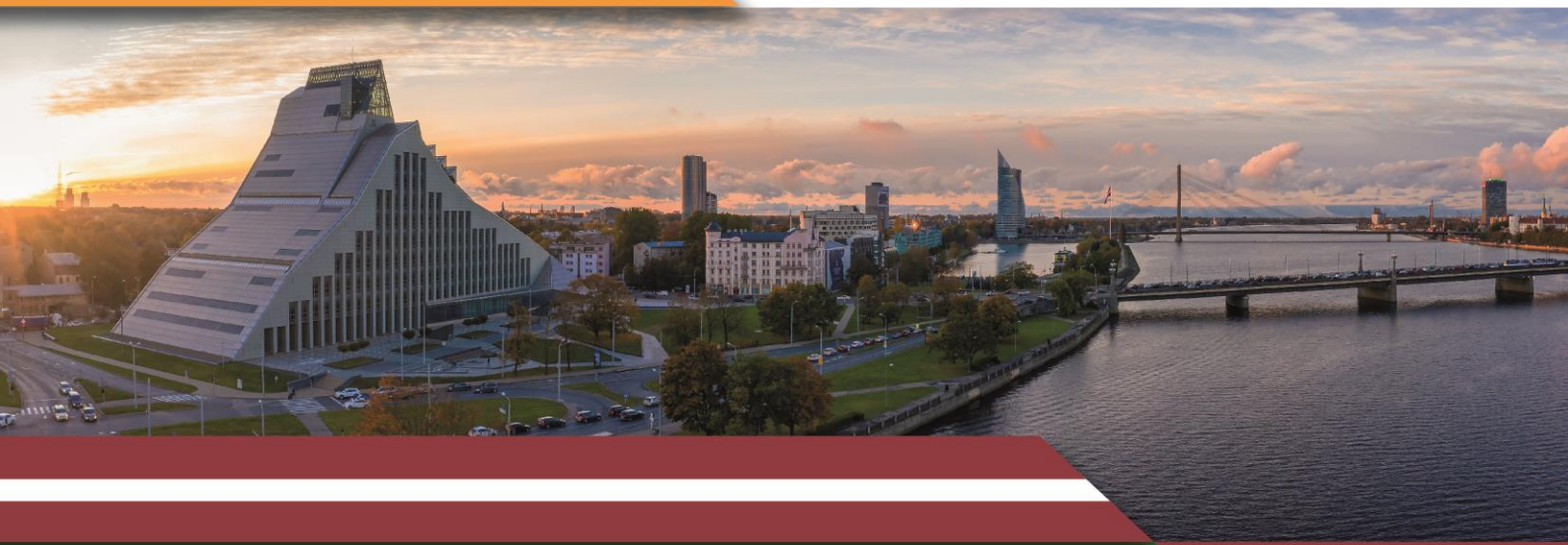


# BIOECONOMY CONCEPT PAPER

EXECUTIVE SUMMARY



## LATVIA



# EXECUTIVE SUMMARY OF THE STRATEGIC CONCEPT PAPER FOR BIOECONOMY: LATVIA

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# Executive summary

## 1.1. Context and objectives

The conventional bioeconomy in Latvia has a long history that has been developed and improved over the years. However, present-day challenges, such as the impact of climate change, the growing global demand for food and feed, and the loss of biodiversity, clearly call for a shift towards a more sustainable, innovative, and knowledge-based bioeconomy. To tackle these challenges, the Latvian Bioeconomy Strategy 2030 (LIBRA) was adopted in 2017 with an **overall vision that Latvia's bioeconomy industries will become innovation leaders in the conservation, enhancement, efficient and sustainable use of natural capital in the Baltic States** [1]. Currently under development is the next version of the bioeconomy strategy with broader cross-ministerial involvement, focusing more at knowledge intensive bioeconomy withing Latvian RIS3 priority.

