



Implementing Finland's bioeconomy strategy

6.6.2023

If the answer is bioeconomy, what is the question?

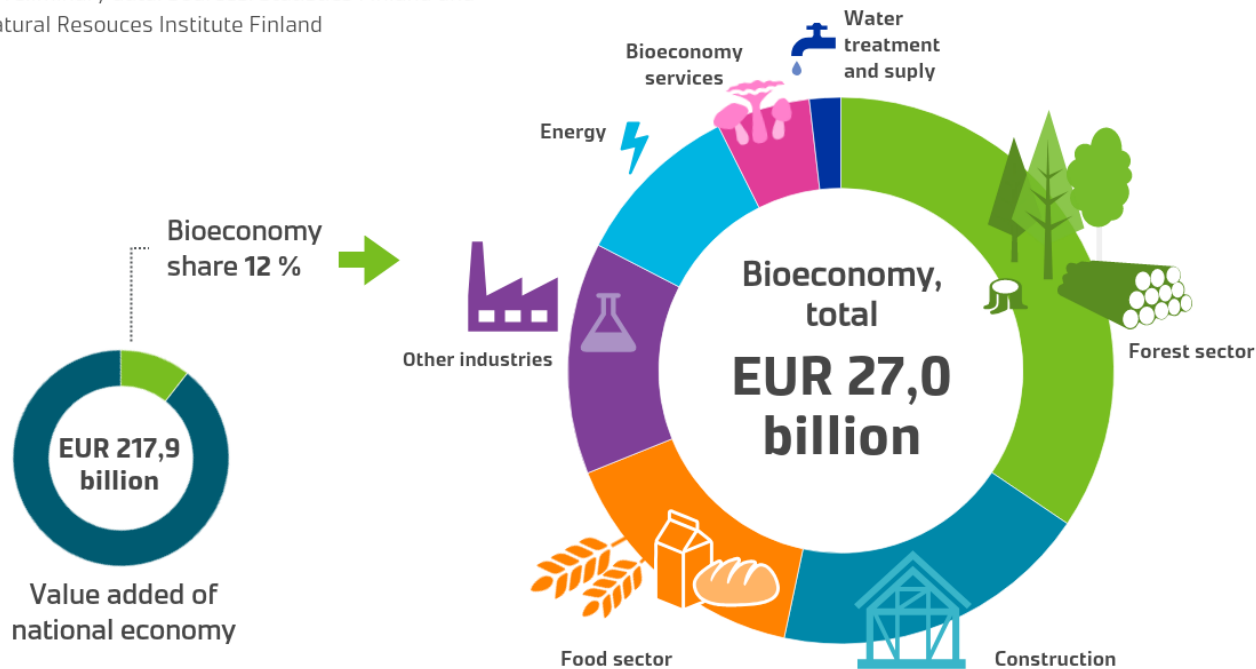
...bioeconomy is connected with particularly wide range of strategies/policies...



Bioeconomy in Finland

Value added of bioeconomy 2021*

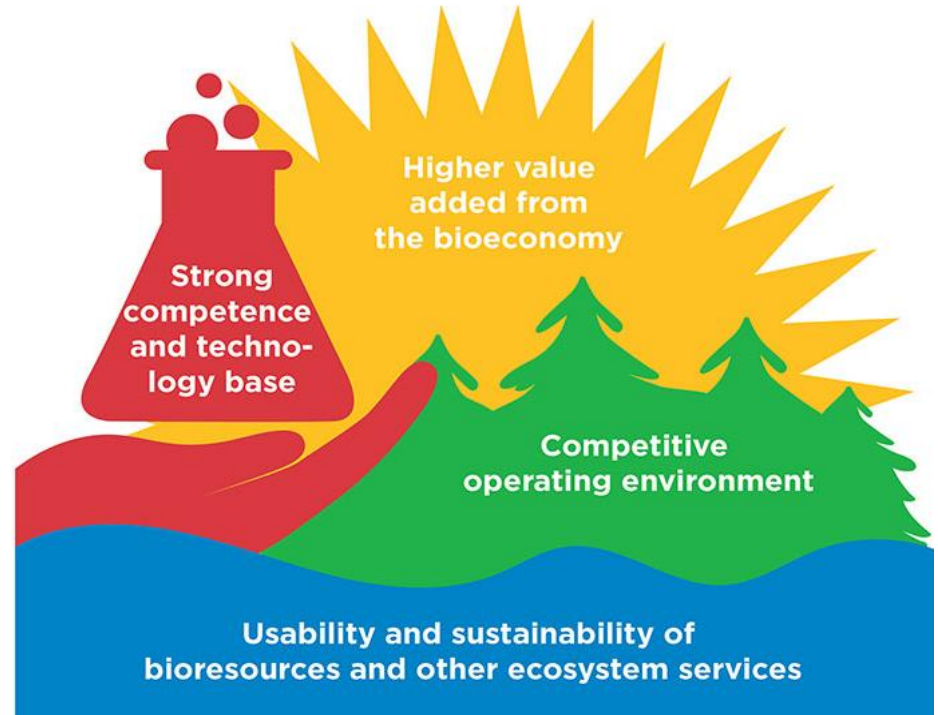
* Preliminary data. Sources: Statistics Finland and Natural Resources Institute Finland



Sustainably towards higher value added

Finland's bioeconomy strategy 2022-2035

Finland's
bioeconomy sectors'
value added
to reach
EUR 50 billion in 2035,
2x of 2021



...ways and means...

