



Bioeconomy Factsheet – EU

This factsheet gives an overview of the European Union's bioeconomy innovation technology system. It includes the key government interventions, research initiatives, networks and finance instruments, in the EU.

Bioeconomy Governance



EUROPEAN COMMISSION

Bioeconomy development, regulation, and coordination in the EU is governed by:

- The **European Commission** (EC)
- The **European Bioeconomy Panel** support interaction between bioeconomy policy areas

Bioenergy and Biofuels

The **Renewable Energy Directive** establishes an overall policy for the production and promotion of energy from renewable sources in the EU. It requires the EU to replace at least:

- 20% of its total energy needs with renewables by 2020
- 10% of transport fuels from renewable sources by 2020, which comply with sustainability criteria

The Directive specifies national targets for each country, and obligates each to set out **National Renewable Energy Action Plans**.

Bioeconomy Strategy

In 2012, the EC adopted the strategy and action plan **Innovating for Sustainable Growth: a Bioeconomy for Europe**, to shift the European economy towards greater and more sustainable use of renewable resources.



This bioeconomy strategy is part of the Europe 2020 flagship initiatives **Innovation Union** and **Resource Efficient Europe**. The goal is a more innovative and low-emissions economy, reconciling demands for sustainable agriculture and fisheries, food security, and the sustainable use of renewable biological resources for industrial purposes, while ensuring biodiversity and environmental protection.

The strategy and action plan outlines a coherent, cross-sectorial and inter-disciplinary approach to the issue with three key pillars:

1. Investment in research, innovation and skills
2. Development of markets and competitiveness
3. Reinforced policy coordination and stakeholder engagement

To regularly assess progress, and make information accessible, the EC fund the **Bioeconomy Observatory**, managed by the **Joint Research Centre (JRC)**, which collates data and documents on EU bioeconomy policies, research and markets.





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Climate Change Policy

The EU have set targets to stimulate climate change action, which has driven climate and bioeconomy policy across Europe:

- **20-20-20** obligates EU member states, by 2020: to reduce GHG emissions by 20% from 1990 levels, increase the share of renewable energy to 20%, and increase energy efficiency 20%.



- The **2030 Framework**, is more ambitious with targets of 40% GHG reduction, 27% renewable energy, and to become 27% more energy efficient by 2030.
- The **2050 Roadmap** is an even longer term plan to cut GHG emissions by 80% by 2050, in a cost effective way.

Technology Commercialisation Centres

There are many technology centres across Europe, funded by European Regional Development Funds:



- Bio Base Europe Pilot Plant, Belgium (Interreg)
- EnAlgae Pilot facilities network, NWE (Interreg)
- EBRI European Bioenergy Research Institute, UK
- BEACON Wales, UK
- The Biorenewables Development Centre, York, UK
- Bioprocess Pilot Facility, Holland
- ARD, Agro-industry R&D, France

Research & Technology Funding



Horizon 2020 is the biggest EU **Research and Innovation** programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020), in addition to private investment. Over €4 billion is available to support bioeconomy related research and innovation.

Horizon 2020 also have **Work Programmes** to address the following bioeconomy related **Societal Challenges**:

- Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy
- Climate action, environment, resource efficiency and raw materials
- Secure, Clean and Efficient Energy

Examples of **Horizon 2020 projects**

- DIABLO
- CARBAZYMES
- PRODIAS
- 2G BIOPIC



FP7 project examples:

- EUROBIOREF
- SUCCIPACK
- BIOCORE
- AGROCOS

Finance

EU financing of start-ups, entrepreneurs, and companies is made by local financial institutions, under schemes including:



- COSME
- InnovFin
- European Structural and Investment funds
- European Investment Bank



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The Bioeconomy Consultants

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Networks

The **European Bioeconomy Panel** support interactions between different policy areas, sectors and stakeholders in the bioeconomy.

There are many **networks** working across Europe, including:

- European Research Area Networks (**ERA-NET**)
 - PLATFORM2, for Bioeconomy ERA-NETS
 - ERA-IB2 (Industrial Biotechnology)
 - ERA-CAPITA (Catalytic Processes)
- The European Biotechnology Network
- Enterprise Europe Network
- Europe Innova ABC network (Agro-Biotech Clusters)
- European Regions Research & Innovation Network

PLATFORM



European Technology Platforms are industry-led, developing long-term RDI agendas at EU and national level, including:



- Sustainable Chemistry (SusChem)
- Forest-based Sector (FTP)
- European Biofuels (EBTP)

European Bioeconomy Industry Associations:

The European Bioeconomy Alliance (EBA) is an informal alliance of leading European organisations active in the bioeconomy. Its members are:



European Bioeconomy Alliance

- BIC
- CEFS
- CEPF
- CEPI
- COPA-COGECA
- ePURE
- EuropaBio
- EUBP
- FEDIOL
- FTP
- PPF
- Starch Europe

Bio based Industries PPP

The European Bio-based Industries Initiative Joint Undertaking (BBI-JU) is a new PPP with a total budget of € 3.7 billion for bio-based innovation from 2014-2024. € 975 million of this is EU funds, with the other € 2.7 billion from



private investments. The PPP has an emphasis on higher added value. The key is to develop new biorefining technologies to sustainably transform renewable natural resources into bio-based products, materials and fuels.

Bio Base NWE

The Bio Base NWE network represents leading biobased economy experts, advising entrepreneurs from across Europe on how to develop new ideas into marketable products, from the first feasibility study or market analysis up to funding and investment scenarios.



BioBase NWE Project

<http://www.biobasenwe.org/en/home/>



This factsheet was produced by Bio Base NWE partners

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