BioGov.net
Governance & Upskilling for a Stronger Bioeconomy

Adult education in Slovakia
(Žilina Region)

The way forward

Technical specifications document

This document presents findings on opportunities for advancement in the bioeconomy sector in Slovakia (Žilina Region), highlighting the needs for skills, existing education, gaps and needs in promoting education. It also includes 3 relevant case studies collected from the country.

Opportunities for Advancement

Slovakia has not yet exploited the potential offered by bioeconomy; however, the Žilina region has a very good potential for advancement in bioeconomy thanks to its quality universities, rich woodlands, water resources and traditional forest industry.

Smart Forestry & Wood Processing

Exploitation of production potential in wood, land and water resources; utilization of multifunctional nature of the forestry that provides amount of biomass, biomaterials and bioproducts; utilization of wood biomass (woodlands cover 50% of the region) for the production of energy (since crop and animal production are not very widespread); use of smart technologies in forestry as well as in related paper industry; increasing the contribution of the forestry and timber sector to the green sector of the economy.

Precision Farming & Social Agriculture

Utilization of precision farming techniques and organic farming practices, and supporting the rise of social agriculture; shift towards functional and personalized foods, complemented by business automation and digitization; using new technologies of mechanical, chemical and energy processing of agricultural and forest biomass.

Technical Sciences Research & Education

Benefiting from technical sciences, transport studies, electrical engineering, ICT and robotics which are well advanced at the universities.

Waste Management & Circular Economy

Protection and sustainable use of land and water in the changing climatic conditions; reuse of food waste in food production; promoting the prevention of creating waste and encouraging recycling through regional initiatives (e.g. Biela Orava).

Needs for Skills

On educational/academic level

Due to the expected impacts of climate change, there is an urgent need to develop an accessible, modular and market-based lifelong learning system to update the knowledge and acquire additional skills for working population; building a comprehensive structure of education in bioeconomy for different target groups.

On private sector level

Responding to the shifts in the Slovak labour market, esp. addressing the needs of individual sectors influenced by innovations, digitalization, and global challenges; better promotion of bioeconomy career opportunities through enhanced collaboration among academia, industry, businesses, NGOs, etc; provision of trainings focused on languages and higher-level skills.

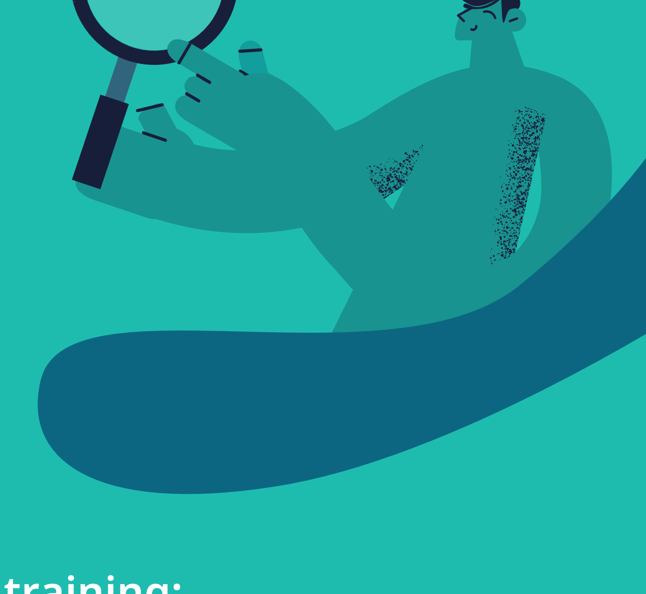
On governmental level

Harmonization of governance mechanisms across different regions; promotion of public dialogues to increase the understanding of bioeconomy; enhancement of the country's involvement in related European projects (e.g. CELEBIO project, which resulted in the National Action Plan for the Development of the Bioeconomy).

Existing Education

Higher education:

Bioeconomy is not part of education in the country, but some technical universities offer programs in agriculture, environmental studies, renewable energy, biological sciences, agronomy, and other disciplines relevant to sustainability and bioeconomy; the system of adult learning is fragmented and formulated at the national level and not at the regional level.



Vocational training:

Several universities are involved in dedicated educational programs and vocational training; the Lifelong Learning and Guidance Strategy 2021-2030 prioritizes the support of selected target groups, namely specific support for the low-skilled people.

Gaps & Needs in Promoting Education

On educational/academic level

Lack of concrete strategy for bioeconomy education on national and regional scales; no organized structures of adult and lifelong learning for bioeconomy; no dedicated research on bioeconomy education; no existing education programs in the field of bioeconomy for vulnerable/disadvantaged groups; need to extend the existing national education initiatives on a regional scale.

On training level

No organized structures for training, retraining and lifelong learning programs tailored to bioeconomy sector; no organized training programs in the field of bioeconomy for minority groups; need for "learning by doing" mechanisms.

On governmental level

No unified strategy for the development of bioeconomy; inconsistency and fragmentation of policies relevant to the area of bioeconomy and the ambiguity of its position and role in development policies; fragmentation of activities and priorities and lack of an organizational umbrella; failure to respond to the labour market problems resulting from the lack of, but also inappropriate, skills of the economically active population.

On private sector level

Inadequate support for the careers in bioeconomy; high labour demand; need for a better use of digitization and innovative technologies in agriculture and forestry.

On societal level

Limited public awareness about the benefits of career development in bioeconomy; unemployment in the low-educated category is the highest in the EU and as many as two-thirds of low-educated young people are neither working nor in education; aging rural population with low level of digital and IT literacy; potential brain-drain due to the lack of support and funding; lack of specific skills, such as creativity, critical thinking and problem solving.

3 Case Studies

Case Study 1

Bioeconomy education, training and retraining and Inclusion of marginalised groups |APTET project /Levice, Slovakia

Purpose: Ensuring the integration of vulnerable groups of people (disabled, seniors, youth, minority groups) via individual and tailored support and their successful entry into the labour market. Complex support, ensured thanks to the collaboration with different organizations, through which expert volunteers are recruited to provide mentoring services. Identification opportunities for people from vulnerable groups in bioeconomy can feed the policy-making in the region.

Case Study 2

Using art to communicate messages, inspire people and raise their interest and awareness|4 živly (4 elements) /Slovakia, Czech Republic, Poland

Purpose: Supporting education in the field of environmental education presented in a non-traditional form: non-formal education through interactive theatre (with the active involvement of students as the participating audience) and environmental activities carried out live, also through an online application. The project also educates teachers and will provide educational materials and guidelines with ready-to-use activities to be used in class.

Case Study 3

Inject the bioeconomy in design, art, architecture, etc. professions | Green Building Academy /Slovakia

Purpose: Green Building Academy is a series of expert online webinars focused on sustainable building. In each module, experts cover different aspects of sustainability in the construction industry, basic definitions and principles of sustainability, as well as good examples from practice.

Consortium

CIVITTA · Q-PLAN INTERNATIONAL · LOBA · PEDAL CONSULTING · FVA NEW MEDIA RESEARCH · ZVT Agricultural Research, Ltd. Troubsko · MNEXT MATERIALS & ENERGY X TRANSITION · DIPARTIMENTO DI SCIENZE E TECNOLOGIE AGRO-ALIMENTARI · btg biomass technology group · WILA Bonn

Funded by the European Union

For more detailed information, visit Slovakia regions page in our website.

BioGov.net

info@biogov.net

@biogovnet