Public Consultation - Bioeconomy Strategy: Towards a Circular, Regenerative and Competitive Bioeconomy

Fields marked with * are mandatory.

Introduction

The Commission plans to adopt a new EU bioeconomy strategy by the end of 2025. The strategy will build on the first EU bioeconomy strategy (2012), the updated strategy (2018) and the progress report (2022). It will be in line with the priorities of the Political Guidelines for 2024-2029 and other strategies and initiatives that have close links to the EU bioeconomy.

Global competitiveness, sustainability and circularity have been defined as important aspects of the EU bioeconomy and drivers to renew our industries, modernise our primary production systems, reduce our reliance on harmful fossil fuels, and enhanced environmental protection.
Furthermore, the new EU bioeconomy strategy is a flagship action of the recently adopted Competitiveness Compass and the Clean Industrial Deal, with the aim of improving the competitiveness of the EU bioeconomy sector.

Therefore, the EU bioeconomy strategy aims to advance the development of a sustainable, circular and competitive bioeconomy in the EU while respecting planetary boundaries and ensuring a fair transition across the EU, at national, regional and local level. It can help to reduce the pressure on ecosystems while ensuring alignment with the Kunming-Montreal Global Biodiversity Framework’s targets for biodiversity protection and restoration.

Why are we consulting?

Your feedback is vital to identifying the objectives of the new bioeconomy strategy as well as challenges and barriers and to prioritising possible policy measures to address these. The questions of this public consultation also address how the bioeconomy could help achieve EU climate and biodiversity goals. This is the first EU-wide consultation on the bioeconomy organised by the Commission.

Target audience

The bioeconomy provides solutions to all sectors and associated services that produce, process, use or distribute biological resources, such as animals, plants, micro-organisms, biomass and organic waste.

Therefore, this public consultation addresses the entire value chain of biological resources from primary

production to advanced manufacturing and services, including the sectors and industries below:

- Primary sectors: agriculture, forestry, fisheries, and aquaculture.
- Processing industries: food, feed, and bio-based materials and products.
- Biotech and biomanufacturing sectors.
- Organisations supporting research, innovation and technology transfer.
- Service industry for bio-based solutions and ecosystem services (e.g. provision of clean air and water).
- Recycling industries of organic waste, including industrial by-products and household bio-waste.

About you

* Language of my contribution

- ○ Bulgarian
- ○ Croatian
- ○ Czech
- ○ Danish
- ○ Dutch
- ◉ English
- ○ Estonian
- ○ Finnish
- ○ French
- ○ German
- ○ Greek
- ○ Hungarian
- ○ Irish
- ○ Italian
- ○ Latvian
- ○ Lithuanian
- ○ Maltese
- ○ Polish
- ○ Portuguese
- ○ Romanian
- ○ Slovak
- ○ Slovenian
- ○ Spanish
- ○ Swedish

* I am giving my contribution as

- ○ Academic/research institution
- ◉ Business association
- ○ Company/business
- ○ Consumer organisation
- ○ EU citizen
- ○ Environmental organisation
- ○ Non-EU citizen
- ○ Non-governmental organisation (NGO)
- ○ Public authority
- ○ Trade union
- ○ Other

* First name

Tudy

* Surname

Bernier

* Email (this won't be published)

tudy.bernier@co2value.eu

* Organisation name

255 character(s) maximum

CO2 Value Europe

* Organisation size

- ◉ Micro (1 to 9 employees)
- ○ Small (10 to 49 employees)
- ○ Medium (50 to 249 employees)
- ○ Large (250 or more)

Transparency register number

Check if your organisation is on the transparency register. It's a voluntary database for organisations seeking to influence EU decision-making.

977056531128-71

* Which sector does your organisation represent?

- [ ] Forest owners (public and private)
- [ ] Forestry industry
- [ ] Forest certification schemes
- [ ] Forest-based industry
- [ ] Non-wood industry
- [ ] Farmers' associations
- [ ] Trade and business associations
- [ ] Fertilizers and feed companies
- [ ] Biogas companies
- [ ] Other agriculture business
- [ ] Biotechnology associations
- [ ] Biotechnology companies and industry
- [ ] Biorefineries and chemistry associations
- [ ] Environmental NGOs
- [ ] Research institutions and project
- [ ] Investment funds
- [ ] Water companies/water authorities
- [ ] Consumers associations
- [ ] Public authorities
- [ ] Citizens
- [x] Others

If others, please specify:

200 character(s) maximum

Carbon Capture and Utilisation (CCU)

* Please, specify the type of product your organisation produces or represents:

- [ ] Intermediate product (e.g. ingredient or component for a final product)
- [ ] Final product (used as it is)
- [x] Both intermediate and final products
- [ ] Other (e.g. services)

* Country of origin

Please add your country of origin, or that of your organisation.

