

transition2bio

Towards a more sustainable future

Toolkit 2: The bioeconomy and its contribution to more sustainable production

Not only must we seek new ways of consuming, but also of producing that respect the ecological boundaries of our planet. All stakeholders, especially the supply side, must be engaged in this systemic change towards a more sustainable model, promoting growth and development and preserving the ecosystem. This toolkit aims to raise awareness and educate the supply side about the bioeconomy at large and its benefits for them.

What economic opportunities for job creation or income diversification exist in my sector? What are promising regional business models or ways of valorising residues that can contribute to the transition to a more sustainable production? The best available resources to answer these questions can be found in this toolkit.

Who: primary producers (farmers, fishermen, forestry owners, etc.), SMEs, large enterprises, industry, associations/clusters

What: materials showcasing economic opportunities in the bioeconomy in the form of best practices, robust information and collaborative platforms.

Key message: what are the bioeconomy opportunities for my business?

You can find additional information in **Toolkit 1** on the bioeconomy and its benefits for all of society and in **Toolkit 3** on communicating and supporting the bioeconomy.

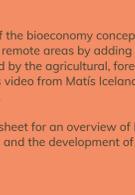
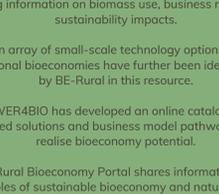


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Did you know?

The bioeconomy can be a key vector of green growth for your business!



I. How can the bioeconomy provide sustainable economic opportunities in my region?

Economic benefits from the bioeconomy are abundant and offer major opportunities for regional and local communities. In 2017, the European bioeconomy employed 17.5 million people and generated EUR 614 billion of value added.



A major strength of the bioeconomy concept is the development of rural, coastal and remote areas by adding values to commodities which are produced by the agricultural, forestry, fishery or waste sectors. Watch this video from Matis Iceland to better understand the rural approach.

Check out this factsheet for an overview of EU projects supporting local bioeconomies and the development of new value chains and business models.

II. What are promising business models and sustainable technologies for local deployment?

Many valuable resources and potentials still remain unexploited by businesses. Thankfully a number of tools exist to help businesses unlock new competences, open new markets, and ensure that concepts like resource efficiency and circularity, and sustainable economic growth are integrated into their business models.

Business Model: describes the rationale of how an organization creates, delivers, and captures value, in economic, social, cultural or other contexts.

Value Chain: is defined as a set of interlinked activities that deliver products/services by adding value to bulk material (feedstock).

Integrated Value Chain: is a logical chain of partners working together to add value to primary biomass in several steps and to look for synergies in production pipelines.

BE-Rural's handbook on regional and local bio-based economies provides an in-depth overview of local potential including information on biomass use, business models and sustainability impacts.

An array of small-scale technology options for regional bioeconomies have further been identified by BE-Rural in this resource.

POWER4BIO has developed an online catalogue of bio-based solutions and business model pathways to fully realise bioeconomy potential.

The Rural Bioeconomy Portal shares information and examples of sustainable bioeconomy and nature-based solutions in rural areas.

RUBIZMO's Transformation Support Tool helps you understand which business models are the best fit for your objectives, taking into account key information on your business environment and stakeholders. It consists of a database of business models and a tool to implement the selected model.

Enabling's Best Practices Atlas has collected best BBP (Bio based Products and Processes) practices, from inside and outside Europe, that are wholly or partly transferable to other regions, and can serve as an inspiration for partners in the value chain.

AlpBioEco developed exciting eco-innovative business ideas and concepts for small and medium-sized enterprises in the Alpine region. Examples include the:

- apple
- walnut
- and herbal value chains.

Further exciting impulses can be found in AlpBioEco's replicable roadmap to analyse bio-based value chains

III. How can we ensure a sustainable supply of biomass?

Biomass is at the core of bioeconomy. However, even though it is considered renewable it remains a finite resource with regard to different influencing factors such as water and land availability. The sustainable and reliable supply of non-food biomass feedstock is essential for the success of the bioeconomy and its bio-based products.

