

Submission on the Bioeconomy Action Plan Consultation and Discussion Document

[REDACTED],²

January 2023

¹ UCD Environmental Policy

² BiOrbic Bioeconomy SFI Research Centre

The authors of this document are based in UCD Environmental Policy and are also affiliated with the BiOrbic Bioeconomy SFI Research Centre. This document is a personal submission from the four authors and the views expressed are not representative of BiOrbic.



Responses to questions in the Bioeconomy Action Plan Consultation and Discussion document

Question 1: Are you satisfied the outlined Pillars represent the structure of the Irish bioeconomy?

The three new pillars – Governance; Nature, Climate & Circular; Communities – are a good addition as they provide for a more comprehensive focus on key relevant sectors and issues that was missing with the original three pillars.

Question 2: Are there specific key performance indicators and/or targets the bioeconomy should be setting out to achieve to measure its implementation?

There is a need to ensure that specific actions to enhance and enable bioeconomy policy and sectoral coherence are explicitly included under this pillar, since this was the first key action in the 2018 NPSB. Some areas to focus possible actions on include:

- Improving structures to support cross-departmental and cross-sectoral policy engagement and reduce siloed policy-making;
- Further integrating bioeconomy policy into relevant departmental work programmes.

Regarding targets, it is important to ensure the ongoing availability of the necessary data required for formulating indicators and targets and deciding on areas to target for subsidies, funding, etc. Otherwise, there is a risk that actions and targets will not be feasible or will fail to deliver the required outcomes. New initiatives such as the InformBio research project should help in this regard.

Importantly, key performance indicators should include sustainability indicators. The goal should not be to measure bioeconomy implementation per se, but its sustainability and circularity. Italy has proposed key performance indicators for a national and regional level alongside specific sustainability indicators which could be of relevance here¹. A useful discussion on sustainability indicators for the bioeconomy can be found in the FAO report, '*Indicators to Monitor and Evaluate the Sustainability of Bioeconomy*'².

Question 3: What other key issues should the Governance Pillar deal with?

Overall, providing for a specific emphasis on governance through the inclusion of the new Governance Pillar is an important step towards ensuring coherent and effective cross-sectoral collaboration so that the bioeconomy can be successfully operationalised.

Another governance issue that remains to be addressed is whether to centralise overall leadership on bioeconomy policy in one government department or to have joint leadership between two or more departments. This relates to:

- a) the need to expand understanding of the bioeconomy beyond the current tendency to view it as solely relating to agricultural, marine and forestry sectors.
- b) The need to ensure effective 'buy-in' and action on bioeconomy policy from all government departments.

¹ See pp. 82-83 of *Bioeconomy in Italy 2*, available at https://cnbbsv.palazzochigi.it/media/1774/bit_en_2019_02.pdf

² Available at <https://www.fao.org/3/ca6048en/CA6048EN.pdf>

Question 4: What key issues should the Research, Development & Innovation Pillar deal with?

RD&I for the bioeconomy should have a number of guiding principles which could be included in funding conditions, including:

- a) RD&I should involve local and regional stakeholders. In line with the proposed territorial approach to the implementation of the bioeconomy (p.15), key issues for RD&I should match the needs of communities, which can be determined through consultation.
- b) RD&I should adhere to the best principles of Responsible Research and Innovation by involving appropriate stakeholders and providing a holistic assessment of the potential impact of the RD&I.

The focus on social sciences in research for the bioeconomy should be strengthened. The Programme for government states its commitment to actions for scientific and technological innovation, but RD&I for the bioeconomy also requires social science and *social* innovation. For example, a circular bioeconomy adhering to the cascading principle will require new types of business models and the cooperation of currently unconnected actors which require more research.

For policymakers, there is a need for further research on conflicting objectives and interactions.

The direction of research calls should be revised based on ongoing data collection.

Question 6: What key issues should the Nature, Climate & Circular Pillar deal with?

The addition of this pillar is welcome.

In terms of policy coherence, it will be important to ensure that the aims and actions of the Bioeconomy Action Plan are aligned with those of the Circular Economy and Climate Action plans, to avoid any conflict and ensure that they are mutually supportive. For example, it will also be important to clearly define in the Bioeconomy Action Plan what is meant by 'circular' and to ensure consistency with the definitions and understandings in the other two action plans.

