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Governance & Upskilling for a
Stronger Bioeconomy

Highlights from the workshop

“What's next for bioeconomy education?”
VET and Life-long learning perspectives.

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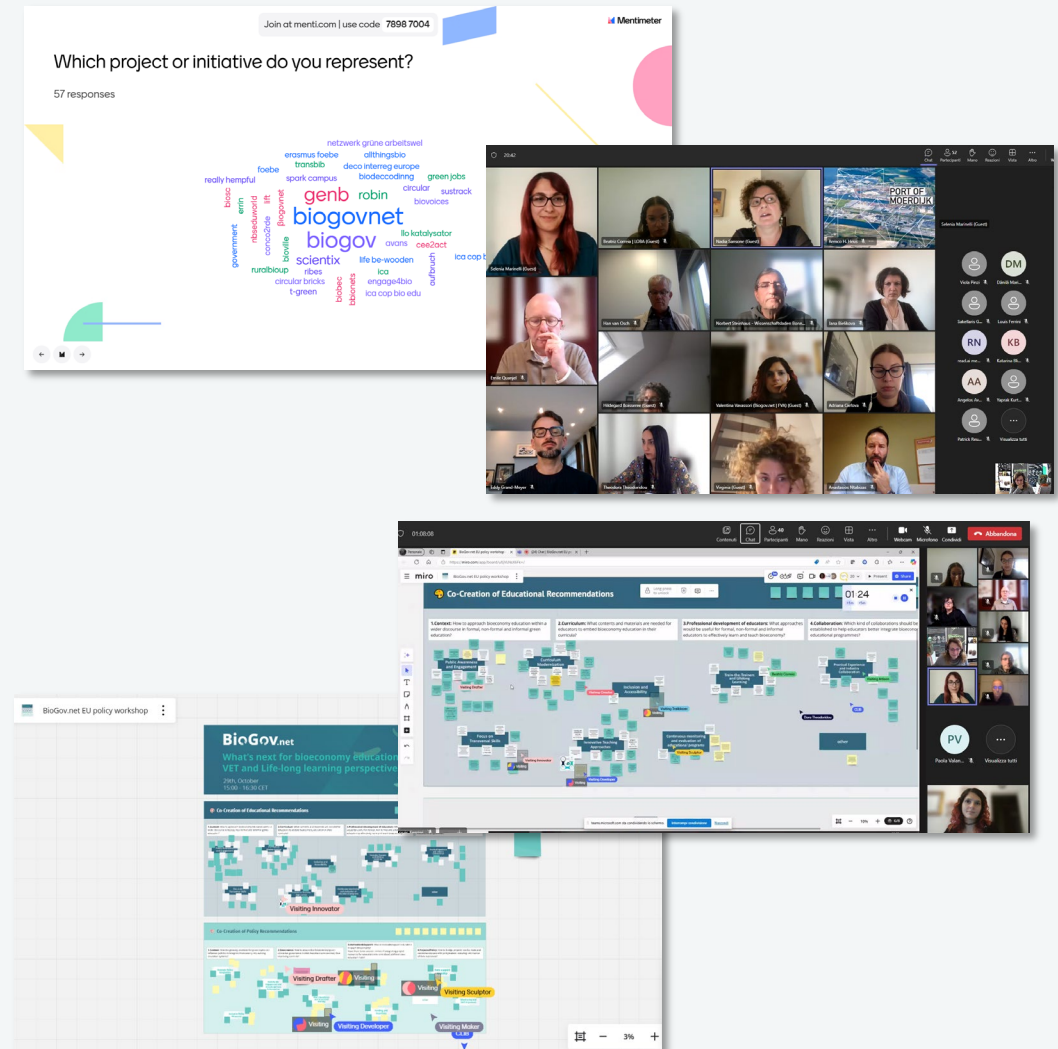
BioGov.net - European Bioeconomy Network (EubioNet)



What's next for bioeconomy education?

VET and Life-long learning perspectives workshop (29 October 2024)

- On 28 Oct GenB organised the workshop targeting the Pre-University and Communication levels (organised by GenB)
- Projects providing inspirational presentations: **BioGov.net**, **Engage4Bio**, **Circular Bricks**, **Scientix**, **ICA-CoP Bio-Edu**
- **94 registrations** received from **28 Countries**
- **60 active participants**, representing **34 EU projects and initiatives**
- Effective interactive sessions on [Miro board](#). Many insightful inputs gathered (co-creation of Educational and Policy recommendations)
- The **aggregated PPTs from speakers** were shared among the participants and [are available here](#)



What's next for bioeconomy education?

Main takeaways from the workshop – Education dimension recommendations

Co-Creation of Educational Recommendations

1.Context: How to approach bioeconomy education within a wider discourse in formal, non-formal and informal green education?



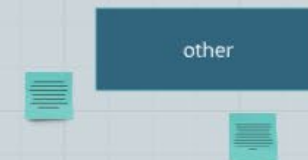
2.Curriculum: What contents and materials are needed for educators to embed bioeconomy education in their curricula?



3.Professional development of educators: What approaches would be useful for formal, non-formal and informal educators to effectively learn and teach bioeconomy?



4.Collaboration: Which kind of collaborations should be established to help educators better integrate bioeconomy in educational programmes?



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Main takeaways from the workshop – Education dimension recommendations

Public Awareness and Engagement:

- ✓ Promote bioeconomy in the **wider discourse of environmental literacy** through **community engagement activities** involving local actors (e.g. through Living labs, citizen science, experiential learning) to support the **citizens in taking and active role** in the transition.
- ✓ **Take stock** from previous EU funded and regional experiences (including materials, educational packages, guidelines for training and mentoring programmes, platforms, etc.)