This list does not represent the official position of the European institutions with regard to the legal status or policy of the entities mentioned. It is a harmonisation of often divergent lists and practices.

- ○ Afghanistan
- ○ Åland Islands
- ○ Albania
- ○ Algeria
- ○ American Samoa
- ○ Andorra
- ○ Angola
- ○ Anguilla
- ○ Antarctica
- ○ Antigua and Barbuda
- ○ Argentina
- ○ Armenia
- ○ Aruba
- ○ Australia
- ○ Austria
- ○ Azerbaijan
- ○ Bahamas
- ○ Bahrain
- ○ Bangladesh
- ○ Barbados
- ○ Belarus
- ◉ Belgium
- ○ Belize
- ○ Djibouti
- ○ Dominica
- ○ Dominican Republic
- ○ Ecuador
- ○ Egypt
- ○ El Salvador
- ○ Equatorial Guinea
- ○ Eritrea
- ○ Estonia
- ○ Eswatini
- ○ Ethiopia
- ○ Falkland Islands
- ○ Faroe Islands
- ○ Fiji
- ○ Finland
- ○ France
- ○ French Guiana
- ○ French Polynesia
- ○ French Southern and Antarctic Lands
- ○ Gabon
- ○ Georgia
- ○ Germany
- ○ Ghana
- ○ Libya
- ○ Liechtenstein
- ○ Lithuania
- ○ Luxembourg
- ○ Macau
- ○ Madagascar
- ○ Malawi
- ○ Malaysia
- ○ Maldives
- ○ Mali
- ○ Malta
- ○ Marshall Islands
- ○ Martinique
- ○ Mauritania
- ○ Mauritius
- ○ Mayotte
- ○ Mexico
- ○ Micronesia
- ○ Moldova
- ○ Monaco
- ○ Mongolia
- ○ Montenegro
- ○ Montserrat
- ○ Saint Martin
- ○ Saint Pierre and Miquelon
- ○ Saint Vincent and the Grenadines
- ○ Samoa
- ○ San Marino
- ○ São Tomé and Príncipe
- ○ Saudi Arabia
- ○ Senegal
- ○ Serbia
- ○ Seychelles
- ○ Sierra Leone
- ○ Singapore
- ○ Sint Maarten
- ○ Slovakia
- ○ Slovenia
- ○ Solomon Islands
- ○ Somalia
- ○ South Africa
- ○ South Georgia and the South Sandwich Islands
- ○ South Korea
- ○ South Sudan
- ○ Spain
- ○ Sri Lanka

- Benin
- Bermuda
- Bhutan
- Bolivia
- Bonaire Saint Eustatius and Saba
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- British Virgin Islands
- Brunei
- Bulgaria
- Burkina Faso
- Burundi
- Cambodia
- Cameroon
- Canada
- Cape Verde
- Cayman Islands
- Central African Republic
- Chad
- Chile
- Gibraltar
- Greece
- Greenland
- Grenada
- Guadeloupe
- Guam
- Guatemala
- Guernsey
- Guinea
- Guinea-Bissau
- Guyana
- Haiti
- Heard Island and McDonald Islands
- Honduras
- Hong Kong
- Hungary
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Isle of Man
- Morocco
- Mozambique
- Myanmar/Burma
- Namibia
- Nauru
- Nepal
- Netherlands
- New Caledonia
- New Zealand
- Nicaragua
- Niger
- Nigeria
- Niue
- Norfolk Island
- Northern Mariana Islands
- North Korea
- North Macedonia
- Norway
- Oman
- Pakistan
- Palau
- Palestine
- Panama
- Sudan
- Suriname
- Svalbard and Jan Mayen
- Sweden
- Switzerland
- Syria
- Taiwan
- Tajikistan
- Tanzania
- Thailand
- The Gambia
- Timor-Leste
- Togo
- Tokelau
- Tonga
- Trinidad and Tobago
- Tunisia
- Türkiye
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu
- Uganda
- Ukraine

