

# European Bioeconomy Stakeholders

## MANIFESTO



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## Introduction

### 1. Who we are

We, representatives from large and small companies, NGOs, biomass producers, regions, and academia from all over Europe as members of the European Bioeconomy Stakeholders Panel, have prepared this manifesto based on the Building Blocks document, prepared as outcome of the Bioeconomy Stakeholders Conference under the auspices of the Dutch Presidency of the European Council in the first half of 2016. Collectively, we believe that Europe can be a leader in the development of a sustainable bioeconomy.

### 2. What is the bioeconomy

The bioeconomy encompasses the production of renewable biological resources and the conversion of these resources, residues, by-products and side streams into value added products, such as food, feed, bio-based products, services and bioenergy<sup>1</sup>.

### 3. Why we need the bioeconomy

Advancements in bioeconomy research and innovation uptake will allow Europe to improve the management of natural resources and to open new and diversified markets in food and bio-based products. This will be important in order to cope with an increasing global population, rapid depletion of many resources, increasing environmental pressures and climate change, as Europe needs to radically change its approach to production, consumption, processing, storage, recycling and disposal of biological resources. The Europe 2020 Strategy called for a bioeconomy as a key element for smart and green growth in Europe.

Developing the bioeconomy in Europe also holds a great potential in this respect: it can maintain and create sustainable economic growth, prosperity and many high-value jobs in rural, coastal and industrial areas, where these are greatly needed, reduce fossil carbon dependence and improve the economic and environmental sustainability of primary production<sup>2</sup> and processing industries. Biotechnology and biological knowledge provide tremendous potential for new products and services.

This strengthening of the bioeconomy can therefore contribute significantly towards a broad range of EU objectives including climate change mitigation, the circular economy and resource efficiency, environmental protection, creating jobs, growth and revenue.

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<sup>1</sup> COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Innovating for Sustainable Growth: A Bioeconomy for Europe /\* COM/2012/060 final \*/

<sup>2</sup> Note: Primary production in the context of this document includes agriculture, forestry, fisheries and aquaculture



## **4. The purpose of this manifesto**

This manifesto is the result of a broad, open, extensive and inclusive consultation and dialogue with a wide range of stakeholders in the field of the bioeconomy. Our intention is that the resulting manifesto will recognise the opportunities and challenges of developing the bioeconomy and provide inspiration to regions and Member States, at various stages of development of their bioeconomy strategies, as well as for the EU as a whole. It should also serve to trigger discussions in Member States, regions, and rural, coastal and urban communities on the issues pertinent to the development of a world leading EU bioeconomy in the context of mounting global competition. It should provide food for thought and a key contribution towards the development of more specific recommendations, from different stakeholders, which can then contribute towards the development of a number of relevant policy initiatives, including a revised EU Bioeconomy Strategy, the EU's Circular Economy package, Smart Specialisation strategies, CAP, CFP and Framework Programme 9 priorities on Research and Innovation. It outlines concrete actions which should be initiated and carried out by the Bioeconomy Stakeholders Panel and its members' wider networks, as well as by society at large, to contribute to the transition towards a bioeconomy for Europe.



## Guiding Principles for Development of the Bioeconomy

*The development of the bioeconomy needs to be driven by the desire to meet several of the big societal challenges of our time. The EU bioeconomy should be sustainable in terms of people (jobs, inclusiveness), planet (limits to resources, biodiversity, ecological balance and climate) and profit (resource efficiency, competitiveness). Given the growing needs of the growing population these societal challenges will become even more imminent.*

### **5. Resource use within the limits of the planet**

Planetary boundaries require the use of limited resources in the most effective, sustainable and efficient ways to produce products such as food, feed, materials, chemicals and energy. The bioeconomy can therefore not be based on the idea of substitution alone, but should be developed recognising that land and biomass, even when renewable, are limited resources. The bioeconomy should therefore be further developed in the context of principles of the circular economy, such as efficient use of primary natural resources, biodegradability and smart consumption, fostering innovation as well as changes in life style and diets. Resource limits are however not static or fixed but are also influenced by human actions as well as environmental conditions.

