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Our Ref: EPAC-3022

27 February 2023

Bioeconomy Action Plan consultation and discussion document (EPAC-3022)

Dear Sir/Madam

The Environmental Protection Agency (EPA) welcomes the opportunity to comment on the *Bioeconomy Action Plan Consultation and Discussion Document* to help inform the final content of the Bioeconomy Action Plan 2023 – 2025 (hereafter, Action Plan) and longer-term policy development in relation to the bioeconomy. The Action Plan will provide a clear path to develop the bioeconomy within the context of existing Government policy ambitions for Ireland's transformation to a modern, resource-efficient (and resource sufficient), prospering and competitive economy, in which environment, health and wellbeing are priorities.

The EPA is committed to protecting, improving and restoring our environment through regulation, scientific knowledge and working with others. Many of the EPA's roles and responsibilities interlink with the development of the bioeconomy (including environmental licensing, environmental research, environmental monitoring, climate science & climate change and the circular economy), therefore we welcome co-operative activities such as this public consultation in developing the Action Plan.

General

The Fast Track to Policy Report titled *Circular Bioeconomy Outlook Study 2030-2050* (funded under the EPA Research Programme – available from: <https://www.epa.ie/publications/research/evidence-synthesis-reports/evidence-synthesis-report-2-circular-bioeconomy-outlook-study-20302050-in-support-of-climate-action-sustainable-food-and-biobased-systems.php>) is referenced in the consultation and discussion document and it is understood that the recommendations will be taken into consideration in developing the Action Plan.

Through bilateral engagements with DAFM/DECC in Q3 2022, the EPA provided feedback on activities that interact with six categories of bioeconomy needs (needs as identified by the Bioeconomy Forum). We ask that this feedback is taken into consideration when developing the Action Plan.

Through participation in the cross-government Bioeconomy Implementation Group, the EPA will continue to contribute to the development of the Action Plan.

Pillars of the Bioeconomy

It is noted that seven pillars are proposed for the Action Plan, and that the Governance Pillar is to address cross-cutting issues which impact across all other Pillars. Consideration to breaking down the Governance Pillar into sub-pillars should be given, as there is a broad brief across networking, awareness raising, and policy, sectoral and regulatory coherence. Addressing the “policy, sectoral and regulatory coherence” across all other Pillars will be a very important aspect of the Governance Pillar.

Some points for consideration regarding the pillars:

- The Nature, Climate & Circular Pillar represents an important foundation on which many of the other pillars are built (e.g. the Communities Pillar and the Industry & Enterprise Pillar). Consideration should be given to having the Nature, Climate & Circular Pillar as an overarching pillar; the bioeconomy is called out as an enabler of climate action and circular economy in the consultation and discussion document and meeting the climate action challenge is interlinked between bioeconomy and circular economy activities.
- The interlinkages between bioeconomy, circular economy and climate action must be clearly articulated in the Action Plan to ensure that opportunities are realised while avoiding unintended consequences. For example, preventing food waste must be prioritised over valorisation of food waste and adopt the use of ‘unavoidable’ food waste for bioeconomy solutions.
- The consultation and discussion document notes that the bioeconomy is a natural enabler for the Circular Economy Act 2022, with the circular economy setting the shift to a more sustainable pattern of production and consumption. Strengthening links with circular economy policy and activities is key to the Action Plan, and it is important to recognise that this interaction cuts across several pillars not only the Nature, Climate & Circular Pillar. There is a strong need for alignment and common goals between circular economy and bioeconomy activities to ensure opportunities are fully realised and unintended consequences avoided.
- Interactions between the Research, Development & Innovation Pillar and the Knowledge & Skills Pillar with each of the other pillars should be documented in the Action Plan. For example, an explicit link is made between the Research, Development & Innovation Pillar and the Industry & Enterprise Pillar, but no link is made to the likely extensive role of research in the Agriculture, Forestry & the Marine Pillar and the Nature, Climate & Circular Pillar. See below section on the Research, Development & Innovation Pillar.
- Regarding the Nature, Climate & Circular Pillar. The Circular Economy Act 2022 references that the National Policy Statement on the Bioeconomy (or any document published by the Government which amends or replaces that statement) is to be taken into account when preparing (i) a circular economy strategy and (ii) national food waste prevention strategy. It is therefore recommended that input to future national circular economy strategies, programmes and action plans is included in the Action Plan.

Actions and Indicators

In development of the Action Plan, please consider the following:

- Recognising the interlinkages across Pillars, it is recommended that as well as Key Performance Indicators for individual pillars, KPIs for cross-cutting linkages should be developed.
- Time scales should be considered given that biological processes (on which the bioeconomy depends) interact on different timescales. For example, certain actions may not impact food security directly in the short to medium-term but could threaten it through indirect effects in the long run, such as climate change impacting the viability of certain food crops. Therefore, the compatibility of the activity with the principles underpinning the bioeconomy must be considered both in the short run and in terms of the long-term viability and sustainability.

- Actions under existing national policies and plans, including Ireland’s National Food Waste Prevention Roadmap which has an action for engagement with the Bioeconomy Implementation Group to “promote the use and integration of the EPA’s standard national food waste measurement protocol for use in key sectors”.

Regulation

It is noted that the Governance Pillar will address regulatory coherence, but specific actions relating to regulation may need to be called out under one or more pillars.

It is important that the Action Plan takes into consideration any existing regulatory requirements and identifies activities that will support overcoming regulatory barriers to supporting bioeconomy (with the understanding that any solutions will not negatively impact on the environment or have unintended consequences). Any actions relating to review of regulation would need the support of relevant government departments and regulators.