Skills needed:

- ✓ Bioeconomy transition requires **transversal skills like critical thinking, innovation thinking, entrepreneurship, and system thinking.**
- ✓ **Foster holistic understanding** to meet the **complexity** of the bioeconomy education.
- ✓ Connect education response with **local skill needs** for the circular bioeconomy and bio-based sectors.

Curriculum modernization:

- ✓ Circular bioeconomy should be treated as **meta skill in existing curricula** across all educational levels.
- ✓ Promote **interdisciplinarity** and **crossover programs** with education providers, industry and local administration **to respond to evolving industrial and market demands.**
- ✓ Foster **co-creation of innovative curricula.**

Innovative teaching approaches:

- ✓ Promote **innovative approaches** to address challenges and respond to opportunities (Ideas incubators, problem-solving oriented teaching, coaching, Lab Works, simulations, Arts-based methods, site visits, experiential learning and collaborative learning communities).

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Inclusion and accessibility:

- ✓ Promote **tailored formats** (Adaptable Course Content, visual storytelling, Art, Virtual Living Labs) to meet the needs of marginalized or disadvantaged groups (incl. Primary sector, NEETS, migrants) and integrate underrepresented populations into the workforce.

Continous monitoring and evaluation of educational programs:

- ✓ Promote the regular **assessment** of bioeconomy education programs to ensure that they **remain relevant and effective** and to **inform the design of innovative curricula**.
- ✓ Developing assessment tools to **measure the impact of bioeconomy education** on students' knowledge and skills.

Train the Trainers and LLL:

- ✓ Support **continuous professional development** for educators at various levels, including informal and non formal education recognized with microcredentials and certifications.
- ✓ Teachers should be **the first to be educated** in these complex topics and **equipped with actionable lesson plans, resources and toolkits** (in local languages).

Practical experiences and collaboration with industries:

- ✓ **Break down silos**, promoting partnerships and alliances with industry, educators, local communities, environmental organizations, etc. to identify **systemic interrelations**, better **align education with real labour market needs** and **implement hybrid education** programs.
- ✓ Support the creation of **multi-actor Regional Hubs** to connect education with **local policy priorities**.

What's next for bioeconomy education?

Main takeaways from the workshop – Policy dimension recommendations

Co-Creation of Policy Recommendations

1.Context: How the growing attention for green topics can influence policies to integrate bioeconomy into existing education systems?



2.Governance: How to ensure that bioeconomy/green education governance models become mainstreamed, thus improving curricula?



3.Motivation&Support: How to motivate/support educators to teach bioeconomy?
Have there been success stories of integrating project resources for educators into centralised platforms and education hubs?



4.Projects2Policy: How to bridge projects' results, tools and recommendations with policymakers, ensuring valorisation of their outcomes?



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Main takeaways from the workshop – Policy dimension recommendations

Strategic Policy integration:

- ✓ Facilitate **multi-ministerial approach** to ensure **cross-sectoral collaboration** and **coherence** for bioeconomy education at local, regional, and EU level.
- ✓ Embed bioeconomy knowledge into the curricula **across all educational levels** to ensure students gain practical and theoretical skills.
- ✓ Specific **policy recommendations must coincide with curriculum reform** to be actionable.

Inclusive Policy measures:

- ✓ Maximise the opportunities for **inclusive growth through bioeconomy education**.
- ✓ Include **bioeconomy education in public schools at all level** to make bioeconomy and sustainability topics accessible to students across diverse socioeconomic backgrounds.
- ✓ Target educational offer to attract individuals from rural and underrepresented communities, **ensuring a diverse talent pipeline**.

Stakeholder engagement:

- ✓ Engaging stakeholders in **defining educational priorities** to respond to **different needs along the whole value chain**.
- ✓ Support the creation of **Interdisciplinary Learning Hubs**, fostering the collaboration across disciplines, promoting knowledge transfer from industry to education and ensuring that educational opportunities are aligned with bioeconomy political and industrial agendas.

Work experience and vocational training

- ✓ Foster the above mentioned partnership to facilitate **more adaptive systems** like collaborative learning hubs, apprenticeships, and vocational training focused on bioeconomy.

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Main takeaways from the workshop – Policy dimension recommendations

Supportive networks and structures:

- ✓ Support the **dissemination of success stories, tools and resources, through knowledge platforms** supported by governments.
- ✓ **Multidisciplinary bioeconomy HUBs** can play the role of mentors to support industries, policy makers and educators in integrating the bioeconomy in their practice.
- ✓ Enhance the role of **connectors** and **ecosystem facilitators** promoting **dialogue and mutual learning** among stakeholders.

Funding and incentives:

- ✓ **Bioeconomy LLL and VET education should be a priority** for future EU Funding.
- ✓ In addition, **new business models and public-private partnerships** should be used to support long-lasting initiatives.
- ✓ Simplify legislative processes to **unlock funding for smaller, local initiatives**.
- ✓ Provide recognition scheme through **certificates and credits for educators and professionals**

Data support to policy:

- ✓ Boost **awareness and empowerment of policy actors** with regards to the circular bioeconomy.
- ✓ Provide **systematic data collection for better strategic planning** and **evidence-based guidance** for future policies and initiatives in bioeconomy education (mapping impacts of successful policies, regional needs and gaps, training programs, initiatives, case studies and good practices).

Monitoring and skill alignments:

- ✓ **Monitoring** labor market trends and local bioeconomies through observatories and platforms **to bridge skill gaps**.

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