- China
- Christmas Island
- Clipperton
- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Cook Islands
- Costa Rica
- Côte d'Ivoire
- Croatia
- Cuba
- Curaçao
- Cyprus
- Czechia
- Democratic Republic of the Congo
- Denmark
- Israel
- Italy
- Jamaica
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Kyrgyzstan
- Laos
- Latvia
- Lebanon
- Lesotho
- Liberia
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Pitcairn Islands
- Poland
- Portugal
- Puerto Rico
- Qatar
- Réunion
- Romania
- Russia
- Rwanda
- Saint Barthélemy
- Saint Helena Ascension and Tristan da Cunha
- Saint Kitts and Nevis
- Saint Lucia
- United Arab Emirates
- United Kingdom
- United States
- United States Minor Outlying Islands
- Uruguay
- US Virgin Islands
- Uzbekistan
- Vanuatu
- Vatican City
- Venezuela
- Vietnam
- Wallis and Futuna
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

The Commission will publish all contributions to this public consultation. You can choose whether you would prefer to have your details published or to remain anonymous when your contribution is published. **Fo r the purpose of transparency, the type of respondent (for example, 'business association, 'consumer association', 'EU citizen') country of origin, organisation name and size, and its transparency register number, are always published. Your e-mail address will never be published.** Opt in to select the privacy option that best suits you. Privacy options default based on the type of respondent selected

* Contribution publication privacy settings

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

- ○ **Anonymous**
  Only organisation details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published as received. Your name will not be published. Please do not include any personal data in the contribution itself if you want to remain anonymous.
- ◉ **Public**
  Organisation details and respondent details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published. Your name will also be published.

☑ I agree with the personal data protection provisions

EU bioeconomy strategy: objectives, opportunities and contribution to the EU's goals

*** What should be the main objectives of the new EU bioeconomy strategy?**

The bioeconomy can contribute to the EU economy and society in many ways, for example related to its ability to increase competitiveness, sustainability, circularity, and resilience in the EU, against the background of global competition, while ensuring food security, employment and welfare.

Please, select which are in your view the **four** most relevant objectives.

The new EU bioeconomy strategy should focus on…

Maximum 4 selection(s)

- ☑ ...improving the position of the EU bioeconomy in the global competition
- ☑ ...strengthening the biotech and biomanufacturing sectors in the EU
- ☑ ...increasing circularity across bioeconomy value chains
- ☐ ...ensuring food security in the EU and promoting sustainable food systems in the EU
- ☐ ...improving the provision of renewable and affordable energy
- ☑ ...contributing to climate mitigation and adaptation

- ☐ ...fostering environmentally sustainable production, supply and use of biomass, in particular to halt biodiversity loss
- ☐ ...increasing employment possibilities in bioeconomy sectors
- ☐ ...ensuring income and welfare in the rural and remote areas of the EU
- ☐ ...protecting and restoring the ecosystems that provide services for people in the EU (e.g. clean air and water)

Please, specify any additional objectives that should be considered:

500 character(s) maximum

Build synergies between biotech and biomanufacturing and other relevant technologies to mitigate climate change like Carbon Capture and Utilisation (CCU). Biogenic CO2 from bioindustries and biorefineries must become a feedstock for producing materials and chemicals and move away from fossil fuels feedstocks

* **What should be the main areas of innovation and opportunity of the new EU bioeconomy strategy?**

The bioeconomy offers several opportunities and innovations and can create new business models.

Please, select which are in your view the **four** most relevant areas.

The new EU bioeconomy strategy should use the opportunities and innovation potential of:

Maximum 4 selection(s)

- ☐ **Advancements in biotechnology and agriculture**. The development of new biotechnological capabilities can improve agricultural productivity, reduce dependency on chemical inputs, and increase crop resilience to climate change. Precision breeding, microbial solutions, and bio-based fertilisers are examples of innovations driving sustainable agricultural practices.
- ☑ **Sectors beyond medicine and food.** While traditionally associated with pharmaceuticals and food production, the bioeconomy is expanding into multiple sectors, including textiles, construction and chemicals. This diversification opens new markets and reinforces economic resilience.
- ☑ **Sustainable biomaterials as alternatives to plastics.** The emergence of bio-based materials offers viable alternatives to conventional plastics, reducing environmental pollution and dependency on fossil-based resources. Innovations in biopolymers contribute to the circular economy.

