World Bioeconomy Association and World BioEconomy Forum on 29 February 2024

To the EU member states

Subject: Position Paper - Facilitating Bioeconomy Growth for Sustainable Development in the EU

The importance of the bioeconomy is rapidly growing around the globe. Bioeconomy strategies highlight major shifts and increased engagement from powerhouse nations like China and the USA. Looking at the regional visions, it appears that the EU needs to position itself in the emerging Biorevolution to protect its future competitiveness and autonomy. To this end, this position paper offers strategic recommendations for the EU, advocating *a holistic approach, clear leadership, and sustainable bioresource use.*

This paper is a compelling call to action, urging stakeholders to recognize the bioeconomy's potential and align policies for a resilient, sustainable future.

Chapter 1: Growing Importance of the Bioeconomy

The World BioEconomy Forum conducted a comprehensive comparison of bioeconomy strategies during the first half of 2023, analysing the latest bioeconomy programs in selected regions: **Brazil[1], China[2]**, **Canada[3], EU[4], India[5],** and **USA[6]**. While not all regions have a published national bioeconomy strategy, a clear interest in facilitating bioeconomy developments is evident, with Brazil showcasing a stronger focus and plans to reveal its strategy still this year. Canada's bioeconomy strategy is being proposed by its industry stakeholders.

1 https://www.g20.org/en/tracks/sherpa-track/bioeconomy-initiative
2 https://www.ndrc.gov.cn/xxgk/zcfb/ghwb/202205/t20220510_1324436.html
3 https://www.biotech.ca/wp-content/uploads/2022/01/National_Bioeconomy_Strategy_EN-compressed.pdf
4 https://op.europa.eu/en/publication-detail/-/publication/edace3e3-e189-11e8-b690-01aa75ed71a1/
5 https://birac.nic.in/webcontent/1658318307_India_Bioeconomy_Report_2022.pdf
6 https://www.whitehouse.gov/briefing-room/presidential-actions/2022/09/12/executive-order-on-advancing-biotechnology-and-biomanufacturing-innovation-for-a-sustainable-safe-and-secure-american-bioeconomy/
https://www.whitehouse.gov/wp-content/uploads/2023/03/Bold-Goals-for-U.S.-Biotechnology-and-Biomanufacturing-Harnessing-Research-and-Development-To-Further-Societal-Goals-FINAL.pdf

Since 2022, the international bioeconomy landscape has witnessed dynamic shifts, with major global players like China and the USA significantly increasing their engagement. China announced its first bioeconomy strategy in May 2022, and the USA updated its strategy through EO 14081 in September 2022, focusing on advancing Biotechnology and Biomanufacturing. Both countries are vying to become leaders in the global bioeconomy, marking a visible shift in the competitive landscape.

The bioeconomy has gained prominence on the international stage, evidenced by initiatives like the UNIDO organised ***bioeconomy panel*** (for the first time at the UNFCCC COP27), and last COP28 where there was an initiative for wood construction. India brought the bioeconomy to the G20 meeting agenda, reflecting the growing global interest in considering the bioeconomy as a source of solutions for addressing global challenges. Brazil will carry on with the same theme and as president of the G20 2024 they have launched ***Initiative on Bioeconomy (GIB)*** with the goal of composing ***High-Level Principles on Bioeconomy***. There are also notions that in the next COP United Nations Biodiversity Conference in Columbia the bioeconomy will emerge as a topic.