### **6. Mitigating climate change**

The Paris Agreement aims to keep global temperature rise well below two degrees Celsius, and to pursue efforts to keep them below 1.5 degrees Celsius. The agreement emphasised both the urgent need to reduce greenhouse gas emissions from the use of fossil fuels, as well as to maintain carbon storages and increase removals by ecosystems, land and forests. The bioeconomy is a key opportunity to replace fossil raw materials. A key challenge for the bioeconomy is to ensure that it doesn't lead to depletion of terrestrial carbon stocks and sinks and that it replaces fossil raw material in the most efficient manner.

### **7. Producing for people**

An EU bioeconomy should contribute to creating jobs and revenues for companies, while ensuring social rights of workers. Sustainable, new and innovative products, business models and production processes as well as agriculture, fisheries and wood-based products can promote new economic activities and secure employment for people in various sectors and along the value chain. At the same time it needs to ensure that globally, the development of the bioeconomy does not come at the expense of land tenure rights, basic human rights or food and water security.



## **8. Sustainable management of resources**

The bioeconomy should contribute to EU objectives including on sustainable primary production, halting biodiversity and habitat loss and (global) deforestation, the reversion of land degradation and ecosystem restoration while improving food, nutrition and water security. A key principle for the bioeconomy should therefore be ensuring ecosystem resilience and sustainable production and consumption systems.

## **9. The bioeconomy needs a stable and predictable legal framework**

For the bioeconomy to continue to develop in a sustainable way in Europe, a coherent, transparent and predictable policy making process is essential. Removing regulatory uncertainty will encourage innovators and entrepreneurs to invest in the development of new or improved bio-based products.

## **10. Cooperation between sectors and actors along value-chains**

A unique added-value of the bioeconomy lies in the possibility to create synergies through cooperation between various sectors both along the value-chains and across the value-chains, and the possibility to scale-up processes once feasibility is demonstrated. This requires efforts to bring actors together and a holistic approach that is respectful to the varying situation for stakeholders from different parts of the bioeconomy-web. By giving more visibility among sectors and to consumers, the innovations will diversify and market pull can be stimulated for new products. The bioeconomy concept builds the critical mass needed for us to effectively address the grand societal challenges.

## **11. Long-term research and innovation agenda**

Research is a cornerstone for the transition from a fossil-carbon based to a renewable bio-based economy. Better understanding of the potential as well as the vulnerabilities of our planet's natural capital, socio-economic research, and technology development, underpin the development of novel processes and products, societal transition, and climate-smart services. A long-term strategic research and innovation agenda and resources to support its development are evidently needed. Coordination of research programmes among countries can speed up development and reduce unnecessary redundancy. Having open access to research and innovation financed with public funds becomes increasingly important.

## **12. Importance of regional strategies and rural renaissance**

Regions are key actors in developing the European bioeconomy and a strong bioeconomy can make regions more economically attractive. Europe's cities and regions should play a key role in the development of the bioeconomy. At the regional level, we should better utilise the available biomass and agricultural land, while ensuring sustainable management of natural resources. The bioeconomy can help Europe revitalise rural areas. A European bioeconomy will offer a new perspective on traditional and high-value production in the regions, as well as creating new opportunities and jobs for farming, forestry, fisheries, aquaculture and industry.



## Actions

*An ambitious agenda is necessary. There are a number of actions and next steps that we want to initiate in cooperation. Joint action of industry, civil society organisations, biomass producers, academia, and regions, in cooperation with the EU and Member States, includes addressing the following issues.*

### **13. Enhancing education, training and skills**

Education of school children and high school students are crucial to raise a generation that can understand the challenges and embrace the opportunities of a bioeconomy. For example, teaching principles of circularity, of acting global and local at the same time (glocal), and raising interest for exploration will contribute to preparing the new generation to find its way. At Universities new curricula are already developed that combine for example life sciences, engineering and marketing. Such cross-overs between disciplines and a facilitating environment for start-ups can support students to become bioeconomy entrepreneurs. Vocational training needs to evolve also to match requirements for skills in primary production, manufacture, transport, and other relevant sectors. Also, later on in life, workers need to update their skills and competences. Life-long learning programmes that connect education providers with producers, workers, researchers, and innovators can support this.