The EPA has statutory roles in environmental licensing and in regulation for circularity. Regulation for circularity plays an important role in supporting bioeconomy development, for example, Article 27 by-products regulations support the prevention of waste and foster resource longevity and valorisation. There is a regulatory process to follow to obtain by-products status for a production residue.

Having a guidance document/glossary of terms related to bioeconomy-related regulation would be welcomed as a resource for all stakeholders and such an output should be considered under the Action Plan. Preparation of this output could be a collaborative activity between DAFM, DECC, the EPA and local government and include for example information on by-products (Article 27), end of waste (Article 28), animal by-products and waste. This would support a common view and understanding on areas such waste prevention, industrial symbiosis and by-products across the circular economy and bioeconomy policy areas.

Bioeconomy and climate

Ireland’s development of the bioeconomy has the potential to support the development of an environmentally sustainable resource base, that could also contribute to climate change mitigation and adaptation. Innovations and practices in the bioeconomy have the ability to both reduce greenhouse gas (GHG) emissions and promote the sequestration and storage of carbon in biomass and soils. Bioeconomy and natural carbon sinks is one of seven strategic areas within the EU’s strategic long-term vision for a prosperous, modern, competitive and climate-neutral economy by 2050.

Enterprises in bio-based value chains have several possibilities to reduce their GHG emissions. Examples include a shift towards energy efficient equipment and practices, inputs with a lower carbon footprint, or better management of products’ end of life, wastes and residues. For land managers, there are opportunities in both carbon sequestration and minimising GHG emissions through environmentally friendly land management practices and local production of sustainable building/insulation materials to feed into the retrofit targets of the Climate Action Plan 2023, e.g. hemp, sheep’s wool insulation products. The options available depend on the nature of the business involved (e.g. livestock, forestry, or arable land) and the local conditions such as soil type and climate patterns. Climate actions by rural communities can also have links with building local, circular food systems, waste management and ecosystem services that will contribute to climate resilience. Local co-operative groups (including agricultural co-ops) should not be forgotten from the point of view of promoting and providing an outlet for products but also from the educational point of view. These organisations have an existing network of contacts and the trust of local communities.

Bioeconomy in the context of climate goals

In the context of Ireland's climate goals, the Action Plan must integrate the objectives of embedding environmental and climate actions in rural, coastal, and regional areas and developing a climate-neutral and decarbonised economy by 2050. It should also be highlighted that a sustainable and circular bioeconomy can help build resilience in local biological resources, environment, economy, and society. A key driver to achieve these goals is to better manage biosphere use to meet environmental and economic requirements in a climate neutral Europe. Promoting more sustainable consumption patterns to guarantee environmental integrity and preserving/building skill sets which are in decline due to the consumption patterns of replace rather than repair will play a role. This would include developing policies and measures to encourage new entrants and existing companies to step into this space and look at how they can participate in the bioeconomy.

Climate and the environment should be a key cross-cutting theme across all pillars in the bioeconomy. The plan highlights that the bioeconomy should promote circularity through solutions and innovations that reuse and recycle materials, maximising resource efficiency through the use of unavoidable wastes and environmental sustainability. It should also be noted that this has synergistic effects in terms of reduced/avoided GHG emissions for climate mitigation. The bioeconomy can play a part in lowering GHG emissions through, for example, the development of innovative practices and processes that can improve the efficiency in agriculture and forestry production systems. Bioprocessing and bio-refining can replace high embedded carbon products such as concrete, steel, plastics and chemicals with bio-based alternatives.

Each of the implementation pillars should also refer to contributions to GHG emissions. For example, although the Industry & Enterprise Pillar refers to the contribution of industry to Ireland's GHG emissions, the Agriculture, Forestry & the Marine pillar doesn't refer to Agriculture (or Land-use, Land-use Change and Forestry) contributions, which are a significant proportion of Ireland's total GHG emissions.

Research, Development & Innovation Pillar

The "collaborative and coherent approach to foster research, development and innovation" noted in the consultation and discussion document is welcomed. There are many national funding opportunities relevant to bioeconomy and circular economy activities, with a risk of duplication of funding for the same stage of project/product development without adequate collaboration and coherence in approach.

It is recommended that the Action Plan includes an activity to gather information on existing research funding and existing innovation funding opportunities relevant to bioeconomy (including those referencing circular economy), and to agree a cross-government approach to ensure clear distinctions, clear purpose and avoid duplication across funding mechanisms. It is recommended that these actions are undertaken prior to creating any new funding mechanisms. The EPA Research team would be a key stakeholder, given the EPA Research 2030 framework, the EPA's responsibility to coordinate environmental research in Ireland and EPA Research thematic areas relevant to bioeconomy. The EPA's Circular Economy Team is also a key stakeholder, given the Green Enterprise innovation funding call has funded bioeconomy related projects in the past and includes the thematic area Food, Nutrients and Water.

The consultation and discussion document calls out the need to ensure that "funding pathways exist to move from research, development, and innovation to commercialisation." There are similar challenges for circular economy funding pathways, therefore working in co-operation on needs and solutions would be welcomed.

Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA)

In preparing the Bioeconomy Action Plan, the requirements of the Strategic Environmental Assessment (SEA) Directive and implementing regulations (S.I. 435 of 2004, as amended) and the Habitats Directive should be taken into account. The EPA [Good Practice Guidance for SEA Screening](#) can assist in determining whether SEA is required. Where SEA is determined to be required, consultation should be undertaken with the statutory

environmental authorities at the scoping and draft Strategy/Environmental Report stages. Provisions should also be made for consultation with the wider public at the relevant stages in the process.

The EPA is happy to discuss all aspects of this submission and looks forward to continuing work with DAFM and DECC on developing the Action Plan through our participation in the cross-government Bioeconomy Implementation Group.

Sincerely,



Warren Phelan
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Office of Environmental Sustainability