- [ ] **Improved biofuels and sustainable energy solutions.** Advancements in biofuel technologies are increasing efficiency and sustainability, providing renewable energy options that can play a role in achieving the EU's decarbonisation goals. Bioenergy solutions contribute to energy security and a low-carbon economy.
- [ ] **Market scale-up and economic growth.** The bioeconomy has the potential to scale up rapidly, creating new business opportunities and employment across various value chains. By investing in bio-based industries, the EU can strengthen global competitiveness and attract new investment.
- [x] **New sources of protein and sustainable and novel food systems.** Innovations in alternative proteins, including plant-based, microbial, and insect-based sources can enhance food security and reduce environmental impact.
- [x] **Investment in research and innovation.** Continuous investment in bioeconomy-related research and development is crucial to unlocking new solutions, improving efficiency, and addressing challenges such as resource scarcity and environmental degradation. Collaborative efforts between academia, industry, and policymakers can accelerate progress.

Please, specify any additional opportunities and innovations that should be considered:

500 character(s) maximum

Same comment as before: bioeconomy and biotech shouldn't be considered in isolation. Their potential must be tapped in through synergies with other technologies like Carbon Capture and Utilisation (CCU)

How should the EU bioeconomy strategy contribute to achieving the EU climate goals?

The EU is committed to cut greenhouse gas emissions by 55% by 2030 and to reach climate neutrality by 2050. To achieve these climate goals, we need to promote green transition in all our economic sectors and change production and consumption patterns.
The sustainable and circular bioeconomy can play a major role in achieving EU climate goals through various practices, measures and innovations.

Please, rank the below climate action pathways according to their relative importance.

In your opinion, the bioeconomy strategy should contribute to...

	Very Important	Important	Neutral	Slightly important	Not at all important	I do not know
* …substituting fossil-based and energy-intensive raw materials by bio-based material, renewable resources and biomass	◉	○	○	○	○	○
* …promoting innovations and biotechnology solutions with decarbonisation potential	◉	○	○	○	○	○
* … fostering resource efficiency and a circular economy approach across bioeconomy value chains	○	○	○	○	○	◉
* …recovering and recycling organic waste and by-products as raw material for bio-based materials and products instead of using primary raw material	◉	○	○	○	○	○
* …encouraging production and consumption towards bio-based products with longer lifetimes and reduced environmental impact. (e.g. wood in buildings and furniture)	○	○	○	○	○	◉
* ...promoting sustainable consumption	◉	○	○	○	○	○

* ...improving the resilience and productivity of primary production, sustainable agricultural practices or carbon farming	○	○	○	○	○	◉
* …supporting soil management practices, such as sequestering and storing carbon, improving the soil's capacity to retain water	○	○	○	○	○	◉
* …increasing carbon sinks in forests through sustainable afforestation and sustainable forest management	○	○	○	○	○	◉
* …increasing carbon sinks in marine the environment (e.g. by restoring seagrass and seaweed beds)	○	○	○	○	○	◉
* … scaling up blue bioeconomy low carbon products (algae, molluscs) while removing excess carbon and nutrients from the marine environment	○	○	○	○	○	◉
* …providing potential alternatives to animal protein such as plant- and microbial-based (e.g. fungi-and bacteria-based) protein	○	◉	○	○	○	○

Please, specify any other significant ways in which the bioeconomy could contribute to EU climate objectives:

500 character(s) maximum

Again, bioeconomy is not sufficient on its own to defossilise the economy. It needs to go hand in hand with other synergetic technologies which can help to decrease emissions across the economy. Since biomass projections fall short of projected needs, recycled waste and captured carbon will be absolutely crucial to provide alternative carbon feedstocks for the production of chemicals and materials

How should the EU bioeconomy strategy contribute to achieving the EU biodiversity goals?

The provision of biomass for the bioeconomy depends on the resilience and integrity of the ecosystems that generate biomass. The triple planetary crisis (biodiversity loss, pollution and climate change) and degraded ecosystems impact the variety and quantity of ecosystem services and biomass productivity, while demand for them is diversifying and intensifying in the EU and globally.

A sustainable and circular bioeconomy can help to reduce the pressure on ecosystems while ensuring alignment with the Kunming-Montreal Global Biodiversity Framework's targets for biodiversity protection and restoration. To do so, the bioeconomy should prioritise nature-based solutions thatimprove ecosystem services and support the EU biodiversity targets.