Higher value added from the bioeconomy

- RDI programme
- Pilot and demonstration plants
- Climate change and biodiversity actions
- Regional bioeconomy plans

Strong competence and technology base

- Research and education
- Development of technologies
- Digitalisation

Competitive operating environment

- Ecosystem services commercialization
- Streamlined permit processes for investments
- Innovative sustainable public funding models
- Cross-border cooperation

Usability and sustainability of bioresources and other ecosystem services

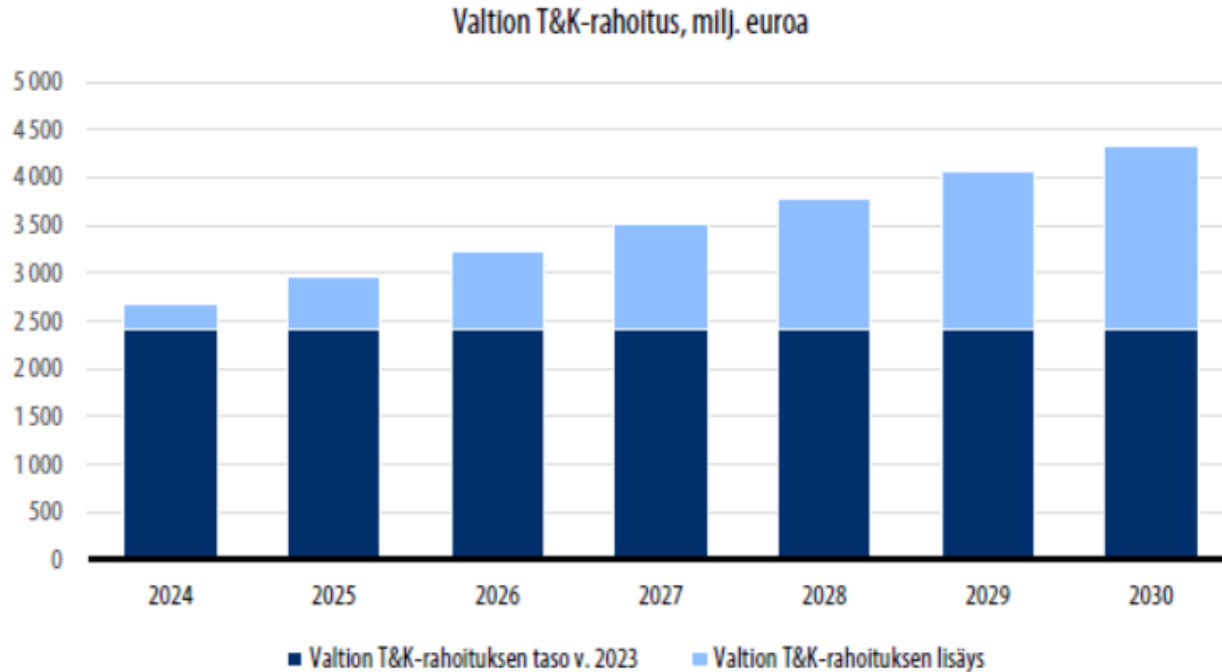
- Demand and availability of biomass and side streams
- Increasing the value added in ecosystem service industries

Increasing value added in different sectors

forest • food • energy • water and water biomass • bioeconomy services
textiles and clothing industry • chemical industry

Finland aiming for 4% R&D/GDP intensity by 2030

Estimated development of government R&D funding in the General Government Fiscal Plan



WIDE LANDSCAPE OF FINNISH BIO & CIRCULAR ECONOMY R&D

SUSTAINABLE TEXTILES

Cellulose fibre production

Recycled textile ecosystem

Utilization of recycled textiles fibres in different end-user applications

PACKAGING

Bio-based barriers

Traceability – digital elements

New business models – Package as a service

PLASTICS

Bio plastics

Plastic recycling

Use of recycled plastics

BIOBASED SOLUTIONS

Nanocellulose based biomedical solutions

Bio composites

Biofuels

Biochemicals

Ligning based binders

Proteins

CIRCULAR VALUE ADDED STREAMS

Towards zero-waste processes

Metals recycling

Batteries recycling

Carbon neutral production – minimizing CO₂

Nutrient recycling

SYNTHETIC BIOLOGY

NEW BUSINESS MODELS & DIGITAL TRANSFORMATION

BUILDING & CONSTRUCTION

CLIMATE SMART BUSINESS

INNOVATIVE FINNISH FOOD

FOOD FROM
Finland

- Innovative Dairy products
- Pure and safe Finnish Meat and Fish
 - Functional foods

