



Biorefining & Bioenergy

AN ENTERPRISE IRELAND
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POLICY ROUNDTABLE DISCUSSION – BIO BASE N.W.E. – Ireland “region” of project

3rd September 2015, Teagasc College, National Botanic Gardens, Glasnevin, Dublin

The global bioeconomy – is Ireland in danger of losing out?

The EU is rapidly moving to replace the petro-chemical technologies that have created unprecedented historical wealth and prosperity with new, sustainable bio-technologies that utilise renewable resources. Development of these new technologies opens up new, lucrative markets that are only just beginning to be exploited.

Ireland has many natural resources that can be leveraged to sustainably produce new forms of bio-products and engineer new process technologies; however, it is only beginning to use these resources to tap new bio-economic opportunities. The economic value of Ireland’s current bio-products are at the lower end of the value spectrum (e.g. commodity food products and bio energy) and have not yet prioritised development of much more lucrative bio-chemicals or bio-materials outputs. Other potential opportunities may be underexploited (e.g. the marine sector) or overlooked altogether (e.g. resource recovery and redeployment). In this rapidly changing environment is Ireland in danger of losing out in the growing bio-economy?

Given the broad scope of the bio-economy, it is opportune to identify which opportunities Ireland should prioritise to maximise national income, exports and job creation. **In this context, as part of the EU INTERREG co-funded Bio Base North West Europe project, TCBB partnered with its partners in the Irish Dept. of Agriculture, Food and the Marine-funded BioÉire project to run a policy roundtable discussion on the development of the bioeconomy in Ireland. Arguably, the TCBB’s participation in BioÉire and the government funding approval for it is a spin-off or outcome of TCBB’s participation in Bio Base N.W.E. and the know-how and networks it has built through it.** In the BioÉire project, a multi-disciplinary research team, led by Teagasc (Ireland’s agriculture and rural development advisory authority) and including the Technology Centre for Biorefining and Bioenergy (TCBB) (at NUI Galway), University College Dublin (UCD) and Dublin Institute of Technology (DIT), has been funded by a 2014 DAFM/Stimulus research grant to address how Ireland can capitalise on these new developments. The consortium and project is known as “BioÉire.” Over a 2-year period starting in December 2014, this team is undertaking research to assess Ireland’s natural resources and core strengths, and match these to global market opportunities. It will then systematically identify up to 8 commercial opportunities that could be viably deployed by Irish-based producers and companies in the short-term, and make recommendations on the development frameworks that could be introduced to underpin commercial exploitation of these opportunities. Such frameworks will relate to R&D programmes, policies, regulatory measures, market supports, funding mechanisms and other initiatives. These were the matters discussed at the Bio Base N.W.E. Policy Roundtable Discussion in Dublin on the 3rd September 2015.

The BioÉire research team comprises partners that have significant track records of conducting national, EU and industry-funded research in this area, and moving such research along the innovation pipeline to commercialisation. TCBB’s expertise and experience of bioeconomy market development gained from its participation with other EU member state organisations in the Bio Base N.W.E. project is a key contributory factor to its participation and contributions to the BioÉire project in Ireland. The key objective of the BioÉire project is to inform and advise the Irish Ministry/Dept. of Agriculture, Food and the Marine on the development of a national bioeconomy strategy to establish the market and regulatory frameworks required for Ireland to avail of the opportunities for sustainable economic development available in the wider European Union and global bioeconomy.

BioÉire is actively seeking participation from the stakeholders that are needed to successfully develop Ireland’s bio-economy. Within Teagasc, the project is being supported by a 16-member working group with expertise, knowledge and professional networks from agriculture, bio-energy, forestry, food marine and waste streams, and from research, policy development and advisory/training perspectives.

TCBB’s Technology Leader, Bart Bonsall commented in December 2014 on the Irish Dept. of Agriculture Food and the Marine’s approval for funding for the project: *“TCBB works with enterprises large and small to extract added value from Ireland’s existing agricultural and forestry outputs as well as agri-food and municipal waste resources. TCBB welcomes this opportunity to work with Teagasc on a project of such strategic national importance, and we are of the view that the Bio-Éire collaboration will identify those areas that will enable Ireland to prosper in this new economy, quantifying, highlighting and developing the near-term market opportunities for Ireland.”*

The definition of the bioeconomy used in the project is that used in the EU Bio-economy Strategy (European Commission, 2012): an economy which encompasses the sustainable production of renewable biological resources and their conversion into feed, food, bio-based products such as bio-plastics, bio-fuels and bio-energy. It includes agriculture, fisheries, forestry, food, pulp and paper and chemical, biotechnology (incl. pharmaceutical) and energy industries.

