



The European Commission's Knowledge Centre for Bioeconomy

National bioeconomy strategies in Europe – State of play February 2025

Factsheet based on data from the Bioeconomy country dashboard of the EC Knowledge Centre for Bioeconomy¹

HIGHLIGHTS

1. In Europe 12 countries (11 in the EU-27) have *dedicated bioeconomy strategies*: Austria, Estonia, Finland, France, Germany, Ireland, Italy, Latvia, Netherlands, Norway, Portugal and Spain (see details in Section 5).
2. Most of the 12 national bioeconomy strategies cover *all primary biomass supplying and biomass processing areas* including biotechnology. Organic waste and ecosystem services are covered by all countries except Estonia (Section 3).
3. In the national bioeconomy strategies, *three common policy actions are consistently addressed* (Section 4):
 - Encouraging investments in bioeconomy research, innovation, and market development
 - Supporting the principles of cascading use, circularity, and resource efficiency for biomass
 - Promoting communication campaigns to raise awareness.

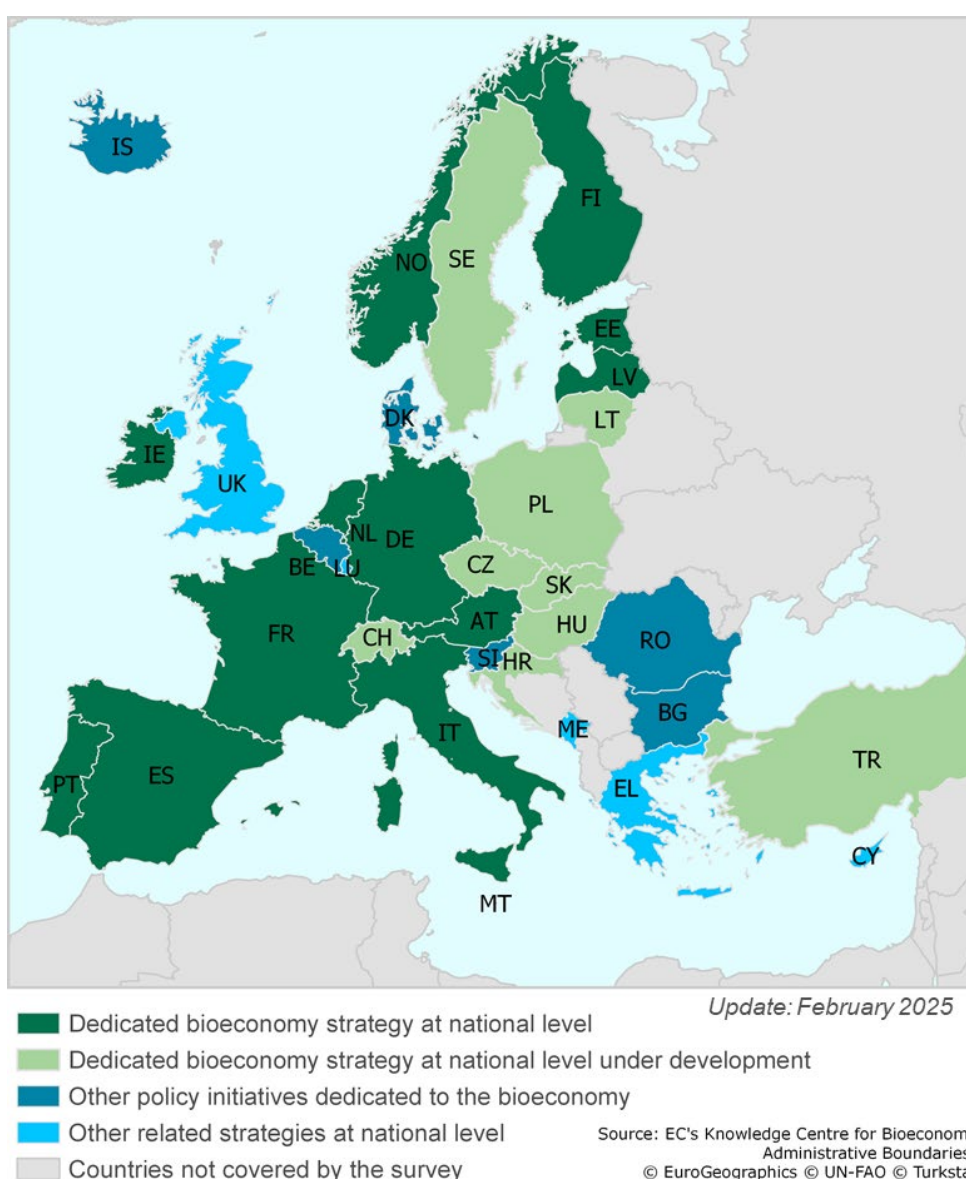
¹ <https://knowledge4policy.ec.europa.eu/visualisation/bioeconomy-different-countries>