This Strategic Concept Paper for Bioeconomy in Latvia (Concept Paper) was prepared to assess the contribution made so far to achieve this vision for the future. Assessment of the current contribution to the bioeconomy development was made by listing the most important policy planning documents and the role of the government, education, research institutions and enterprises in the development of bioeconomy in Latvia. For an in-depth research and detailed description, the Riga Technical University Bioeconomy team from the Institute of Energy Systems and Environment worked for more than a year on the inventory, data collection and detailed description of the main components of the Latvian bioeconomy system. The Concept Paper was developed under the BIOEASTsUP project [2] to strengthen the BIOEAST Initiative [3]. The mission of the BIOEAST Initiative is to develop a knowledge-based and circular bioeconomy to foster its growth and create new jobs with added value while preserving or enhancing environmental sustainability [3]. The Concept Paper was therefore developed in close collaboration with the BIOEASTsUP CSA members, regularly discussing progress and refining future actions with PhD Stelios Rozakis and in the meetings of the BIOEASTsUP CSA group.

## 1.2. A systemic approach to bioeconomy

Opportunities for bioeconomy development in Latvia can be seen in each of the bioresource extraction sectors - agriculture, forest sector, fisheries and aquaculture. LIBRA encompasses all of the raw material extraction sectors as well as the downstream sectors, identifying possible directions for development. To map the bioeconomy development opportunities in Latvia, the authors settled for a more detailed study of one of the three bioresource extraction sectors, with the aim of understanding the sector's system components (i.e. renewable resources; knowledge, innovations, technologies; process, products, services; research and development; finance and governance; private and public expectations) in more detail and to define more precisely possible growth scenarios for the sector and identify untapped potential opportunities. The forest sector was chosen as the sector to look at in more detail. Several factors played in favour of this choice. Firstly, Latvia has large areas of state-owned forests, which means that any changes in policy planning or legislation can be implemented and afterwards monitored directly. Not only does the state manage forests (through JSC "Latvian State Forests"), logging, and production of seedlings, but research is also carried out in the state forests and by state research institutions, which means that all the tools needed to develop the bioeconomy are directly available for the forest sector.

The **forest sector** encompasses all things related trees – their cultivation and use – starting from the forest land and seed, up to final product and end of its life. It can be easily divided in two – forestry and wood processing. Forestry includes all things forest land management, from infrastructure to tree seeding and harvesting [4]. Although the sustainability of forestry is important for the steady supply and availability of the raw material, it is the further processing that adds value to the timber [5]. Nevertheless, forestry and forest industry are sometimes mistakenly interchanged even on European Union level reports [6]. In this Concept Paper the term “forest sector” is used to describe the economic sector involving forestry and wood processing, sometimes called “woodworking industry” [7]. **System components were identified** through analysis of statistical data, reports, policy planning documents etc. By identifying the main system components, it was possible to determine the currently strongest enablers and constraints to the development of the Latvian forest sector. The main constraints identified include a lack of financial resources for infrastructure, innovation, science and education capacity, as well as communication and awareness issues and a lack of overall definition of the sector boundaries (some attribute only to the traditional branches of the bioeconomy; the modern bioeconomy is not lobbied enough yet) and therefore lack effective governance of the whole sector can be observed.

### 1.3. Strengths and weaknesses of the bioeconomy

After identifying the currently strongest enablers and constraints to the development of the Latvian forest sector a series of focus group discussions were carried out to explore the forest sector in-depth, identify existing barriers and develop a set of measures that could contribute to the development of the bioeconomy. To identify the growth opportunities of the bioeconomy and possible niche products for further promotion, a group of five experts with knowledge and expertise on the current situation in the Latvian forest sector, wood processing and the development of sustainable products was established. To ensure maximum effectiveness of the focus group, experts with experience and expertise in various fields covering energy, bioeconomy, resource efficiency, waste management and policy were involved. Experts have previously participated in similar JSC “Latvian State Forests” organised research on identifying innovative products for woody biomass products. Industry, including private forest owners; specialists from logging and wood processing; environmental activists and biologists; policy makers (e.g. the Ministry of Economics and Ministry of Environmental Protection and Regional Development); representatives of state-owned development finance institution “ALTUM” and Investment and Development Agency of Latvia; and experts in new product development and commercialisation, were consulted on some specific issues.