TCBB’s input into the BioÉire project to inform and advise the Irish Department of Agriculture, Food and the Marine on the development of a National Bioeconomy Strategy and to identify 8 priority commercial opportunities for market development is informed and enhanced by its participation in the EU INTERREG IVB N.W.E. Bio Base N.W.E. project. The BioÉire project is funded completely by an Irish Dept. of Agriculture, Food and the Marine research grant. The Bio Base N.W.E. Policy Roundtable discussion examined areas where Ireland has existing bioeconomy strengths and large volumes of feedstocks, including significant marine resources and fish processing by-products as well as within the forestry and agri-food sectors. Some of the discussion focused on whether Ireland should seek to valorise existing feedstocks of organic wastes and by-products or focus on other strengths such as a recent historical tradition and expertise in growing and processing sugar beet. The policy roundtable discussion looked at whether Ireland should re-enter the sugar beet growing and processing arena, but this time with a focus on a more valuable value chain of bio-chemicals production from sugar beet.

Whilst a dedicated open forum for discussion was scheduled for immediately after all of the presentations had been delivered by the individual speakers, questions and comments were taken and open discussion facilitated during the individual presentations and immediately afterwards. This worked well as issues and questions arising were analysed and reviewed when they were “live” in the minds of the participants.

Bio Base N.W.E. – BioÉire Roundtable Policy Discussion Seminar Programme Outline – 03.09.2015:

10.00	The National Bio-Economy Policy Context – the Rationale for Bio-Éire	Dr Maeve Henchion, Teagasc
	An Overview and Analysis of Bio-Economy Strategies in other Countries	Mr Paul O’Reilly, DIT
	Agriculture as a Supply Chain for New Bio-chemical and Bio-material Opportunities	Mr Bart Bonsall, TCBB & Bio Base N.W.E.
	Sustainable Utilisation of Marine Resources for Food use: a Bio-refinery Process Approach	Dr Maria Hayes, Teagasc
	Discussion Session to Gather Ideas on the Best Bio-economy Opportunities for Ireland	All – open roundtable discussion
1.00	LUNCH	

After lunch and the close of the Policy Roundtable Discussion, a further BioÉire project internal roundtable discussion took place with the Teagasc Bioeconomy Working Group on methodology for

identifying optimal bioeconomy value chains for Ireland and addressing policy and regulatory framework challenges to market development. This discussion built on and followed on from the themes, issues and suggestions that were raised and discussed in the open invitation roundtable seminar earlier in the day.

The workshop brought together representatives from across policy, academic, state and semi-state organisations to discuss initial bioeconomy opportunities for Ireland, ultimately feeding into the process of developing a coherent, national bioeconomy strategy.

Summary of recommendations and follow-up items arising from the Bio Base N.W.E. policy roundtable workshop:

- Suggestions of key informant(s) within the industry/sectors for interview and inputs into a national bioeconomy strategy were made, the recommended informants include TCBB's partners in Bio Base N.W.E. Follow-up discussions with sectoral experts, potential users (commercial experts and policy makers) as well as interdisciplinary experts who may help bridge gaps were recommended and will be pursued by TCBB within the BioÉire project and continue after the Bio Base N.W.E. project has been completed.
- Input into strategic analysis of current bioeconomy in Ireland – SWOT analysis and other tools were discussed and regulatory drivers and inhibitors discussed. Policy initiatives such as the current consultation on the proposed Renewable Heat Incentive (RHI) and Food Wise 2025 were discussed with some participants to make submissions to this consultation following the workshop.

Bioeconomy value chains

- Identification and recommendation of value chains: value chains such as marine resources and fish and seafood processing as well as the agri-food and forestry industries where Ireland has the potential to perform well were identified and recommended for further and more detailed examination for commercial feasibility.
- For the BioÉire project, the Bio Base N.W.E. roundtable discussion and follow-on work arising from it represent additional outputs of the project, not anticipated in the original BioÉire project proposal.
- Rather than solely be an end in itself, the Bio Base N.W.E. roundtable discussion organised by TCBB in collaboration with its BioÉire partners will also be a platform for the following follow-up items:
 - **The Irish Bioeconomy – scope, structure and situational analysis:**
Report on the current status of the bioeconomy in Ireland to uncover:
 - any discontinuities in our data? Any gaps or structural breaks? Any trends that are not captured?
 - ballpark estimates of value added across sub-sectors
 - feasibility of case studies/examples
 - transformation technologies in food and agriculture
 - A further internal workshop will take place to select 8 value chains for detailed techno-economic and socio-environmental analysis. These 8 value chains will be recommended to policy-makers for market development.

The Technology Centre for Biorefining & Bioenergy (TCBB), the Ireland participant in Bio Base N.W.E. is co-hosted at NUI Galway, Ireland.