### **14. Aligning open science and research programmes**

New concepts, processes and products, smart connections, and novel business models, founded on basic science and break-through discovery, are key for developing the bioeconomy. Interdisciplinary approaches can unlock new insights and applications, for example on tipping points. Transnational research calls co-funded by the European Commission, such as Joint Programming Initiatives and ERA-NETS, offer great opportunities for working across borders, build networks, and can be a step-up to large European consortia. Inclusiveness, smart specialisation, collaboration with global players and European Technology Platforms (ETPs) are important concepts to increase efficiency of use of funds and align efforts. Open science policies are to be implemented through new contracts with publishers.

### **15. Bridging the innovation gap by public-private partnerships**

By pooling resources, knowledge, and infrastructure from public research programmes and innovative companies, in a PPP contractual arrangement, the skills and assets can be combined to help boosting the development of the bioeconomy. Initiatives like the Bio-based Industries Joint Undertaking serves this aim and by strengthening coordination and interaction between this initiative and other programmes, national and European, it could add even more to the European bioeconomy in the coming years. Also on the national level public-private partnership has an important role to play for the bioeconomy, for example by working together in regional clusters.





## **16. Embracing the circular economy**

Bioeconomy and the circular economy need to go together to develop synergies between the two systems in order to ensure that resources are used more productively and efficiently in both economies. We want to cooperate to deliver the bioeconomy contribution to the goals, targets and ambitions formulated in the EU Circular Economy Package which offers great opportunities to make better and more efficient use of biomass resource and to reduce overall resource consumption. The Circular Economy Action Plan and its waste legislation should be fully implemented to minimise waste, to separately collect, reuse and transform bio-waste as well as by-products and residues into high-added-value compounds.

## **17. Strengthening the regional bioeconomy and inter-regional cooperation**

Regions which identify the bioeconomy as a competitive advantage within their smart specialisation strategies or other regional strategies should support the regional bioeconomy development from European Structural and Investment Funds. Where possible, synergies should be sought between European, national and regional funds to build infrastructure at the regional level and to link in with research and innovation funding that should not ignore rural priorities. Mapping of regional competencies, supporting mutual learning within and between regions and more resources for peer-to-peer exchanges at the EU level are essential in order to create new value chains while optimising existing ones.

## **18. Raising public awareness and improving communication**

Raising public awareness is essential in order to ensure the development of a smart, sustainable and inclusive bioeconomy, to create a market for sustainable bio-based products and to promote more sustainable consumption and lifestyle patterns. Actions needed include increasing traceability and transparency of supply chains, developing certification schemes and consumer labels for bio-based products. Public awareness actions are needed particularly on regional and local level where it could include prizes or awards as well as exhibitions also on the role of technology and science in the bioeconomy.

## **19. Establishing a monitoring system for the bioeconomy**

Monitoring socio-economic data/information from the bioeconomy, across all the different sectors that it encompasses, is essential for both private and public decision-making. We believe that the bioeconomy's essential contribution to climate change mitigation, rural and regional economies and job creation as a whole in the EU is often difficult to quantify due to the lack of a common approach between different feedstocks and value-chains in the bioeconomy. This hampers the comparison with other sectors and makes it difficult to discover trends over time.

Needed socio-economic information includes, for instance, number of employment opportunities, work-related accidents, number of businesses and turnover of all the sectors of the bioeconomy. Existing tools and data methodologies can be better utilised to avoid additional administrative burden.



## **20. Promoting biomass availability**

Sustainable biomass mobilisation in Europe is the basis for a sustainable bioeconomy. The challenges related to biomass mobilisation differ greatly between different regions and from one biomass source to another. The small-scale nature of many biomass producers, cultural and demographic barriers, effects of urbanisation on rural communities as well as sparsity of secondary biomass resources are all challenges for the bioeconomy.

To promote biomass availability in a sustainable manner, cooperatives and cooperation between biomass producers should be encouraged and investments made into rural transport systems. Other barriers for more efficient primary and secondary biomass mobilisation should be identified. Overall, efforts should be made to ensure that the biomass mobilisation system is dynamic and able to adapt to changing demands and circumstances.

