



12th September 2017

**Response to Discussion Document for the preparation
of a National Policy Statement on the Bioeconomy**

Dear Sir/Madam,

Thank you for the opportunity to draft a response to the Discussion Document for the preparation of a National Policy Statement on the Bioeconomy. Please find below some brief observations from the Irish Forum on Natural Capital. Due to our limited resources, we are unfortunately not in a position to develop a more comprehensive response but hope nonetheless that our submission may inform your thinking on this very important topic.

Yours faithfully,

Prof Jane Stout
IFNC Chair / Trinity College Dublin

1. General Comments

We suggest that it would be useful to embrace the natural capital concept with respect to developing a policy statement on the bioeconomy. Natural capital comprises the world's stock of natural resources, including all living and non-living components and associated bio-

physico-chemical processes, from which flow ecosystem goods and services that have benefits and value to human society.

Renewable biological resources (including crops, forests, fish, other animals and their by-products, as well as micro-organisms) underpin the bioeconomy. These are ecosystem goods that flow from the stock of natural capital. They depend on other elements of natural capital, and the ecosystem services they provide (e.g. the soil organisms that maintain soil fertility for growing crops; the natural enemies that prey upon crop pests; the wetlands that filter and purify water).

Therefore, by taking a natural capital approach to assess the impacts and dependencies of bioeconomy products on natural assets throughout their lifecycle, we could articulate a fuller range of their environmental costs and benefits and account for them, thereby informing decision making, providing an evidence-base for the bioeconomy's contribution to long-term sustainable development, and avoiding greenwash.

Thus, we would recommend that any bioeconomy policy should require producers of bioeconomy products to undergo life cycle assessment (LCA) or risk assessment that includes information on product impact and dependency on natural capital as a matter of course, in order for the "green" credentials of products to be demonstrated and appropriately marketed.

2. Specific comments on the document:

Introduction –

"Investment in the bioeconomy will also help Ireland meet its national, EU and wider international commitments to environmental protection and sustainable development" – not necessarily. This is a sweeping statement that doesn't address the complexities of either the bioeconomy nor of environmental protection. There is the potential for bioeconomic policies to contribute to environmental protection, but it's not a given.

We note the absence of the Department of Culture, Heritage and the Gaeltacht (DCHG) in the Interdepartmental Group, which is a shame, given their role in conservation of natural heritage in the State.

What is the bioeconomy? –

Does the broad definition outlined adequately encompass the opportunities presented by the bioeconomy?

No – there is the opportunity to adopt full LCA, quantification of natural capital impacts and dependencies, for stronger environmental sustainability.

Benefits of the bioeconomy –

We don't understand how the bioeconomy can "reduce our dependency on natural resources and imported materials" when it has just been defined as the economy that uses biological resources that are components of our natural resources. It would be better to think about reducing dependency on non-renewable natural resources (or those that do not renew as quickly as we deplete them).

What is the bioeconomy in Ireland? –

Again, this Interdepartmental Group should include DCHG – biological resources are part of our natural heritage, dealt with by this Department.

How can a high-level policy statement on the bioeconomy assist in progressing the development of the priority value chains identified?

By considering and/or insisting on complete LCA of these value chains. For example, it is important that potential waste products from bioeconomy activities do not exacerbate waste problems.

What existing strategies shape the Irish bioeconomy? –

The National Biodiversity Strategy should be included here.

Policy documents on Natural Capital from the Irish Forum on Natural Capital and from relevant Government Departments.

Approach at European Level –

We think that considering the bioeconomy as the biological element of the circular economy is grossly underestimating the role of ecosystems in the circular economy. The bioeconomy is based on extracting biological materials (from natural or artificial “habitats”) and creating a market for them, whereas there are a great many more ecological (i.e. biological) processes which contribute to the circular economy (e.g. decomposition of waste; filtering and detoxifying air, land and water etc.).

What lessons can Ireland take from the European approach, including to the Circular Economy?

Integrate natural capital concepts (see Natural Capital Coalition) and resist from seeing the bioeconomy as the answer to solve environmental problems. Involve more ecologists in the debate.

3. Role of a national policy statement

Objective –

Given the cross-sector nature of the bioeconomy, how can a national policy statement best support development?

Take a natural capital approach – the successful development of the Irish Forum on Natural Capital (IFNC) demonstrates how this approach has support across sectors.

Establish common principles –

The word “sustainable” can be applied in different ways – notably a sustainable industry can be defined as one which has long-term financial value, rather than one which necessarily accounts for impacts and dependencies on the environment and actively reduces those impacts. Environmental sustainability is achieved when the rates of resource depletion are less than renewal, such that use of those resources can continue indefinitely. We welcome

the statement that sustainability cannot be assumed in developing the bioeconomy and suggest that feasibility assessments should include LCA as mentioned above.

Can we identify a common set of principles, including in particular the application of the cascading principle, which will assist in the development of both the bioeconomy and circular economy?

We need to recognise that the economy is a subset of the environment, not the other way around, and that the economy can only grow within physical and biological constraints imposed by the environment.

Identify the actions needed to pursue opportunities

How can a national policy statement support local and regional cooperation around the use of renewable biological resources?

Require an analysis of environmental impacts and dependencies in the development of bioeconomic products in order to internalise non-market externalities into the product's costings.

How can waste policy, including an examination of the definition of waste, best support developments in the bio and wider circular economy?

Create a register/inventory of "waste" products and methods for transporting/distributing them. Charge heavily for waste going into landfill.

How can we stimulate market demand for bioeconomy products? What is in it for the consumer?

Make products that are produced with lower environmental impacts cheaper than the alternative by adopting natural capital methods that quantify environmental impacts and dependencies and value them, enabling their incorporation into pricing structures to reflect the true cost of production. Make waste more expensive to deal with. Use financial instruments and incentives.

Support and monitor progress

What is the most appropriate mechanism to coordinate development and monitor progress?

Create an independent body of stakeholders – not just containing bioeconomy proponents/industries. Involve cross disciplinary expertise.

Prof Jane Stout, Trinity College Dublin, on behalf of the Irish Forum on Natural Capital

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4. About the Irish Forum on Natural Capital

The Irish Forum on Natural Capital (IFNC) is a special interest group that brings together a diverse range of organisations and individuals from academic, public, private and NGO

sectors who are interested in the development and application of the natural capital agenda in Ireland.

Our vision is for an Ireland in which natural capital and ecosystem goods and services are valued, protected and restored.

Our mission is, through the collaboration and leadership of our diverse members, to help to value, protect and restore Ireland's natural capital and ecosystem services. We will do this by supporting the adoption of natural capital concepts in public policy and corporate

The IFNC has over 450 individual members and a Steering Committee that includes senior representatives from the National Parks and Wildlife Service, Environmental Protection Agency, Coillte, Bord na Mona, Trinity College Dublin, University College Dublin, Business in the Community Ireland, Chartered Accountants Ireland, Department of Communications, Climate Action and Environment, Department of Agriculture, Environment and Rural Affairs (NI), Northern Ireland Environment Link, South Dublin Chamber, the CDP, Teagasc, the Local Authorities Waters and Communities Office, and independents.