

# BIOECONOMY CONCEPT PAPER



# SLOVAK REPUBLIC



## Mission

To develop a preliminary impact assessment and to set the framework for a national bioeconomy strategy and action plan development, aiming to generate a deeper discussion in Slovakia on the necessity of paradigm shift in economic thinking regarding the sustainable valorisation of biomass as renewable natural resources.



## Opportunities foreseen in bioeconomy

- Promote innovation and ensure the long-term sustainability of biomass-based production systems.
- Improve the position of primary producers in the value chain by enabling the sustainable production of higher value-added products.
- Biomass-based circular solutions have the potential to reduce our dependence on non-renewable resources.
- Innovations in biomass processing systems and biomass-based solutions have the potential to support the local economy, create new jobs and improve the quality of life in rural areas.



## Strengths in bioeconomy

- Great unused potential of biomass production with currently low valorisation and processing. The dependence of the Slovak economy on imported resources and materials makes the economy vulnerable, while the potential for sustainable use of domestic resources remains untapped.
- High levels of public awareness (demonstrated by NGOs and public communities) focused on sustainable solutions, land management, biomass use, and healthy lifestyles.



## Strategic directions

Strategic directions are aimed at innovation and ensure long-term sustainability of biomass-based production systems. Should improve the position of primary producers in the value chain by enabling the sustainable production of higher value added products.

- **Public and private expectations:** ① Enhancing technology transfer and cooperation in breakthrough technologies at national/international level. ② Active involvement of stakeholders (farmers, companies, etc.). ③ Improved awareness of all stakeholders on the use of biomass as a strategic resource, understanding of the concept of circular economy. ④ Improved finalisation of research results through established innovations in the priority area. Knowledge for better biomass recovery in the SR and application of the “food first” principle and the circularity principle in the economy. Improved economic position of primary producers in the value chain (innovative products with added value and better diversification of production). ⑤ New research and innovation centres, living labs, pilots, innovation incubators. More efficient local use of bioenergy.
- **Research, innovation and education:** Research and innovation agenda and thematic areas identified by stakeholders during the preparation of Smart specialization Strategy SK 2021 – 2027. R&D projects,

including demand-driven projects, living labs focused on: sustainable biomass production systems; innovative solutions for sustainable biosystems and biotechnologies; innovative solutions for bioenergy and biofuels; added value of biomass-based products; innovative solutions for the implementation of the circular bioeconomy; biomass cascading solutions; biodegradable materials; lignocellulosic packaging materials in the food industry; innovation in the use of biorefinery secondary products; biochemical and environmental aspects of biomass production and processing. Tailored education dedicated to bioeconomy and circular economy aimed at young people at the secondary and vocational schools and universities.

- **Governance and policy actions:** ① Improve knowledge and data for better evidence-based policy making, implementation of the EU policies related to bioeconomy and circular economy (Bioeconomy Strategy, Green Deal, Farm2Fork, new soil legislative, Fitfor55, etc). ② Effective Road map for circular bioeconomy (currently under preparation) and its effective implementation. ③ Improvement of the inter ministerial and inter sectorial dialog aimed at synergies among different supporting tools and policies, such as CAP Strategic plan 2023+, cohesion funds in Operational program Slovakia, Resilience and recovery plan and other policies dedicated to support of all stakeholders dealing with research, innovation, development of entrepreneurship with special attention to SMEs.



## Endorsement

The BIOEAST Initiative aims to build knowledge-based agriculture, forestry and aquaculture in the bioeconomy. For this reason, the BIOEASTsUP Horizon 2020 EU project was launched under the auspice of the macro-regional governmental initiative to support eleven countries in building up their own bioeconomy strategies and action plans.