The reference in the Bioeconomy Action Plan consultation document to the "circular bioeconomy" also represents a shift from the 2018 National Policy Statement on the Bioeconomy, which focused mainly on the "bioeconomy". There is a significant difference between the two, with the circular bioeconomy requiring more radical policies and structural change, which needs to be reflected in the resulting Bioeconomy Action Plan. In addition, the title of the action plan itself should also reflect this focus and include the phrase "circular bioeconomy". One useful discussion of the challenges associated with the circular bioeconomy is the recent article by Irish researchers on "Biocircularity: A Framework to Define Sustainable, Circular Bioeconomy"³.

The reference to outlining actions to ensure harmony between renewable energy policy and the [circular] bioeconomy is welcome. It should address the potential for goal conflict due to the principle of cascading use, which should direct biomass towards higher value applications prior to their use in energy and fuel generation. Currently, around one-third of Ireland's renewable energy is from biomass.

³ Available at: <https://link.springer.com/article/10.1007/s43615-022-00180-y>

Question 7. What key issues concerning consumption patterns need to be examined to close the gap between sustainable supply of biological resources and demand?

This is a real issue of concern, as the 2022 EU Bioeconomy Strategy Progress Report⁴ notes, pointing to studies that predict a gap by 2050 of 40-70% between sustainable biomass supply and biomass demands for materials and energy. A key issue should be setting priorities for scarce supplies in line with the cascading principle. This framework would give relevant actors clarity on longer-term policy development. This said, sufficiency also requires a fundamental change in consumption patterns which requires more radical policies and structural change.

Question 9: What key issues should the Communities Pillar deal with?

The addition of this pillar is welcome.

In terms of a territorial approach to bioeconomy implementation, one existing model that may be effective is the co-operative model. This has worked well in the Irish agri-food sector in the past, enabling a joint engagement by producers, processors and distributors which was centred on the local-scale but also linked regionally and nationally.

In terms of engagement and representation in the circular bioeconomy, enabling the participation of diverse communities is important. Open dialogue and consultation with communities is essential, particularly around the sustainability of using biomass, where to locate biorefineries, and what products should be produced on what scale.⁵ In particular, environmental and social NGOs should be supported to be able to properly participate in circular bioeconomy policy development and implementation. Not only is this a more equitable approach, but it could help tailor bioeconomy plans to local challenges. This may require the allocation of financial support to enable them to bring their particular expertise and knowledge to the process.

It will also be important to ensure that such groups are also represented on the new Bioeconomy Forum.

Question 10: Are local and regional policies ensuring the consideration of bioeconomy opportunities are in scope, and are coordinated approaches on such services in place at regional assembly and local authority level?

Coordination between local and regional policies could be supported with measures including:

- a) Bioeconomy training for local level administrators
- b) Introduction of regional bioeconomy managers to oversee how bioeconomy activities are integrated into Local Economic and Community Plans, Local Enterprise Plans, and County Development Plans.

Question 11: What key issues should the Industry & Enterprise Pillar deal with?

Investor confidence in the circular bioeconomy is critical to ensuring its success. In this regard, there is a need for a strong policy signal of the government's long-term government commitment to and financial support for the development of the Irish circular bioeconomy. There is also a need to clarify – for investors, producers and other stakeholders – what the plans for the Irish circular bioeconomy are post-2025 i.e., after the lifespan of the Bioeconomy Action Plan. Developing an overarching

⁴ Available at: <https://op.europa.eu/en/publication-detail/-/publication/ae0a36d3-eac3-11ec-a534-01aa75ed71a1>

⁵ See for example: <https://clarechampion.ie/biogas-plant-planning-permission-branded-absolute-disaster/>

national Circular Bioeconomy Strategy (which includes KPIs and sustainability indicators for all sectors of the bioeconomy) would be one way to address these issues. It would also provide an opportunity to set out the government's long-term vision for the Irish circular bioeconomy and provide a focus for cross-departmental and cross-sectoral engagement.

There is a statement on p.16 of the consultation document that "This pillar will look to address the issue around access to finance for bioeconomy investment, taxation and links to co-alignment and coherence with circular economy and renewable energy approaches." The need to ensure alignment with circular economy policy and renewable energy policy is also mentioned under the Nature, Climate Change & Circular pillar, so there is a need to ensure coherence and avoid replication of actions on these areas in both pillars.

