

Deploying the Bioeconomy in the EU: A framework approach for bioeconomy strategy development

Introduction

The bioeconomy can be a **catalyst for sustainable systemic change and transition**, tackling key economic, societal and environmental challenges faced by EU Member States (MS). For bioeconomy transitions to occur, there is a need for policy to encourage and support interactions among multiple actors, including businesses, users, scientific communities, policymakers, social movements and interest groups. Bioeconomy transitions will also involve the need to choose between alternative visions of the future and how to get there, pointing to the importance of public engagement to foster consultation and deliberation. In this light, bioeconomy transitions will also involve the



need to prepare for unexpected consequences and new emerging issues which implies a need for both exploratory, analytical approaches (e.g. horizon scanning), as well as adaptive governance. Therefore, **targeted national bioeconomy strategies and/or action plans are necessary both to aid the addressing of the European Green Deal (EGD) and also to develop benefits and opportunities for rural, coastal, regional and urban areas** in each MS. Based on the feedback from experts in the Mutual Learning Experience (MLE), and taking into account the principles of good governance and systems transition approaches, **10 Key Policy Messages have been identified to help guide national bioeconomy strategy and/or action plan development.**

10 Key Policy Messages to Guide Bioeconomy Strategy and Action Plan Development

Getting Started	Brief Description
<p>Policy Message 1: Ensuring stronger recognition of the importance of bioeconomy policy by decision-makers and stakeholders</p>	<p>In each MS, it is crucial that at the highest political level necessary, policy makers ensure demonstrable long-term, ongoing commitment towards the development of a national and regional sustainable, circular bioeconomy</p>
<p>Policy Message 2: Moving from a bioeconomy concept to developing a vision</p>	<p>Each MS should examine the status, positioning and importance of the bioeconomy within its own economy from</p>

	a range of different perspectives to co-create an integrated vision and to ensure a collaborative approach towards the development of its bioeconomy.
Policy Message 3: Creating spaces for building collective bioeconomy awareness and leadership	The development of sustainable and circular bioeconomies in MS will involve multiple actors, inside and outside of government, over extended time periods. To allow for such engagement, there is a need to develop spaces for engagement such as e.g. forums to identify, design and implement a bioeconomy vision.
Building Transformative Coalitions	Brief Description
Policy Message 4: Coordinating across government and across different levels of government to support bioeconomy strategy design and development	The transition to sustainable and circular bioeconomies in MS may not fall neatly under the responsibility of a single government department. A key challenge is the need to build collective leadership capacity to innovate at a scale while integrating numerous policy domains relevant to the bioeconomy.
Policy Message 5: Identification of existing bioeconomy initiatives for building a coherent action plan	The identification of existing and on-going bioeconomy initiatives and lead innovators is a first step towards developing a coherent action plan. These initiatives can serve as lighthouse projects, motivating case studies or learning environments.
Policy Message 6: Establishing collaborative bioeconomy partnerships for co-investment	Bioeconomy developments by their very nature are highly-collaborative activities, requiring participation, expertise and investment on the part of multiple actors. These include government, the private sector, primary producers and entrepreneurs at project level and civil society through engagement, consultation and participation.
Getting Started	Brief Description
Policy Message 7: Developing linkages and pathways between policy, funding and national and EU bioeconomy strategic research, innovation and investment agendas	Policy makers will need to help combine a mix of policies and funding sources, at rural, regional and national level. This will enable multi-actor approaches boosting ecological and technological innovation for sustainable and circular bioeconomies.
Policy Message 8: Addressing the concerns and resistance of incumbent industries and patterns of behaviour of citizens	Addressing concerns and resistance is important for developing sustainable circular bioeconomy strategies and action plans. A key political and communications challenge is

and consumers	ensuring that all stakeholders feel that their voices have been heard and that their concerns are being listened to and addressed.
Policy Message 9: Encouraging diffusion of biobased knowledge, innovation & technological advances to support rural and regional development	In the transition to sustainable circular bioeconomies, relevant agro-ecological good practice, bio-based innovation, technologies are increasingly available Enabling diffusion and sharing of these could bring significant benefits for bioeconomies throughout the EU.
Policy Message 10: Evaluating and gauging progress to help steer development of sustainable, circular bioeconomies	Evaluation will increasingly play a crucial role in gauging progress and steering developments from current situations towards sustainable and circular bioeconomies. Monitoring and evaluation needs to be deeply integrated into all stages of the policy making cycle to generate continuous learning, to guide progress and to manage risk.

Conclusion

The drive for the EU and its MS to develop sustainable, circular bioeconomies reflects the need, as expressed in the EGD, for more integrated policy approaches that are long-term in character. The Bioeconomy Strategies currently in place in EU MS highlight a shift from sectoral approaches to an integrated systemic focus, for example by recognising the interlinkages between environment, economy and society. They also emphasise the required transformation of the economy and society based on new objectives to contribute to net-zero emissions and become circular and digital in line with long-term framings and targets of 2030 and 2050.

There is now **a key need to ensure the strategic development of the bioeconomy** and bio-based industries in those parts of the EU where suitable conditions exist for bioeconomy activities but where insufficient investment, innovation, infrastructure or knowledge capacity currently exists. In this light, **the MLE has identified 10 key policy** messages, underpinned by a sound public governance and systems transition approach **to start, build or steer bioeconomy strategy and/or action plan design, development, implementation and evaluation.**

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