1. NATIONAL BIOECONOMY STRATEGIES AND RELATED POLICY INITIATIVES IN THE EUROPEAN COUNTRIES

The data available in the Bioeconomy country dashboard of the EC Knowledge Centre for Bioeconomy for 33 European countries shows the following situation (Figure 1):

- 12 countries (11 in EU-27) have *dedicated bioeconomy strategies*: Austria, Germany, Spain, Estonia, Finland, France, Ireland, Italy, Latvia, Norway, Netherlands and Portugal.
- 11 countries (9 in EU-27) have *dedicated bioeconomy strategies under development*: Croatia, Czechia, Denmark, Hungary, Lithuania, Poland, Slovakia, Slovenia, Switzerland, Sweden and Türkiye.
- 4 countries (3 in EU-27) have *other policy initiatives dedicated to bioeconomy*: Belgium, Iceland, Romania and Bulgaria.
- 6 countries (4 in EU-27) have *other related strategies at the national level*: Cyprus, United Kingdom, Greece, Luxembourg, Montenegro and Malta.

Figure 1: Status of national bioeconomy strategies and related policy initiatives in Europe. February 2025.



2. TIMELINE OF NATIONAL BIOECONOMY STRATEGIES' ADOPTION

The timeline of bioeconomy strategy developments in Europe, with the progress made since the first EU bioeconomy strategy adoption in 2012, is shown in Figure 2. The timeline displays when each country's bioeconomy strategy was initially adopted. Some countries have updated their strategies after the first adoption (see Section 5 for details). Estonia's circular bioeconomy strategy represents the most recent addition.

Figure 2: Timeline of national bioeconomy strategies adoption and update in Europe.



3. AREAS COVERED IN THE STRATEGIES

Most national bioeconomy strategies cover all primary biomass supplying (agriculture, forestry, and aquaculture) and biomass processing areas (food, wood products, pulp & paper, textiles, chemicals and materials, bioenergy) (Figure 3). For primary production areas, there are two exceptions: the Austrian bioeconomy strategy does not specifically address fisheries, while the Estonian strategy only covers eight out of thirteen areas. Organic waste is considered in all countries except Estonia. For biomass processing areas, Estonia does not cover biotechnology, bio-based textiles and bio-based chemicals and materials. Ecosystem services are part of most national bioeconomy strategies except Estonia.

Some other specific focus areas addressed in national strategies include:

- Bio-pharmaceuticals in Germany
- Bio-fertilisers, bioplastics, bio-stimulants, and bio-lubricants in Italy
- Construction, water treatment and supply, and nature tourism in Finland
- Footwear and natural resin in Portugal

Figure 3: Overview of areas covered in national Bioeconomy strategies per country.

Bioeconomy Strategies of Member States		AT	DE	EE	ES	FR	FI	IE	IT	LV	NL	NO	PT
Focus													
Areas covered	Agriculture	●	●	●	●	●	●	●	●	●	●	●	●
	Forestry	●	●	●	●	●	●	●	●	●	●	●	●
	Fisheries		●	●	●	●	●	●	●	●	●	●	●
	Aquaculture	●	●	●	●	●	●	●	●	●	●	●	●
	Organic waste	●	●		●	●	●	●	●	●	●	●	●
	Food	●	●	●	●	●	●	●	●	●	●	●	●
	Wood, wood products & furniture	●	●	●	●	●	●	●	●	●	●	●	●
	Pulp & paper	●	●	●	●	●	●	●	●	●	●	●	●
	Biotechnology	●	●		●	●	●	●	●	●	●	●	●
	Bio-based textiles	●	●		●	●	●	●	●	●	●	●	●
	Bio-based chemicals and materials	●	●		●	●	●	●	●	●	●	●	●
	Bioenergy (incl. transport biofuels, bioelectricity and heat & cooling)	●	●	●	●	●	●	●	●	●	●	●	●
	Ecosystem services	●	●		●	●	●	●	●	●	●	●	●
	Other specific sectors	●	●				●	●	●	●		●	●