## **21. Researching and assessing biomass potentials**

Careful assessment of the sustainable biomass resources, their scale, different existing and potential future uses is needed as a foundation of a sustainable bioeconomy. The assessments, such as done by the Joint Research Centre, should take into account the potential environmental and social impacts of using these resources as well as the economical limitation of the potential. The resource potential should be evaluated against the potential (scalability and costs) of technologies involved in the processing and refining of biomass. Effective assessment is needed to ensure that the bioeconomy policies help to resolve the global challenges the EU is facing, including a comprehensive set of indicators to monitor the bioeconomy and its impacts.



## Recommendations to the EU and Member States

*There are a number of actions and next steps in which the EU or Member States should take the lead. Strong leadership of the European Union and Member States and an integral approach to working towards a bioeconomy is urgent and includes:*

### **22. Support market creation**

The EU, Member States and regional authorities can make crucial contributions to growing the bioeconomy by stimulating market demand for renewable, smart and resource-efficient products and services. Existing standardisation activities and certification schemes and/or new voluntary labelling schemes, can be used. Where there is potential for bio-based products to sustainably substitute fossil-carbon alternatives, this could be enabled both through the development of new legislation, such as the circular economy package, and through the eventual revision of other relevant existing legislation.

### **23. Common agricultural policy**

The EU's Common Agricultural Policy is key policy underlying the possibilities of a sustainable European bioeconomy. The policy should be reformed to facilitate a sustainable and resource efficient bioeconomy by providing fair opportunities to all farmers and rural communities, nutritious and healthy food choices for consumers, by creating incentives in the whole value chain for the development of new business opportunities, and by development and better valorisation of various biomass resources in rural areas.

### **24. Maintaining biodiversity and EU nature legislation**

Biodiversity protection is important and should be addressed by better implementation of the relevant EU nature protection legislation. Efforts to protect the environment and avoid biodiversity loss should be seen as one of the activities to further develop the public acceptance of the bioeconomy.

To assess the environmental impacts and benefits of all aspects of the bioeconomy, the effects on climate, ecological footprint and biodiversity, should be measured and brought together in relation to the regions and specific sectors developed as part of the bioeconomy.

### **25. Invest in the future of the bioeconomy**

The EU must significantly increase its public investments in research programmes, demonstrators and innovation support to create sustainable jobs and revitalise rural areas in Europe while simultaneously live up to the EU's obligations in international treaties, such as COP 21. A European "bioeconomy investment programme" should make first time exploitation in Europe a key selection criteria and be sufficiently financed to achieve the goals of the programme.



In order to improve the effectiveness of existing EU financing instrument, the role of and synergies between different funds<sup>3</sup> and funding instruments should be further developed by the EU.

## **26. Support frontrunners and innovations**

Frontrunners should receive the space and support needed to innovate and accelerate within regulatory boundaries. Innovation deals and green deals should be agreed upon with stakeholders in situations where regulation could better support the development of the overall bioeconomy and where creative solutions are needed. Establishing new bio refineries (or reconvertng old refineries) represents an investment in a first-of-a-kind plant, thus a clear and supportive regulatory and financial framework is important in order to foster such investments in Europe. Smart regulation and consistent multi-level implementation across the EU should be a priority in order to remove obstacles and reduce administrative burden while at the same time securing sustainability.

## **27. Establish a level playing field**

The EU should seek to realise a level playing field between the variety of applications and different types of uses of biomass. It should seek to stimulate new markets for bio-based products and biomaterials and attach incentives to innovative and high-value production and products where bio-based options deliver clear advantages in terms of sustainability and renewability compared to fossil-based options for example. Standardisation and certification of bio-based products, can play an important role in providing such stimulation by ensuring that products meet certain minimum requirements.

Incentives for biomass for energy and other uses of biomass should be aligned with the aims of the circular economy and smart resource use.

## **28. Strengthen the coordination within European Commission services**

Stretching over many policy areas and with a central role to play in the EU agenda, the European Commission should ensure consistency and synergy across the concerned policy areas by establishing a Commissioner's Bioeconomy cabinet with representation of the services of Commissioners of Agriculture, Research, Regions, Fisheries, Environment, Growth, Energy, Employment and Climate.