Please, rank according to their relative importance the below ways in which the strategy should contribute to achieving the EU biodiversity goals.

In your opinion, a bioeconomy that protects biodiversity should support...

	Very Important	Important	Neutral	Slightly important	Not at all important	I do not know
* …land management practices, business models and value chains that prevent and reverse natural ecosystem degradation	○	○	○	○	○	◉

* …farming practices and agricultural models that ensure environmentally sustainable biomass production	○	○	○	○	○	◉
* ...sustainable forest management practices that have a positive impact on biodiversity and nature, contributing to the resilience of forests against anthropic pressures and climate change	○	○	○	○	○	◉
* ...business models that continue and improve the provision of ecosystem services (clean air, soil retention, flood control, water purification and replenishment, biodiversity, carbon sequestration and storage, nature-based recreation)	○	○	○	○	○	◉
* …solutions to regenerate biological resources (e.g. bioremediation, depollution of brownfields for biomass production)	○	○	○	○	○	◉
* …resource efficiency, circularity and innovations across bioeconomy value chains to get more added value from fewer primary natural resources	◉	○	○	○	○	○
* …use of organic waste and by-products instead of primary natural resources	◉	○	○	○	○	○
* …adiversified, stable and fair income for primary producers	○	○	○	○	○	◉
* …locally adapted solutions and reorientation of traditional bioeconomy actors	○	○	○	○	○	◉

Please, identify any other significant ways the bioeconomy could contribute to EU biodiversity goals:

500 character(s) maximum

The EU bioeconomy: barriers and risks impeding or slowing down its growth and potential measures to address them.

The EU bioeconomy faces multiple interconnected barriers that hinder or slow down its growth and development. The Commission has identified the below barriers based on studies, reports and workshops, and position papers and other contributions from stakeholders and Member States. The upcoming new EU bioeconomy strategy aims to tackle these barriers. The barriers have been divided into following subgroups:

- regulatory barriers
- financing barriers
- market barriers
- other barriers

Please, select the two barriers per subgroup that in your view are the most relevant ones.

Which of the following barriers hinder or slow down the most the growth of the EU bioeconomy?

* Regulatory barriers

Maximum 2 selection(s)

- [x] Complex regulatory requirements and lack of harmonisation at the EU and national level for bio-based materials and products
- [ ] Lengthy and burdensome permitting and administrative procedures that are slowing down uptake of bio-based products
- [ ] Insufficient harmonisation of standards across the EU for bio-based products
- [ ] Lack of an updated regulatory framework for novel biotechnologies and innovations
- [ ] Insufficient guidance, capacity building and support for small to medium-sized Enterprises MEs and start-up at EU and national level
- [x] Unfair competition of bio-based products with conventional fossil-based products (e.g. lack of a regulatory level playing field in the single market, insufficient regulatory incentives)
- [ ] Unclear or insufficient rules on what constitutes sustainable sourcing of biomass within the planetary boundaries
- [ ] Lack of synergies between EU, national and local strategies

* Financing barriers

Maximum 2 selection(s)

- [x] Limited access to financing for investments in bio-based production and biomanufacturing due to risk factors
- [ ] Lack of an efficient EU capital market to finance start-ups and scale-ups
- [ ] Insufficient financial incentives and support for primary producers to engage in nature positive actions that ensure and contribute to ecosystem integrity and resilience for long-term sustainable supply of biomass and ecosystem services that increase the value of the bioeconomy (biodiversity investment gap)
- [ ] Insufficient research and development funding across the bioeconomy value chain
- [x] Unfair competition of bio-based products with conventional fossil-based products (e.g. lacking regulatory level- laying field inn the single market, lacking regulatory incentives)

* **Market barriers**

Maximum 2 selection(s)

- [x] Lack of demand for bio-based products
- [x] Restrictions to bio-based products in comparison with fossil-based products due to several reasons (e.g. novelty, higher prices, lower scale)
- [ ] Lack of infrastructure for the processing of woody biomass for high-value applications
- [ ] Lack of infrastructure (e.g. recycling facilities, pilot facilities and equipment) for start-ups and scaleup and for recycling of organic waste
- [ ] Impacts on the availability of biomass for other applications of existing policies that prioritising biomass for energy
- [ ] Lack of strategies to increase the availability of sustainably sourced biomass and to ensure resilient supply chains for different uses of biological resources
- [ ] Uncertainty about the sufficiency of sustainably sourced biomass availability in the EU and globally

