



Exposición de la visión y experiencia europea: Irlanda y la Bioeconomía

Puerto Montt, Región de Los Lagos,
28 de Enero, 2022

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Ireland in Chile – Why Now?



- Rich historical connections, going back to Bernardo O’Higgins, Juan MacKenna, John O’Brien and others;
- Diplomatic relations formally established in 1992;
- Embassy of Chile opened in Dublin in 2002;
- Ireland’s President Higgins – who had been Observador No. 1 for the plebiscite in Chile in 1988 – visited Santiago in October 2012;
- Irish government decisión to open Embassy in Santiago under Global Ireland Programme, October 2017;
- Team arrives to open Embassy, Q1 2019.

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The potential for collaboration in Agriculture



- Irish agricultural or agri-tech companies have done very well in Chile – companies like Ireland Genetics, Samco, Moocall & others.
- Major Irish investment in fruit & vegetable sector in Chile through Total Produce.
- Challenges in Chile and Ireland so similar, whether that's in areas like livestock management or dairy or sustainability and emissions.
- Excellent engagement from Minister Walker and, subsequently, Minister Undurraga - enthusiasm about bringing our senior officials and brightest minds together to discuss where cooperation may lead.

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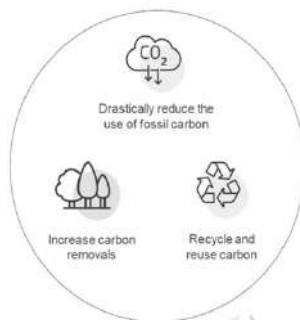
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EU Policy - Sustainable Carbon Cycles



Sustainable carbon cycles

To achieve climate neutrality at the latest by 2050 and negative emissions thereafter, the EU needs to increase carbon removals and establish sustainable carbon cycles.



Industrial capture, use, transport, and storage of carbon



In addition to decarbonising its energy system, the EU will also need to rethink its sourcing of carbon as feedstock for industrial processes.

Creating an internal market for the sustainable capture, use, and storage of CO₂:

- Replace energy-intensive materials (cement, steel...) with **bio-based materials** which store carbon
- Transform CO₂ from a waste product to a resource, and use it to produce materials, chemicals and fuels
- Remove carbon from the atmosphere

Body Level Two
EC 2021 Communication on Sustainable Carbon Cycles - COM(2021) 800 final – several important references to the bioeconomy
 Body Level Three
 Body Level Four
 Body Level Five

Life and biological sciences and technologies as engines for bio-based innovation – results of an EU COM study presenting the 50 most significant bio-based innovations for the next 5-20 years (2021)

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What is the Bioeconomy?



What is the bioeconomy?

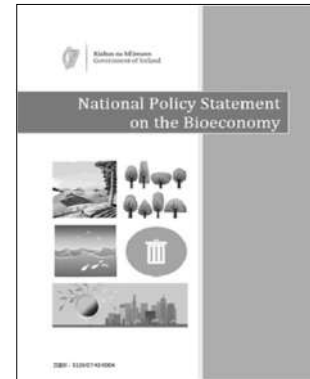
1. Land & Marine Ecosystems
2. Agriculture, Forestry, Fisheries, Aquaculture
3. Industries & Economic Sectors that process biological resources
4. Addressing Sustainability & Circularity

How is policy being developed / implemented?

- a) National policy statement on the bioeconomy (2018)
- b) EU Bioeconomy Strategy as part of the Green Deal: EU Circular Economy Action Plan.
- c) Food Vision 2030 & Climate Action Plan 2021

What are its key objectives?

The Bioeconomy can renew industries through innovation, modernise primary production systems, protect the environment and enhance biodiversity and aid rural & regional welfare & prosperity.



EC Foresight Exercise:

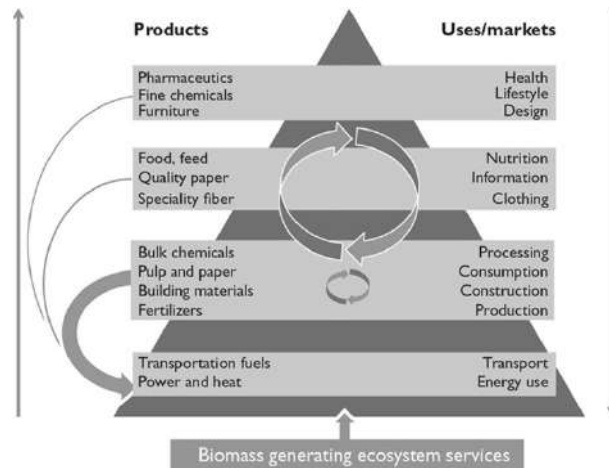
- a. *Future transitions for the Bioeconomy towards Sustainable Development and a Climate-Neutral Economy - Foresight Scenarios for the EU bioeconomy in 2050* – (2021 report)
- b. *Future transitions for the Bioeconomy towards Sustainable Development and a Climate-Neutral Economy - Knowledge Synthesis Final Report* – (2020 report providing the foundational basis for the above scenarios report)

Why does the Bioeconomy offer such opportunities?