Finally, given the proliferation of very small producers in certain sectors relevant to the circular bioeconomy – such as the marine sector – it is important that these small enterprises are supported to be able to engage effectively and have access to the potential benefits of the circular bioeconomy.

Question 14: What key issues should the Knowledge & Skills Pillar deal with?

At a research level, knowledge-building on public policies, regulations, consumer attitudes and societal responses is required. Generally, there is a need to ensure adequate support for social science research on the bioeconomy, which lags behind other fields of research. The emphasis on collaboration is welcomed under this pillar as the research ecosystem must be multidisciplinary.

At the policy-making level, there is a pressing need for additional staff to work on circular bioeconomy policy matters, as the volume of activity in this area has increased in recent years and is likely to continue to do so. In addition, there is a need for policy-making departments to be able to recruit specific staff with bioeconomy policymaking expertise and knowledge. Benefits of doing so include better cross-sectoral coherence, reduction in delays in incorporating bioeconomy into sectoral policy and legislation and greater capacity to engage with stakeholders wishing to discuss legislative barriers, etc

There is also a need for education and upskilling of staff in the financial services sector on the circular bioeconomy so that they can:

- a) Properly assess loan applications from circular bioeconomy producers and processors and give greater priority to such applications.
- b) Be better placed to advise investors on circular bioeconomy investment opportunities.

Question 17: Are there any further Pillars/Issues which this Action Plan should address?

One issue that was highlighted in the 2018 National Policy Statement on the Bioeconomy was that of ensuring coherence between all sectors relevant to the bioeconomy and two of the seven key actions outlined in the 2018 document specifically related to coherence. The critical importance of such coherence is well-established and so it is important that the forthcoming Bioeconomy Action Plan maintains this as a priority.

In terms of ensuring that the forthcoming Bioeconomy Action Plan is successfully implemented, it is important to identify what useful learning there may be from the experience of operationalising the Climate Action Plan. For example, the establishment of climate policy Project Management Offices and accelerators for particular climate actions could provide a useful template for similar initiatives in relation to the Bioeconomy Action Plan operationalisation.

Question 18: Indicate what the top five priorities for action in the bioeconomy over the next three years should be?

1. Develop a longer-term National Bioeconomy Strategy to provide a long-term vision, a signal of commitment for business and investors and guidance for policymakers. One important element of such a strategy would be the definition of common terminology and language around the bioeconomy and related concepts that is accessible for all stakeholders e.g., clearly defining what is meant by 'bioeconomy', 'circular bioeconomy', etc.
2. Provide for genuine diversity of stakeholders included in the bioeconomy development process, especially at local level and in the NGO sector. This requires supporting genuine participation, not just informing people about the bioeconomy. To date, the bioeconomy remains largely unknown to the public in Ireland and has gone unchallenged in its broadsheet media (Kelleher et al., 2021⁶). However, some elements of the bioeconomy (e.g., seaweed harvesting applications and biogas plants) have been met with public resistance. Public debate and the exchange of ideas (advocates and critics) must be supported. The Irish government already has established participation formats for civil society (i.e., The Citizens Assembly) which could support this.
3. Increase policy-maker staffing resources, particularly in departments where bioeconomy plays a significant role. More staff are required, including those with specific bioeconomy expertise as well as those with interdisciplinary and complex system thinking skills, given that bioeconomy spans so many sectors.
4. Identify practical ways to further improve coherence and collaboration between government departments to reduce siloed decision making. This should also include identifying synergies and conflicts between goals in existing policy., e.g., between climate, biodiversity, circular, industry, energy, forestry, agriculture and marine policy. Ensuring the availability of staff with systems thinking and collaboration skills will be important in this regard.
5. Evaluate biomass flows and prioritise uses to reduce over-exploitation and competition for scarce biomass, e.g., building on the work of the BioEire project. A related requirement is to improve monitoring and reporting capabilities for the complex task of measuring bioeconomy performance (KPIs and sustainability criteria).

⁶ Kelleher et al. (2021) "Framing the circular bioeconomy in Ireland's broadsheet media, 2004-2019". Available at: <https://www.tandfonline.com/doi/full/10.1080/17524032.2021.1889632>