













EDUCATION ON BIOECONOMY

SCAR BALTIC WOKSHOP ON BIOECONOMY STRATEGY 4-5 April 2019, Riga, Latvia Academy of Sciences

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- Bioeconomy is complex and involves interdisciplinary knowledge.
- Some countries like Finland, France or Italy, foster the training of experts, while others, like Austria, Germany and Sweden, also promote stakeholder platforms and cross-sectoral alliances as the basis for interdisciplinary exchange.
- In Europe, only few countries have adopted specific measures related to the improvement of education on Bioeconomy in Schools and Universities.



DESCRIPTION OF THE CHALLENGE

- Bioeconomy as a concept is a long-term process and requires the concentrated cooperation of a large number of scientific disciplines, as well as political and economic decision-making process.
- All the above aspects need to be analyzed under the prism of the education in order to be better adapted to specific audiences, regions and processes.



Enormous challenges for university development at present

- ✓ Excellence in research, education and university management (increasing competition between higher education institutions!)
- ✓ Specific challenges for life science universities to develop the basis for the future development of mankind
- ✓ Food and water security, environmental protection
- ✓ Sustainable use of natural resources (soil, bioresources, water,..)
- ✓ Development of high-end technological methods in biotechnology (biorefinery, renewable energy,....)
- ✓ Landscape development; town- and country planning
- ✓ And many more.....

Cooperation Objectives

- <u>To identify</u> education institutions in Baltic States providing education on Bioeconomy at all levels, and to analyze them in terms of objectives, contents, principles, target audiences and impacts.
- To create a platform for the systematic collection and exchange of teaching activities and materials for the key players in the field of Bioeconomy education.
- To analyze good practices in teaching the topics relevant for Bioeconomy from a didactical point of view.
- To determine learning outcomes, link them to the overall European and national qualification frameworks, and to constructively align them with teaching and assessment methods.
- To develop generic and country/region specific strategies for pilot courses, case-studies, summer schools, trainings etc., tailored to the need of SMEs in the field of Bioeconomy.

Digitalization of Bioeconomy Education

- Digitalization will be more crucial in the future since it is creating numerous new opportunities to institute new business models in Bioeconomy.
- This important field is completely unknown at the education level. We has the challenge to set up an education module in the frame of this cooperation.



Educating Life Science Graduates Fit for Baltic States

Panel "Challenges of the Bio-economy for Graduates"

Workshops:

- (1) challenges of the intercultural classroom
- (2) tools for enhancing the learning experience,
- (3) bridging education and practice,
- (4) innovation in curriculum development and delivery

General Goal: To contribute to the development of the European HE Area

Some Expected Benefits

University Management:

Strategic support and funding

- ✓ Institutional benchmarking
- ✓ Enhanced internationalization
- ✓ Global network for large research programs
- ✓ Collective Dialogue EU, UN, OECD, etc.

Researchers:

Scientific expertise

- ✓ New projects (bilateral multilateral–global)
- ✓ New interdisciplinary insights

Students:

Curiosity/Creativity:

- ✓ Enhanced awareness of global challenges
- ✓ Lifelong global network of colleagues early in careers in academia, business, government,....

The implementation of bioeconomy is a process for the entire society: not one that can be implemented alone by expert circles in science and economics.

A bio-based, sustainable economy has a chance to become reality only if the desired goals and the possible conflicts in objectives are discussed with all players

in society.



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THANKS FOR YOUR ATTENTION!