The bioeconomy is underpinned by the unique characteristics and features of biological resources that makes them attractive for becoming the possible fundament of an economy such as:

- a) their renewability;
- b) their CO2-“friendliness “or even sometimes carbon neutrality;
- c) their re-use or multiuse, also in the format of cascades;
- d) their potential to provide new, better functionality in their products e.g. higher stability, longer life, stronger endurance, less or no toxicity, less water use etc.



Transforming Primary Production Resilient, Carbon Neutral Dairy Farms



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A world first for agriculture, BiOrbic, Carbery and their collaborators have undertaken an interdisciplinary programme of work, targeting numerous areas.



RENEWABLE ENERGY

Sourcing energy through renewable means where possible to reduce the farm's reliance on carbon emitting fossil fuels.



SOIL AND GRASSLAND

Capturing carbon within the soil by planting multi-species swards. This allows for reduced use of fertiliser.



ANIMAL DIET AND BREEDING

Trialling different types of diet that change animal digestion, reducing the amount of greenhouse gas emitted through belching.



BIODIVERSITY

Maintaining biodiversity on the farm, taking advantage of ecosystem services for less reliance on pesticides and fertiliser.

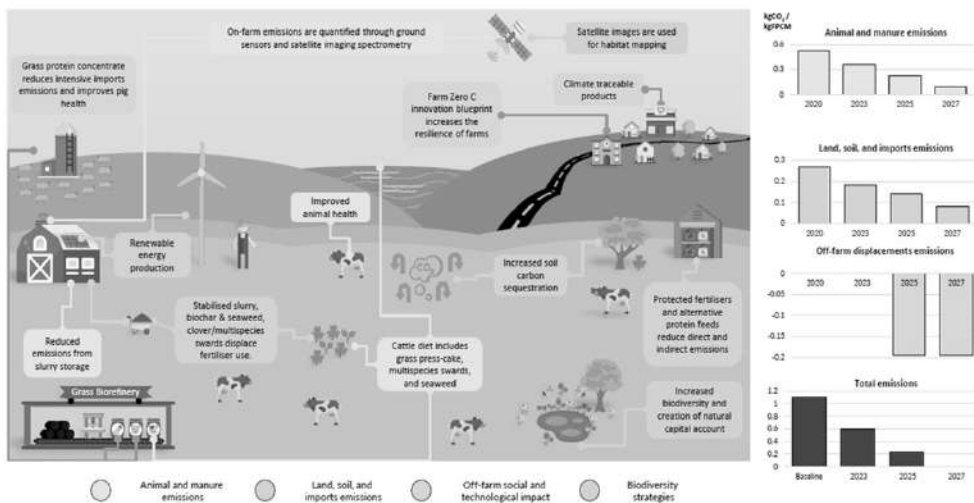


LIFE-CYCLE ANALYSIS

Thorough analysis of plant and animal life-cycles on the farm to understand overall carbon emissions.

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Our holistic approach



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<https://www.teagasc.ie/publications/2021/the-signpost-series-webinar---farm-zero-c-overview.php>

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Transforming Industry Scale up resource-efficient, circular and carbon neutral solutions



AgriChemWhey



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AgriChemWhey aims to establish a first-of-a-kind, industrial-scale biorefinery to valorise dairy waste to several high added value bio-based products for growing global markets by:

1. Optimising and scaling-up the innovative fermentation process
2. Proving the techno-economic viability of the biorefinery
3. Integrating symbiotic industrial and agricultural value chains

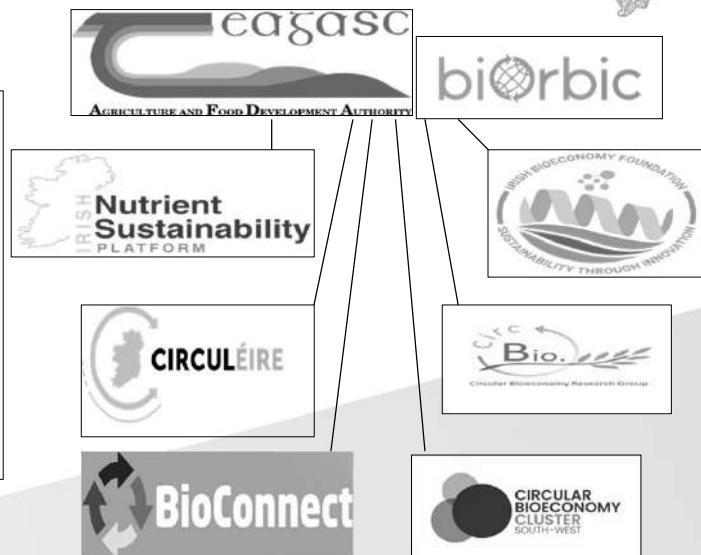
<https://youtu.be/wVhP-KVyl0s>

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Structuring & Mobilising Bioeconomy Development



- The bioeconomy by its very nature is highly-collaborative and activities require participation, expertise and investment on the part of multiple actors including government, the private sector, and civil society.
- A key factor for success is achieving effective cooperation among these multiple, diverse participants.
- Linking Primary Producers, Industries & Rural Entrepreneurs to Centres, Platforms & Clusters – everyone is ‘learning by doing’.



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Bioeconomía irlandesa presente en la agricultura chilena



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Muchas gracias!

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