and social opportunities from new biobased innovations.

If Ireland wants to achieve net-zero greenhouse gas emissions by 2050, we need to transition from a 'take, make, waste' linear economy to a circular economy where waste is minimised, and materials are kept in use for as long as possible. This shift needs to happen across all economic sectors including the bioeconomy.

In the 2018 National Policy Statement on the Bioeconomy, the Government set out its ambition for Ireland to become a global leader in the bioeconomy by harnessing Ireland's natural resources and competitive advantage. The Department of the Climate, Environment and Energy and the Department of Agriculture, Food, and the Marine were

tasked with developing the Bioeconomy Action Plan (2023-2025) to deliver on this vision. Employing the EPA's 'Fast Track to Policy' Programme, the EPA and DAFM jointly funded a research project to rapidly provide expert guidance and recommendations to inform the new action plan.

Led by Prof. Kevin O'Connor (BiOrbic, UCD), the Circular Bioeconomy Outlook Study 2030-2050 explored and synthesised the best available research and evidence – both nationally and internationally – on biobased products, feedstocks, technologies and policies. The study also considered how these biobased innovations could be applied within an Irish context.



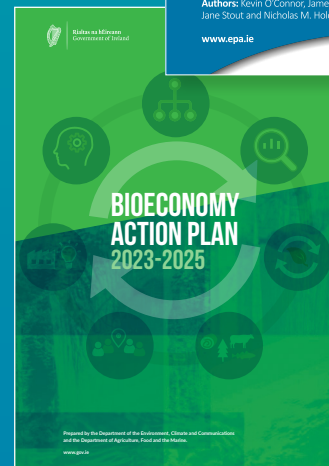
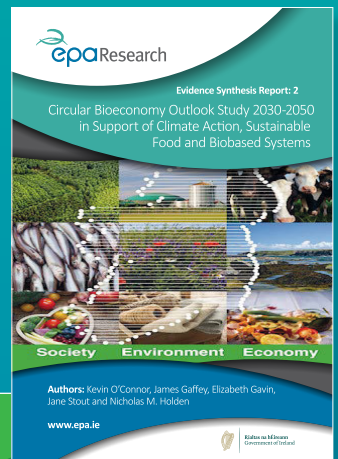
The research provides an outlook for Ireland's circular bioeconomy for the period 2030-2050. It shows that using our natural and biological resources in a sustainable way can enable Ireland to take action on climate change, protect biodiversity, boost food and energy security and support a fair and inclusive transition to a circular bioeconomy, benefitting both rural and urban communities across Ireland.

By exploring high-potential biobased products, key feedstocks and conversion technologies, patents, digitalisation and services, the research outlines technological pathways and a clear vision for achieving a sustainable circular bioeconomy in Ireland. It also brings together the best available evidence and insights from stakeholders to highlight both the challenges and opportunities for Irish businesses and provides specific policy recommendations to help Ireland move towards a circular bioeconomy.

## Policy Impact

The Circular Bioeconomy Outlook Study played a key role in shaping Ireland's bioeconomy policy through its contribution to the Bioeconomy Action Plan (2023-2025). Its findings are directly referenced in the plan and its recommendations have helped guide actions to be implemented by organisations such as DAFM, DCEE, Department of Enterprise, Trade and Employment, EPA and Teagasc. These actions included, examining investment models such as Public Private Partnerships, developing bioeconomy demonstration initiatives and encouraging biobased industries to undertake life-cycle analyses.

The study also helped inform national research funding, leading to new investment in bioeconomy projects in areas such as: how to integrate the circular bioeconomy into climate and biodiversity measures; enhancing the assessment of circular product value chains; supporting the just transition, and as well as developing circular bioeconomy metrics.



*'The fast track to policy project was very important in influencing the development of the first National Bioeconomy Action Plan 2023-2025 and its analysis underpinned specific actions outlined in the seven pillars of the plan. Overall, it supported a key goal to develop a knowledge-based approach to developing a sustainable, regenerative and circular bioeconomy in Ireland.'*  
Patrick Barrett, DAFM.



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