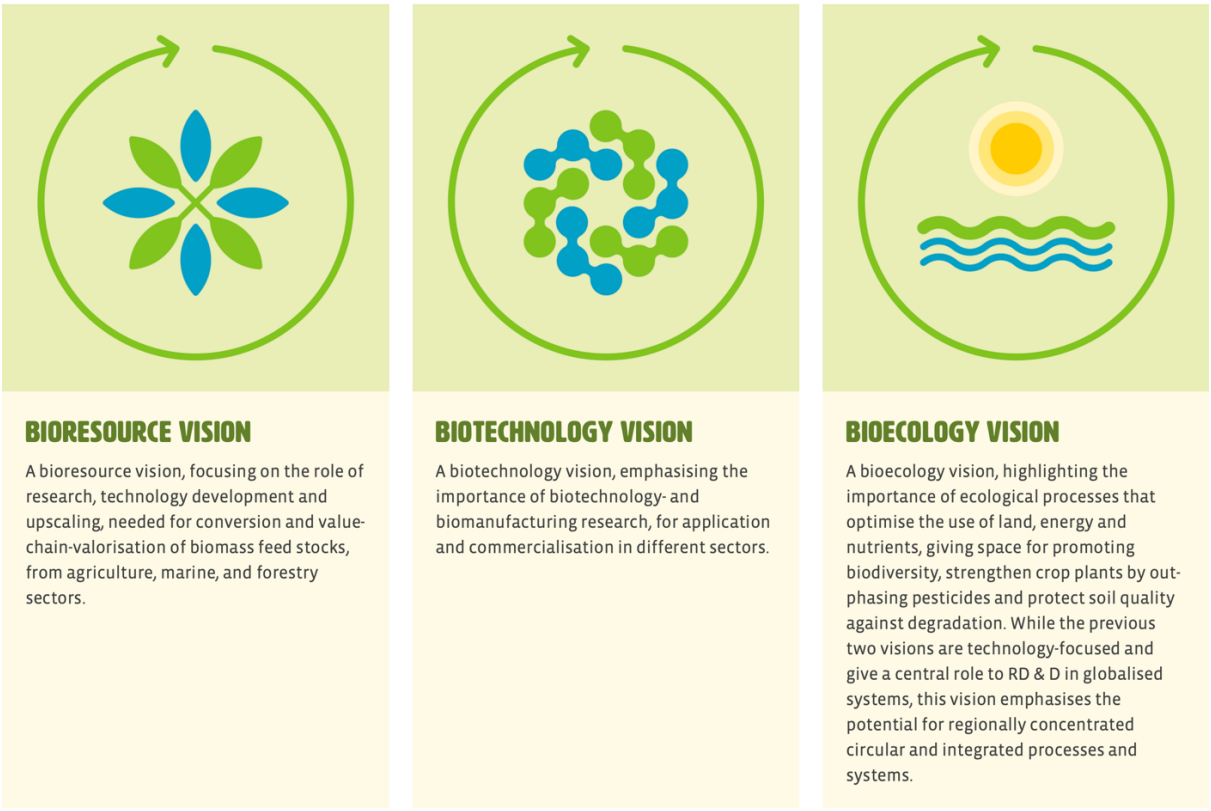
Economically, the bioeconomy's importance has surged, with the current global value estimated at over 4 trillion EUR. Projections indicate a potential rise to 30 trillion EUR, constituting a third of the global economic value. The bioeconomy is increasingly viewed as a key solution provider for challenges such as ***climate change, biodiversity conservation, healthcare,*** and ***food security***.

Proposals in this position paper are aligned with the prevailing trend, acknowledging the geopolitical shift from the globalisation wave to a more polarised world. Restructuring is underway, with an increasing emphasis in the near future on ensuring domestic resources and capabilities, and the EU needs to be prepared for this shift.

We are already envisioning ***the fourth industrial revolution – the Biorevolution***. The third industrial revolution, predominantly based on digitalisation, led to the rise of global non-governmental powers in this domain. Unfortunately, the EU was not at the forefront of these solutions, resulting in digital service giants emerging from outside Europe, and the importation of semiconductors and computers. Now, as we enter the Biorevolution, **the EU needs to secure its position early on by becoming a proactive operator in this space.**

Chapter 2: Bioeconomy Visions and Regional Approaches

The bioeconomy can be evaluated based on the sectors of interest and values declared by each region, making direct comparisons challenging. A visionary approach, incorporating **bioresources, biotechnology, or bioecology**, is a workable method to express emphasis and priorities in bioeconomy strategies and action plans. These visions are not mutually exclusive but complement each other and are relevant for practical solutions in balancing.