Healthy and innovative grain and cereal products

- Oats & rye products
- Snacks, flakes, malt
- Biscuits, bread, flakes

Free from - products

- Gluten free, lactose free
- Plant-based dairy alternatives
- Plant-based meat alternatives

Confectionary products

- Finnish delicacies
- Liquorice, chocolate
- Free From confectionery

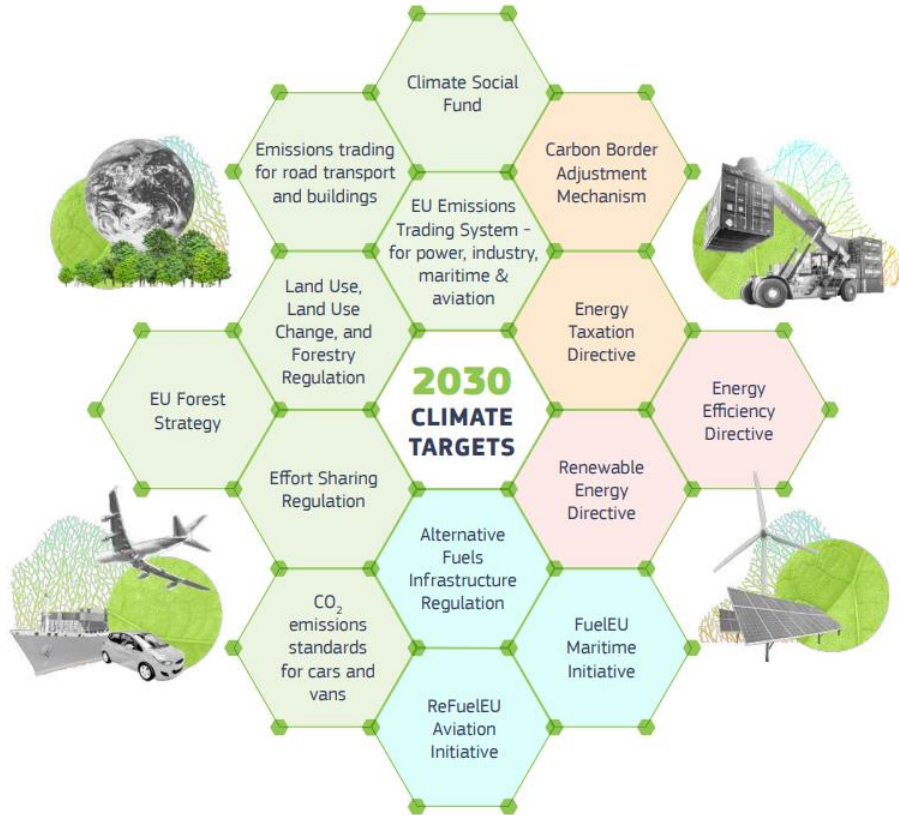
Products from wild berries

- Juices, smoothies
- Desserts and snacks
- Ingredients for food and cosmetics industry

Innovative beverages

- Innovative alcoholic and non-alcoholic beverages
- Gins, vodkas, whiskies, others
- Spring waters
- Beverages from wild berries

...smart and balanced EU and national regulation and de-regulation to drive sustainable bioeconomy...



Pressures on EU biodiversity



Bioeconomy opportunities deserve more attention in the proposed EU Green Deal Industrial Plan

THE PLAN IS BASED ON FOUR COMPLEMENTARY PILLARS



BOOSTING SUSTAINABLE COMPETITIVENESS

The Green Deal Industrial Plan will simplify, accelerate and align incentives to competitiveness and attractiveness of the EU as an investment location for industrial manufacturing, acting on all fundamental factors.

A predictable and simplified regulatory environment

- ▶ Quick deployment of manufacturing capacity
- ▶ Critical Raw Materials Supply
- ▶ Affordable and sustainable energy



A predictable and simplified regulatory environment

- ▶ Net-Zero Industry Act
- ▶ Promote regulatory sandboxes
- ▶ Electricity Market Design reform

▶ National and EU funding



Speeding up access to finance

- ▶ InvestEU, REPowerEU, Innovation Fund, State aid Temporary Crisis and Transition Framework, a European Sovereignty Fund

▶ Green and digital skills



Enhancing skills

- ▶ European Skills Agenda, Partnership for Skills

▶ Diversified access to critical inputs



Trade and resilient supply chains

- ▶ Free Trade Agreements, Critical Raw Materials Club, Clean Tech/ Net-zero Industrial Partnerships



Thank you!



Ministry of Economic Affairs
and Employment of Finland

www.bioeconomy.fi