Check out this LIFT factsheet on the challenges to be addressed in biomass availability, quality, supply and sustainability and European projects addressing these issues.

Enabling's process Flows Platform represents data for different feedstock and shows the process flows for the different feedstocks. The project also provides a Biomass Trade Platform where biomass producers and biomass processors can meet to exchange currently not valorised organic biomass residues and organic by-products.

S2BIOM's planning toolset contains harmonised datasets for the availability of lignocellulosic biomass in EU27, western Balkans, Turkey, Moldova and Ukraine and its Bio2Match tool helps match biomass and conversion technologies.

ICT-BIOCHAIN is working to guarantee a secure and sustainable supply of biomass feedstock by improving the efficiency of the biomass value chain. You won't want to miss its platform of ICT solutions.

Baltic For Bio produced a Forest Energy Atlas GIS platform.

In the forestry sector, ERIFORE is establishing an open access distributed forest bioeconomy research infrastructure across Europe.

BIOREG's Geoport Tool, a tool focused on wood waste management provides a unified platform which helps disseminate suitable solutions and success factors, depending on the regional context.

IV. How is the business community supported in driving bio-based innovation?

The business and research community play a central role in driving bio-based innovation and investing in healthier, safer, and more sustainable products and services. From a vast range of primary producers, SMEs and start-ups, industries, and companies providing bio-based and ecosystem services everyone has an important role to play. However, many researchers and SMEs need support to take advantage of these emerging opportunities.

Get started with this clear description of a business plan from ProBio.

For those striving to launch a bioeconomy-related business, these CommBeBiz webinars might help you:

- Business Plan writing
- Market Partner Research

For those brand owners wanting to switch to bio-based approaches, the BIOSWITCH toolbox is essential as you embark on your bio-based transition journey.

It can be important for bio-businesses to understand the maturity level of certain bio-based market segments. These BIOWAYS factsheets describe the market conditions, barriers and future trends, and public perceptions of a range of bio-based application areas from biochemicals, biofuels, to bio-based plastics.

V. What networking, capacity building, and open access research opportunities exist in the bioeconomy sector?

The bio-based industry is a key player in Europe, however, it is still a fairly small and nascent industry under development. One of the main challenges in the bioeconomy is to overcome barriers in order to bring bio-based innovations closer to the market. Luckily a number of tools exist for support.

Read this European Commission report on 15 EU success stories, "Bio-based products from idea to market", for concrete real-life examples that can serve as inspiration for many.

By offering start-ups and SMEs voucher services for technical and non-technical innovation support services, many projects are helping bring innovations to the market.

Here you will find an overview from SuperBIO of ten life-innovation services, including everything from proof-of-concept and scale up to life-cycle assessment, and access to investors.

Similarly, the Interreg North-West Europe BioBase4SME Network supports partnerships and advises start-ups and SMEs from across North-West Europe about how to overcome technological and non-technological barriers and develop new ideas into marketable bio-based products.

BIOPEN's European Open-innovation Platform helps with matchmaking among project ideas and stakeholders, funding opportunities, and offers a semantic search engine to perform searches over millions of patents and scientific papers.

Cross-sector and multi-stakeholder collaboration can be key elements of success. In this BioBridges factsheet the main practices and challenges are listed.

Here the Interreg Danube Transnational Programme has developed a joint bio-based value-added network for the Danube Region (DANUBIOVALNET)

For a helpful overview of European projects working in the area of open innovation platforms and facilities, check out this LIFT Factsheet.

Hundreds of open-access innovation platforms and facilities, such as the Bio Base Europe Pilot Plant, operate all across Europe in different sectors of the bioeconomy.

Can we help you further?

You can find more resources at link to T2B Library

Please contact us at: info@transition2bio.eu

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