BIORESOURCE VISION

A bioresource vision, focusing on the role of research, technology development and upscaling, needed for conversion and value-chain-valorisation of biomass feed stocks, from agriculture, marine, and forestry sectors.

BIOTECHNOLOGY VISION

A biotechnology vision, emphasising the importance of biotechnology- and biomanufacturing research, for application and commercialisation in different sectors.

BIOECOLOGY VISION

A bioecology vision, highlighting the importance of ecological processes that optimise the use of land, energy and nutrients, giving space for promoting biodiversity, strengthen crop plants by out-phasing pesticides and protect soil quality against degradation. While the previous two visions are technology-focused and give a central role to RD & D in globalised systems, this vision emphasises the potential for regionally concentrated circular and integrated processes and systems.

Notably, the USA, China, and India predominantly adopt a biotechnology vision, while the EU leans towards bioresource and bioecology visions. Encouragingly, signs of expanding approaches to become more comprehensive are emerging.

Biotechnology is increasingly pivotal, facilitated by new tools such as digitalisation, automation, and AI, accelerating development work and instilling greater investor confidence.

Expectations regarding bioresource deployment vary across regions, with the USA tending to deploy more domestic biomass, and the EU focusing more on stabilising sustainable use of biomass and advocating circular economy principles. China is setting more focus on management and protection, while Brazil is seeking downstream opportunities in the value chains.

Chapter 3: Recommendations for the European bioeconomy

Vision and Principles:

Recognising the multifaceted nature of the bioeconomy, we are recommending the EU to assume a holistic perspective on bioeconomy encompassing three visions on bioeconomy - ***Bioresource, Biotechnology, and Bioecology***. These principles play a crucial role in advancing the EU competitiveness, research, technology development, ecological processes, and circularity. Clear accountability within the EU is essential to fully realize these principles.

Clear Accountability and Leadership:

To foster a thriving bioeconomy, the EU should establish clear accountability by creating a dedicated commissioner for the bioeconomy. This commissioner would have the mandate to improve the coherence of bioeconomy-related policy, and would provide focused leadership and strategic direction, overseeing and coordinating bioeconomy-related initiatives across various sectors to ensure a cohesive and effective approach.

The elevation of the bioeconomy on the EU agenda signifies its growing importance as a pivotal phenomenon, as a crucial solution to geopolitical polarization, climate change and biodiversity at the same time.

Balanced approach between bioeconomy visions:

In the pursuit of a sustainable and harmonious bioeconomy, it is essential to strike a ***balance among the three fundamental visions***: biotechnology, bioresource, and bioecology. This equilibrium ensures a cohesive and effective approach to navigating the challenges and opportunities within the global bioeconomic landscape. Embracing innovation, optimising resource use, and prioritising ecological harmony collectively contribute to the resilience and sustainability of the bioeconomy on a global scale.

We recommend the incorporation of these elements into the forthcoming update of the EU bioeconomy strategy, taking into consideration the emerging concepts within the upcoming biotechnology and biomanufacturing initiative.

Sustainable Use of Bioresources:

The sustainable use of bioresources is paramount, emphasizing alignment with circular economy and cascading principles, while minimising environmental impact. It necessitates a constant recognition of planetary boundaries within planned actions. To foster Europe's adoption of the bioeconomy and bioproducts, implementing a robust recycling strategy is crucial to ensure the sustainable utilisation of its bioresources.