Within the focus group discussions experts: (1) developed a Strengths, Weaknesses, Opportunities and Treats (SWOT) matrix for the Latvian forest sector; (2) **selected three wood-based products with higher added value – textile from tree; particle board; natural thermal packaging** - for further analysis. For each of the selected products a SWOT matrix, multi-criteria decision-making analysis and finally an analysis for the possibilities to reduce Threats, take advantage of Opportunities, exploit Strengths, and remove Weaknesses was carried out for each of the niche products. The performed analysis allowed the experts to identify five action directions for the development and successful promotion of each of the three products. As well as, helped to select several actions lines to be taken to contribute to the overall production of higher value-added products and to help overcome the barriers in the forest sector.

## 1.4. Promising bioeconomy sectors to ensure sustainable development

A national commitment to the objectives set out in the European Green Deal, as well as a commitment to gradually replace unsustainable and fossil-based textiles, would make a major contribution to attracting investment for developing a production facility or a pilot project for **textile from tree**. The development of cooperation mechanisms between research institutions, companies and investors should be strengthened to promote innovation. To promote the production and consumer choice of **particle board with improved environmental performance**, information campaigns should be launched to stimulate the demand for the more environmentally friendly product. Companies should be encouraged to certify their products to ensure consumer trust. Although it is consumer demand that is seen as the main determining factor for the promotion of the particle board, however, a game-changing factor could also be the Government's subsidies or support for producers, which would be aimed at supporting the use of bioresources for higher added-value products according to the bioresource value pyramid. It was identified that to foster and improve the value chain for **natural thermal packaging** production, it would be necessary to improve the value chain of resource supply, e.g. to develop an infrastructure for the collection of tertiary and secondary residues, and to examine the opportunities to use new business models in the bioeconomy for collaboration with down-stream and up-stream value chain stakeholders.

## 1.5. Synthesis of actions and conclusive comments

Strategic directions to develop over-arching national bioeconomy appropriate strategic actions can be supported with regard to:

Policy planning documents at the national level related to the bioeconomy show that the objectives set at the international level and in the European Bioeconomy Strategy are implemented in Latvia at a high level. The main concern, however, is the policy planning documents that specifically address the forest sector. Guidelines for the development of forests and related sectors beyond 2020 are not available, and the national Forest Policy was last updated in 1998. Therefore, **policy planning documents do not include development objectives, linked to the European Green Deal and the EU Forest Strategy for 2030**. This creates uncertainty about the direction in which the Latvian forest sector will be developed in the medium and long term and whether it will be in line with the EU-level sustainable development plans and the achievement of climate neutrality.

Overall, the **lack of financial resources and funding for science and innovation** in Latvia is the main barrier that hinders the development of an innovative and high added-value bioeconomy in Latvia. It is also necessary to **reduce the bureaucratic complexities and incentivize the development and production of higher added-value products and innovations**, especially if low-quality biomass is used for the production of high added-value products. This could be achieved by **developing and implementing national guidelines intended for companies on the use of bioresources for the creation of higher added-value products**. Such guidelines would make it easier to prioritise investments and support the most promising projects that meet all three sustainability priorities. To allow for closer collaboration between the system stakeholders, the **communication** between industry representatives, researchers and policymakers may be improved by **implementing science-industry collaboration, research projects, piloting technologies and bioproducts** that are developed in research institutions



for industrial companies. Encourage private sector investment in research, which is not yet common practice in Latvia.

The **industry requires clear signals from the government about the long-term planning and commitments** to adhere and to implement the objectives of the European Green Deal and the European Bioeconomy Strategy, promoting the circular bioeconomy and sustainable solutions in practice. This would guarantee a secure investment environment and provide local businesses with clarity on the Government's long-term priorities, especially in higher risk novel industries. The **overall awareness** of the importance of bioeconomy should be raised in the society, and the difference between low added-value biomass applications and high added-value technologically innovative bioeconomy, e.g. by promoting sustainable products and companies. This includes measures to counteract “greenwashing” to ensure fair competition, promoting companies to certify their higher added-value bioeconomy products to increase competitiveness and prove the superiority of their products. As well, actions as workshops and **training for industry** on the wide use of wood residues in products with higher added-value and in line with the circular bioeconomy may be provided.

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