

Adult education in the Czech Republic

The way forward

Technical specifications document

This document presents findings on opportunities for advancement in the bioeconomy sector in the Czech Republic, 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

There is still no systematic approach towards personal advancement in bioeconomy in the Czech Republic. Nevertheless, the country has a strong research performance in many domains related to bioeconomy which, together with developed agriculture, forestry and other industries, provides a good foundation for the development of opportunities for advancement in bioeconomy education.

Natural Sciences Research & Education

Benefiting from the agricultural and biological sciences, biochemistry, genetics and molecular biology sciences which are well developed in the country (each representing more than one-tenth of the country's all citable publications).

Smart Agriculture & Forestry

Use of by-products for fertilization of agricultural crops in the Czech agriculture; utilization of production of wooden products, furniture, and organic food using new eco-driven and technology-driven solutions.

Green Technologies and Renewable Energy

Utilization of bioenergy (biogas, biomethane, bioethanol) and biotechnology for new breeding techniques.

Technology Transfer and Academia-Business Cooperation

Utilization and improvement of existing cooperation among companies, universities and research organisations within the EU's funding programs; support for the creation of new start-ups and companies focused on production/processing of the renewable biological resources.

Circular Economy

Development of locally based circular systems already existing within the substantial initiatives mainly through the BioEast network.

Green Chemistry

Utilization of innovations and research findings of phytopharma, cosmetics and textiles industries.

Needs for Skills

On educational/academic level

Better promotion of bioeconomy education and training; building of a comprehensive structure of education in bioeconomy for different levels of education and target groups; provision of language courses and other trainings focused on skills development.

On private sector level

Better promotion of bioeconomy career opportunities through enhanced collaboration among academia, industry, businesses, NGOs, investors, etc.

On governmental level

Enhancement of coordination of policies/governance mechanisms in different bioeconomy sectors; harmonization of governance mechanisms across different regions; promotion of public dialogues to increase the understanding of bioeconomy.

Existing Education

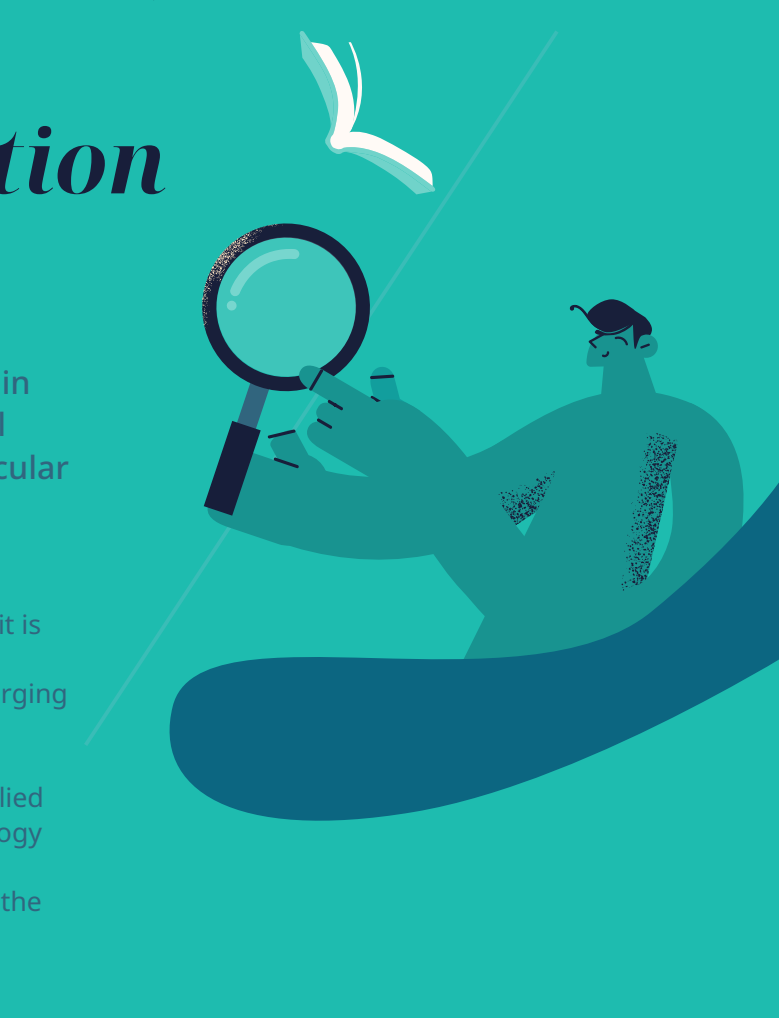
Higher education:

Bioeconomy is not part of adult education in the country, but agricultural and biological sciences, biochemistry, genetics and molecular biology sciences are well developed in the universities.

- The country is advanced in digitalization and AI – it is the first EU country to have officially adopted the National Strategy on AI, linking AI with other emerging technologies incl. bioeconomy domains;
- The research organisations oriented towards applied research that are also actively involved in technology transfer are represented by the Association of Research Organisations (AVO), which supports the engagement and involvement of SMEs and large entrepreneurs.

Vocational training:

Many universities are involved in dedicated educational programs and vocational training.



Gaps & Needs in Promoting Education

On educational/academic level

Lack of concrete educational strategy for bioeconomy education on a national scale; no organized structures of adult and lifelong learning for bioeconomy; no organized research on bioeconomy education; no dedicated research on bioeconomy education; no existing education programs in the field of bioeconomy for minority groups including disabled people and youth adults; lack of educational structures for bioeconomy.

On training level

No organized structures for training, retraining and lifelong learning programs tailored to bioeconomy sector; insufficient art and creativity training; no organized training programs in the field of bioeconomy for minority groups.

On governmental level

No unified strategy for the development of bioeconomy - however, there are important strategic policy initiatives in which bioeconomy is one of the key areas such as the Bioeconomy Concept of the Ministry of Agriculture, and the Strategic Framework Czech Republic 2030 and the Strategic Framework Circular Czechia 2040 of the Ministry of Environment; Ministry of Education also provides the trainings in the topics of bioeconomy, circularity and sustainability for its officers; regulatory complexities and bureaucratic hurdles; lack of appropriate financial mechanisms.

On private sector level

Unequal relations between primary producers and other actors; inadequate advocacy support for the careers in bioeconomy.

On societal level

Limited public awareness about the potential and benefits of career development, growth and social impact through bioeconomy; aging rural population with low level of digital and IT literacy; potential brain-drain due to the lack of motivation; lack of identification and management of marginalized groups and the lack of any educational plans for them; implementations related to bioeconomy are not fully aligned with the socioeconomic priorities of the country.

3 Case Studies

Case Study 1

Bioeconomy education, training and retraining in Entrepreneurial Education | Postgraduate course "First Bioeconomy Course" on Bioeconomy of the University of South Bohemia /South Bohemia, Czech Republic

Purpose: Summer schools with international participation offer the multidisciplinary approach, covering a wide spectrum of topics such as science, economy, business, law and communication. The Bachelor and Master students are given the lectures also in bioenergy, project application or hemp industry, and they attend the excursions related to bioeconomy (e.g. biogas station).

Case Study 2

Bioeconomy education, training and retraining in Entrepreneurial Education | E-map mapavin.cz /Czech Republic

Purpose: Mapavin.cz is an interactive digitized map for the enhancement of cooperation between research organisations and entrepreneurs in many areas, incl. bioeconomy.

Case Study 3

Bioeconomy education, training and retraining in Entrepreneurial Education | BIOEAST Uni Net /Czech Republic and other CEE countries

Purpose: Acknowledging the importance of the coordinated approach and tackle the issue of bioeconomy education in the BIOEAST macro region. BIOEAST Uni Net is a network of the bioeconomy universities from the Central and Easter Europe. Its main goal is to maximise the efforts in increasing knowledge sharing, networking, mutual learning, and development of joint activities.