4. POLICY ACTIONS IN THE STRATEGIES

Figure 4 provides an overview of the policy actions foreseen in the national bioeconomy strategies. Across all countries considered, *three common policy actions are consistently addressed*:

- Encouraging investments in bioeconomy research, innovation, and market development.
- Supporting the principles of cascading use, circularity and resource efficiency for biomass.
- Promoting communication campaigns to raise awareness.

Some specific *examples of actions to promote investments* are:

- Creating public funds or funding instruments for innovation partnerships, cooperation platforms, and bioeconomy specific research and innovation.
- Establishing open marketplaces based on public sector innovation and procurement needs.

The actions found in the national strategies aiming to “promote the principles of cascading use, circularity and resource efficiency for biomass” are typically generic statements to support the recovery and valorisation of different types of wastes and by-products.

Figure 4: Overview of policy actions in national bioeconomy strategies per country.

Bioeconomy Strategies of Member States		AT	DE	EE	ES	FR	FI	IE	IT	LV	NL	NO	PT	
Focus														
Policy actions	Embed the bioeconomy into new legislative frameworks					●			●					
	Revisit existing regulatory frameworks to include bioeconomy concepts/priorities	●	●	●	■	●	●	●	●	●	●	●	●	
	Promote the establishment of intra-governmental groups to support policy coherence or collaboration amongst different bioeconomy stakeholders	●	●	●	●	●	●	●	●	●		●	●	
	Promote labels and standards for bio-based products	●	●		●	●	●	●	●	●		●	●	
	Promote public procurement of bio-based products	●	●	●	●	●	●	●	●	●	✓	●	●	
	Enhance land management for new production systems and ecosystem functions	●	●		■		●	■	●	●	■		●	●
	Promote specific bioeconomy sectors	●	●	●		●	●		●	●		●	●	
	Promote the principles of "cascading use", "circularity" and "resource efficiency" for biomass	●	●	●	●	●	●	●	●	●	●		●	●
	Enhance the knowledge on bioeconomy by setting-up knowledge hubs, observatories, information systems, web portals, conferences, etc.	■			●	●	●	●	●	■	■		●	●
	Implement specific studies (feasibility, impact assessments, land use, territorial development analyses, market analyses, foresight studies etc).	●	●		●	●	●	●	●	●	●	✓	●	●
	Develop monitoring systems for the bioeconomy		●		■		●	●	●	■		●	●	●
	Promote communication campaigns for awareness raising (e.g. bioeconomy awards, information systems, events, etc.)	●	●	●	●	●	●	●	●	●	●	●	●	●
	Promote educational/training programmes	●	●	●	●	●	●	●	●	●	●		●	●
	Promote investments in bioeconomy research, innovation, market development	●	●	●	●	●	●	●	●	●	●	●	●	●
	Market incentives for bio-based production/consumption (e.g. subsidies, taxes)	●	●	●		●	●	■	●	●	●		●	

5. SUMMARIES OF NATIONAL BIOECONOMY STRATEGIES

The national bioeconomy strategies and the main related documents are listed and summarised in Table 1.

Table 1: Bioeconomy policy documents in the 12 countries with dedicated bioeconomy strategies.