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<sup>3</sup> For instance Horizon 2020, European Regional Development Fund (ERDF), European Social Fund (ESF), European Agricultural Fund for Rural Development (EAFRD), European Maritime and Fisheries Fund (EMFF), Cohesion Fund, European Fund for Strategic Investments – EFSI and InnovFin.



*This Manifesto is endorsed by members of the European Bioeconomy Stakeholders Panel as well as other bioeconomy stakeholders. The European Bioeconomy Stakeholders Panel members endorsing the Manifesto are listed on the next page. The full list of stakeholders endorsing the Manifesto can be viewed online.*



# European Bioeconomy Stakeholders Manifesto

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ADltech Technology Corporation/ Navarra region

Association "Europe of Kujawy and Pomerania"

Association of National Organisations of Fishing Enterprises in the European Union,  
Europêche

BioFuel Region AB (BFR)

Climate-KIC Holding BV (Climate-KIC)

Confederación Española de Pesca (CEPESCA)

Cluster of Bioenergy and Environment of Western Macedonia

DBFZ Deutsches Biomasseforschungszentrum gemeinnützige GmbH (DBFZ)

EuropaBio

European Aquaculture Technology and Innovation Platform (EATiP)

European Chemical Industry Council (Cefic)

E-zavod (EZVD)

Fagligt Fælles Forbund (3F)

Federación española de Industrias de Alimentación y Bebidas (FIAB)

Forest-based Sector Technology Platform (FTP)

Helmholtz-Zentrum für Umweltforschung GmbH – UFZ

Instituto Valenciano de Investigaciones Agrarias

Netherlands Standardization Institute (NEN)

Novamont SpA (Novamont)

Platform of Bioeconomy ERA-NET Actions (PLATFORM)

Politechnika Łódzka (Lodz University of Technology) (TUL)

REIMS Metropole

Regional Cluster Organization Paper Province (PP) in Värmland

Regional Government of Tuscany

South Danubia region/ Hungarian Chamber of Agriculture

Stichting BirdLife Europe (BirdLife Europe)

Transport and Environment (European Federation for Transport and Environment) (T&E)

