ShapingBio

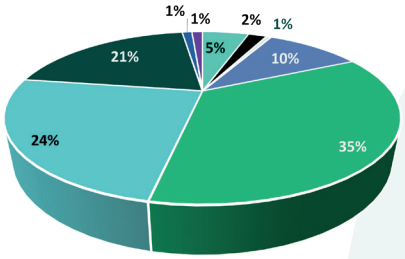
Bioeconomy country file

Estonia

Estonia is one of the high-tech hubs in North-eastern Europe and has an active national biotechnology association. It also features a solid chemical industry. There is a strong support towards high-tech university spinoffs and start-ups and the country has a network of technology parks and incubators. The main objectives of the Estonian bioeconomy are the greater added value from the circular bioeconomy, the sustainable use of resources and preservation of biodiversity, and the support of research and development, innovation, and technology. Estonia does not have a national bioeconomy strategy. However, in 2023, the authorities published a roadmap on circular bioeconomy, which serves as the main policy document for the national bioeconomy development.

Employment by sector in Estonia (2020)

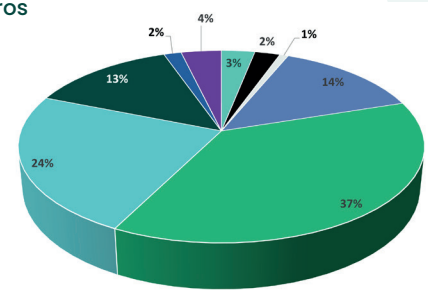
Number of people employed



- Agriculture (12.36k)
- Food, beverage and Tobacco (14.7k)
- Wood products and furniture (21.47k)
- Forestry (6.21k)
- Bio-based chemicals, pharmaceuticals, plastics and rubber (351.63)
- Paper (1.23k)
- Bio-based textiles (3.,12k)
- Fishing and aquaculture (660)
- Bio based electricity (716.27)

Value added by sector in Estonia (2020)

Million euros



- Agriculture (264.4)
- Food, beverage and Tobacco (459.4)
- Wood products and furniture (731.45)
- Forestry (267.1)
- Bio-based chemicals, pharmaceuticals, plastics and rubber (15.44)
- Paper (45.84)
- Bio-based textiles (60.69)
- Fishing and aquaculture (31.6)
- Bio based electricity (72.87)

Duration

2023 - 2035

Responsible authorities

Estonian Ministry of Regional Affairs and Agriculture

Estonia

Circular Bioeconomy Roadmap

The circular bioeconomy roadmap defines the broad fields of activities for the development of the circular bioeconomy in Estonia and the activities necessary for its development in the short term (2023–2027) and in the long term (until 2035). The document aims to form the basis for the development of regional circular bioeconomy roadmaps based on local bio-resources, the needs and opportunities of communities and municipalities.

Dominant sectors

Agriculture
Forestry
Food, Feed and Beverage

Other related strategies

- Agriculture and Fisheries Strategy 2030
- Estonia 2035
- Smart Specialisation Strategy

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Policy instruments

ResTA

The ResTA program supports business-oriented R&D in the valorisation of wood, food, and subsoil resources. The total budget of ResTA is 10 821 810 €.

Baltic Innovation Fund 2 (BIF 2)

BIF2 is a EUR 156m Fund-of-Funds initiative launched by the EIF in co-operation with the Baltic national promotional institutions – KredEx (Estonia), Altum (Latvia) and Invega (Lithuania).

RITA

RITA funds socio-economical applied research based on the needs of the state. It supports strategic R&D activities - implementation of socio-economical interdisciplinary applied research as well as knowledge-based policy formulation.

NUTIKAS

The funding supports companies in commissioning necessary applied research or product development projects from universities or research institutions. The maximum funding per project is 2 million euros, whereas the minimum amount is 20 000 euros.

Circular economy program

The program supports a range of activities in the field of circular economy and waste. The program is open to local authorities, companies, non-profit organisations, foundations, legal persons governed by public law, and self-employed people.

Forestry program

It supports a range of forestry activities that aims to implement the long-term development objectives of forestry. Local authorities, companies, non-profit organisations, foundations, legal persons governed by public law, and self-employed persons can apply

Fisheries program

It supports a range of fisheries activities. it aims to achieve a balance between conservation and exploitation of fish stocks. Municipalities, companies, environmental protection bodies, non-Wprofit organisations, foundations, apartment associations, legal persons governed by public law, and self-employed persons can apply

Bioeconomy in Estonia

Collaborative structures

The Centre of bioeconomy, Estonian University of Life Sciences

The center focuses on interdisciplinary collaboration initiatives within the university and with other research institutions, companies, and organizations. It also initiates and coordinates interdisciplinary research and development of new innovative technologies, seeks funding, organises seminars, public discussions and other scientific events.

Competence Centre for Knowledge-Based Health Goods and Natural Products

The main goal of the project is to consolidate and mobilise sectorial know-how as well as other resources and raise the sectorial competitiveness via international networking, research, and development based on both academic excellence and business innovation. It also aims at supporting the cooperation of research institutes, the public sector, and enterprises.

Fisheries Information Centre

The center coordinates the cooperation between the fisheries and the aquaculture sector, fishermen's organisations, and researchers as well as to coordinate relevant studies and pilot projects.

Association of Estonian Food Industry

The association represents the interests of Estonian food industry in the development of national economic policy and interacts with authorities, producers, trade, and other interested parties by co-operating in all the links of the food chain.

Entrepreneurship education program Edu ja Tegu

The aim of the program is to develop young people's entrepreneurial competencies in line with the labour market needs. The programme gathers various stakeholders, including Education and Youth Board, ministries, Junior Achievement Estonia, Estonian universities, and county development centers

Estonian Research Council

The council funds research and innovation in Estonia, coordinates funds for bioeconomy (NUTIKAS, RITA, ResTa), and supports international research cooperation.

Centre of Competence for Wood Processing and Furniture Manufacturing

The center is a network linking the public sector, private industry, and educational and research institutions, providing knowledge, skills, and best practices in materials and technologies to advance production, management, and product development in wood processing and furniture manufacturing

Showcase

SWEETWOODS flagship biorefinery in Imavere, Estonia

SWEETWOODS Imavere biorefinery is a unique and groundbreaking demo plant that is using Sweetwater's Sunburst pre-processing technology to fractionate biomass into biocomponents faster and more efficiently than any other technology on the market. The demo plant demonstrates on an industrial scale, how novel pre-treatment technology in combination with innovative enzymatic solutions will convert more than 90% of the woody biomass into high-quality lignin and wood sugars. https://sweetwoods.eu

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