Country	Strategy documents and links	Summary of strategy
Austria (AT)	Bioeconomy a strategy for Austria (2019) Flagships of the Bioeconomy in Austria (2021) Bioeconomy Action Plan (2022) First strategy adopted: 2019 Landing page: Bioeconomy	<p>"Bioeconomy - A strategy for Austria" sets six target areas which are broken down into operational targets that "will enable an effective transition to the actions in the "Bioeconomy Action Plan". Furthermore, the Austrian strategy establishes "fields of action" in 23 different areas (called in the strategy "spheres"), including "circular economy", "Wood as a Construction and Building Material", "science and research", etc. For each of these fields of action, a series of more specific measures are detailed.</p> <p>"Flagships of the Bioeconomy in Austria" shows projects of the Bioeconomy in Austria - a progress report about the implementation of key measures.</p>
Estonia (EE)	Circular bioeconomy roadmap for Estonia (2023) First strategy adopted: 2023 Landing page: Bioeconomy	<p>The strategy "Circular Bioeconomy Roadmap Estonia" aims to become a recognised development centre for bioeconomy in Europe. It is integrated it as a horizontal and cross-cutting theme in its Agriculture and Fisheries Development Plan 2030 and other related plans. Estonia has a strong biomass production base, but there is a need to increase added value and innovation potential for sustainable development of the circular bioeconomy, contributing to climate change mitigation, biodiversity preservation, social, and economic development. The circular bioeconomy roadmap defines activities for its development in Estonia, with regional roadmaps focusing on local bio-resources, community needs, and opportunities for innovative local initiatives and collaborations.</p>
Finland (FI)	The Finnish Bioeconomy Strategy. Sustainably towards higher value added (2022) First strategy adopted: 2014 Landing page: Bioeconomy	<p>"The Finnish Bioeconomy Strategy. Sustainably towards higher value added" sets a vision and objective for the national bioeconomy, together with generic, but measurable, targets in terms of jobs and turnover. Furthermore, the strategy establishes four strategic actions to help implement such vision and targets, such as "creating a competitive operating environment for the bioeconomy" and "securing the accessibility and sustainability of biomasses". For each of these actions the strategy sets specific (2 to 6) goals; each of these goals is accompanied by a series of (2 to 5) measures. The strategy allocates responsibilities for these measures (namely governmental organisations and ministries) as well as other actors to be involved</p>
France (FR)	The national bioeconomy strategy: restoring photosynthesis at the heart of our economy (2017, in French) Bioeconomy action plan 2018-2020 (2018, in French) First strategy adopted: 2017 Landing page: Bioeconomy action plan (in French)	<p>The "Bioeconomy Strategy - Action Plan 2018-2020" identifies 5 priority axes, from "enhancing the knowledge on bioeconomy" to "removing obstacles and mobilise funding". For each of those axes, the action plan establishes a series of (4 to 18) operational and specific actions, detailing an estimated timeline, expected deliverables, etc.</p>
Germany (DE)	National Bioeconomy Strategy (2020) First strategy adopted: 2020 Landing page: Bioeconomy at a glance	<p>The German "National bioeconomy strategy" has 6 central action areas for a sustainable bioeconomy to improve the policy framework, from "Reduction of the pressure on land" to "Exploitation of the potential of digitisation for the bioeconomy". Furthermore, it has an additional cross cutting action area on political coherence linking industry policy, energy policy, agricultural, forestry and fisheries policy and climate and environmental policy is detailed.</p>