Supply Chain Resilience:
In the face of global uncertainties, the European Union (EU) must elevate the resilience of its supply chains, particularly within the bioeconomy sector. Recommendations for achieving this objective include conducting comprehensive risk assessments specific to bioresource dependencies, fostering strategic diversification in bioresource suppliers, and integrating advanced technologies for traceability and sustainable practices. Transparent communication and collaboration within the bioeconomy sector, along with legislative support for sustainable bioresource practices, are crucial steps. Continuous adaptation to emerging trends in bioeconomy technologies and investing in specialized training programs will fortify the EU's bioeconomy supply chains, ensuring their robustness and sustained success in a rapidly evolving global landscape.

Incorporating Biotechnology as an Enabler:
Stakeholders are urged to recognise biotechnology as a crucial enabler for the bioeconomy, leveraging new tools like digitalisation, automation, and AI for accelerated development. The creation of a new EU biodata space and network should provide the foundation for a stronger European sector growth.

Biosecurity and Biosafety in Biotechnology:
Stakeholders should acknowledge biosecurity and biosafety as integral components of biotechnology development work, ensuring responsible and secure advancements.

Enhancing Regional Cooperation for Sustainable Development:
Cooperation between different regions, particularly in the realm of sustainable development, is essential for fostering a global bioeconomy that addresses common challenges.

Active Participation in Global Bioeconomy Hub Arrangements:
Bioeconomy stakeholders are urged to actively participate in global arrangements, contributing to the international dialogue and ensuring a cohesive and collaborative approach.

In conclusion, the World Bioeconomy Association and World BioEconomy Forum emphasise the dynamic and crucial role of the bioeconomy on the global stage. The EU, as a key player, is encouraged to integrate these findings into its policies, demonstrating clear accountability, fostering innovation, and championing sustainable bioeconomy practices.

Thank you for your attention to these critical matters.

Sincerely on behalf of the World Bioeconomy Association and the World Bioeconomy Forum

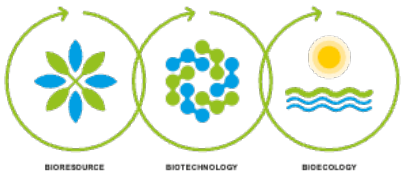
Jukka Kantola
Chair of the World Bioeconomy Association
Founder of the World Bioeconomy Forum

The **World Bioeconomy Association** unites the global bioeconomy community to foster sustainable economic growth and advance the transition to a bioeconomy. Our partners and members include a diverse range of stakeholders, public organisations, business leaders, academics, government officials, NGOs, or other civil society representatives, all committed to pursuing progress in the bioeconomy.

The bioeconomy is a multisectoral concept, embraced by three visions of the bioeconomy (bioresource, biotechnology and bioecology) in the Association strategy and communication.

The Association promotes circularity of the bioeconomy, while recognising that all bioeconomy principles cannot be always circular. In the bioeconomy, resources are produced responsibly and sustainably, generating raw materials, intermediate and end products to replace materials exiting the cycle, thereby complementing the circular economy balance without reliance on a fossil-based economy.

More on: https://bioeconomyassociation.org



The **World Bioeconomy Forum** functions as a pivotal global platform, uniting stakeholders for in-depth discussions on the circular bioeconomy. Established in 2018 by Jukka Kantola and co-founders, the Forum has undergone significant evolution, hosting events in various pivotal locations related to the bioeconomy.

Guided by a Four-Pillar Structure encompassing I) The Bioeconomy: People, Planet, Policies, II) Corporate Leaders, III) Bioproducts around us, and IV) Looking to the Future, the Forum takes a comprehensive approach. By engaging diverse bioeconomy stakeholders in meaningful roundtable discussions and an annual conference, it actively contributes to shaping Annual Declarations and influences the progress of the circular bioeconomy.

The Advisory Board, composed of experts from all continents, ensures that the Forum maintains high standards of content and fosters insightful dialogue. With a diverse target audience, including policymakers, bio-related industries, associations, and institutes, the Forum is dedicated to fostering collaboration and sustainability.

More on: https://wcbef.com