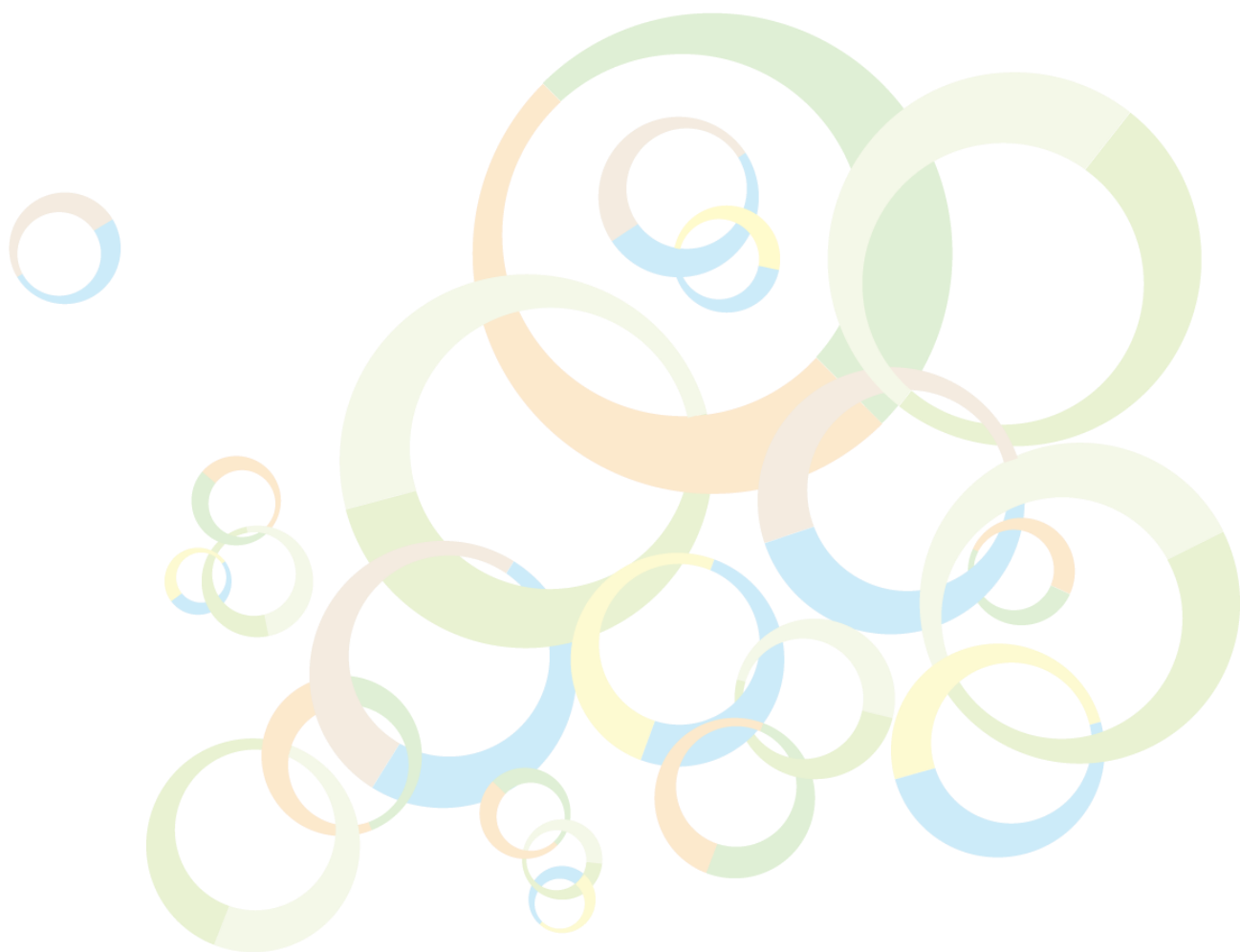
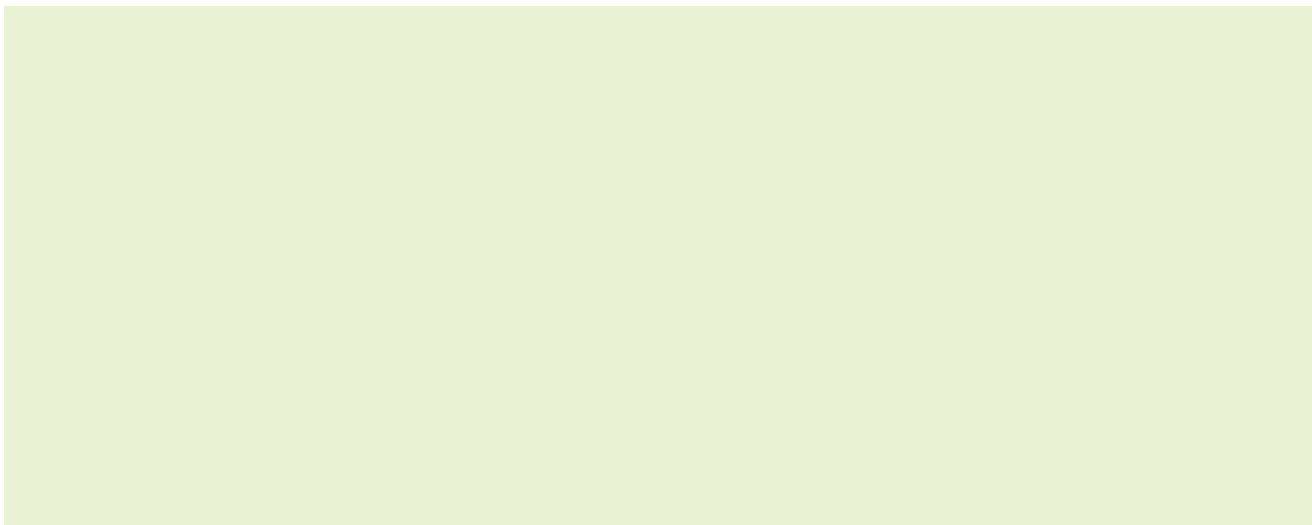
West Finland European Office

# European Bioeconomy Stakeholders Manifesto



Lodz University of Technology  
PBTP





For more information on the Bioeconomy Stakeholders Panel, please visit:  
<https://ec.europa.eu/research/bioeconomy/index.cfm?pg=policy&lib=panel>