Country	Strategy documents and links	Summary of strategy
Ireland (IE)	<p>National Policy Statement on the Bioeconomy (2018)</p> <p>Bioeconomy Implementation and development Group (First Progress Report, 2019; Second Progress Report 2023)</p> <p>Bioeconomy Action Plan 2023-2025 (2023)</p> <p>First strategy adopted: 2018</p> <p>Landing Page: Bioeconomy Policy</p>	<p>The “National Policy Statement on the Bioeconomy” in Ireland identifies 7 broad key actions. The “Bioeconomy Action Plan 2023-2025” includes 33 actions to accelerate support for the development of the bioeconomy. The plan has a high focus on bringing sustainable scientific practices, technologies and biobased innovation and solutions into use on farms and by biobased industries in Ireland.</p> <p>The “Bioeconomy Implementation and development Group, First Progress Report” assessed the advancement in the seven key actions from the policy statement by taking stock of the specific milestones achieved at the time of its publication (2019). The “Second Progress Report” outlines steps on accountability, transparency, coherency, participation and fairness.</p>
Italy (IT)	<p>BIT II - Bioeconomy in Italy (2019)</p> <p>Implementation Action Plan 2025-2027 (2024)</p> <p>First strategy adopted: 2017</p> <p>Landing page: Bioeconomia in Italia</p>	<p>Strategy "BIT II - Bioeconomy in Italy" identifies the R&I agenda and priority actions as well as measures creating and guaranteeing the framework conditions required for its effective implementation. It also sets measurable targets of turnover and employment. The "Implementation Action Plan 2025-2027" is the second action plan. The updated Implementation action plan presents: a detailed action plan for 2025-2027 outlining a series of relevant targeted actions clustered into 5 main Bioeconomy macro-areas; flagship projects that are either in progress or ready for deployment, to provide concrete examples of how circular Bioeconomy investments can serve as catalysts to strengthen and expand the primary Bioeconomy sectors; legislative requirements and economic opportunities; and a plan for the dissemination and monitoring of the plans results and impacts.</p>
Latvia (LV)	<p>Latvian Bioeconomy Strategy 2030 (2017; Summary report)</p> <p>Latvia Bioeconomy Strategy 2030 (2017; translated to English, 2018)</p> <p>First strategy adopted: 2017</p> <p>Landing page: Open Bioeconomy (in Latvian)</p>	<p>The "Latvian Bioeconomy Strategy 2030" establishes five key integrated and complementary groups of measures, from “Attractive business environment for the entrepreneurship in bioeconomy” to “Socially responsible and sustainable development”. Each of these groups comprise a series of (3 to 10) actions, some quite specific and targeted (e.g. “Replacement of non-renewable resources with bio-resources in public procurement”) some others rather broad and abstract (e.g. “Export promotion measures”).</p>
Netherlands (NL)	<p>The position of the bioeconomy in the Netherlands (2018, phamplet)</p> <p>First strategy adopted: 2018</p> <p>Landing page: Circular economy; Biotechnology</p>	<p>“The position of the bioeconomy in the Netherlands” document establishes 8 pillars (themes) vital in the development of bioeconomy policy, including “Using resources within the planetary boundaries”, “Sustainable resource management” or “Regional strategy and rural development”. The position paper also establishes a transition agenda to boost the bioeconomy in the Netherlands, most of them quite general and some others (e.g. “transition agenda for biomass and food”) more concrete.</p> <p>NB. Since the KCB survey, the document has been removed from official websites of the Dutch government.</p>
Norway (NO)	<p>Familiar resources – undreamt of possibilities (2016, in Norwegian)</p> <p>Familiar resources – undreamt of possibilities, summary (2016)</p> <p>First strategy adopted: 2016</p> <p>Landing page: Publication archive, National strategy (in Norwegian),</p>	<p>The Government’s bioeconomy policy targets sustainable, effective and profitable production, extraction and use of renewable, biological resources into food, feed, ingredients, health products, energy, materials, chemicals, paper, textiles and numerous other products. National focus on the bioeconomy should lead to increased value creation and employment, reduced emission of climate gasses, as well as more efficient, profitable and sustainable use of renewable biological resources. Priority will be given to measures with a national effect on both value creation and employment as well as reduced climate gas emissions and/or more efficient and sustainable use of resources.</p>

Country	Strategy documents and links	Summary of strategy
Portugal (PT)	<p>Action Plan for a Sustainable Bioeconomy. Horizon 2025 (2021, in Portuguese)</p> <p>First strategy adopted: 2021</p> <p>Landing page: Bioeconomy (in Portuguese)</p>	<p>"Action Plan for a Sustainable Bioeconomy. Horizon 2025" The action plan identifies five axes of action, including "Encouraging sustainable production and intelligent use of regionally-based biological resources"; "promoting research, development and innovation and enhance the national scientific and technological capacity of excellence"; "monitoring the bioeconomy", etc. For each axis, the action plan establishes several objectives and specific measures and points to relevant instruments and other relevant strategic documents. The measures are well described and classified into areas of intervention.</p>
Spain (ES)	<p>The Spanish Bioeconomy Strategy 2030 Horizon (2016, in Spanish)</p> <p>The 2016 Spanish Bioeconomy Action Plan (2016)</p> <p>First strategy adopted: 2016</p> <p>Landing page: Bioeconomy (in Spanish)</p>	<p>"Spanish Bioeconomy Strategy, Horizon 2030" is accompanied by the 2016 Action Plan. This action plan includes 5 groups of actions broken down each of them into a series of measures, some quite generic but some others very targeted and specific.</p>

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MORE INFO:

EC Bioeconomy country dashboard

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