* **Other barriers**

Maximum 2 selection(s)

- [ ] Lack of education programmes on bioeconomy production methods, products and services.
- [ ] Lack of transparent and reliable information on the environmental and climate benefits and impacts on the bioeconomy of products and services
- [ ] Lack of skilled workforce on bioeconomy production methods, products and services

- [x] Barriers specific to product groups (please, specify these groups in the below free text box)
- [ ] Limited consumer knowledge and acceptance of certain novel bioeconomy products and services
- [x] Lack of awareness of the potential of the bioeconomy
- [ ] Limited use of artificial intelligence and other digital solutions and technologies to promote the uptake of the bioeconomy

Please, specify barriers to specific product groups

500 character(s) maximum

Currently there is no clear definition at EU level of what is a fossil-based chemical or a fossil-based material, and what is a fossil-free one. In addition to bio-based products, there needs to be a strong EU definition around fossil-free materials to include recycled products, bio-based products, and CCU products.

Please, specify any additional barriers that should be considered:

1500 character(s) maximum

The main barrier is the lack of EU framework around moving away from fossil fuels as feedstocks for the production of daily products. Currently, there are very little incentives (whether under ETS, or as quotas /mandates) to use alternative carbon feedstocks to oil and gas to manufacture chemicals and materials. This holds true for bio-based products, and for CO2-based products. In addition, there are very little incentives in the current framework for bioeconomy actors to capture biogenic carbon and use it as a feedstock to manufacture other products. If we are to move away from a fossil fuels economy, it is urgent that such a framework is put in place.

If you have evidence to substantiate some of your answers above, please provide it below (e.g. via links) or upload it as a separate document:

500 character(s) maximum

CO2 Value Europe developed a quantitative assessment of the role of CCU to reach EU climate targets, showing how captured carbon is an absolute must to reach EU objectives, and in particular the role for capturing biogenic CO2 (e.g. from upgrade of biogas to biomethane) and that it is used as alternative feedstocks for the production of chemicals like olefins. Our report is available here: https://co2value.eu/wp-content/uploads/2024/01/FINAL-LAYOUT_CVEs-EU-Roadmap-for-CCU-by-2050.pdf

Please, upload your file(s)

Only files of the type pdf,txt,doc,docx,odt,rtf are allowed

Which of the below potential risks are relevant to the EU bioeconomy?

The growth of the EU bioeconomy may face, or even lead to, specific c risks, such as deepening the potential gap between increasing demand of biomass and what can be sustainably harvested, as identified by some reports (e.g. the European Biomass Puzzle by the European Environmental Agency). This potential biomass gap can, in turn, result in difficulties in ensuring long-term competitiveness, lead to increased competition for land between different bioeconomy uses and endanger, for example, carbon sinks.

Other risks relate to a shortage or unstable supply of certain natural resources and raw materials due to climate change impacts, such as droughts, floods or forest fires. This question refers to the kind of strategic risks that affect whole societies, rather than just individual companies or other bioeconomy actors, such as farmers.

Please, assess the importance of the below potential related to the EU bioeconomy.

What is the relative importance of the following potential risks for the EU bioeconomy?

	Very Important	Important	Neutral	Slightly important	Not at all important	I do not know
* Lack of stable supply of sustainably sourced biomass and competition for it between different uses, such as for food, materials, products, energy and ecosystem services	◉	○	○	○	○	○
* Societal concerns linked to the ethics and safety of biotechnologies and its solutions	○	○	○	○	○	◉
* Loss of competitiveness of the sector due to an altering landscape and uncertain regulatory framework	◉	○	○	○	○	○
* Spread of invasive species (e.g. blue crabs, round goby) competing with and harming local species traditionally used in bioeconomy	○	○	○	○	○	◉

Please, specify any additional risks that should be considered:

500 character(s) maximum

Which measures would help to address the above barriers and to promote sustainability, circularity and competitiveness of the EU bioeconomy?

The upcoming new EU bioeconomy strategy aims to address the barriers, to the EU bioeconomy, to promote its sustainability, circularity and competitiveness, and to ensure a fair transition across EU at national, regional and local level.

Please, rank according to their relative importance the measures that, in your view, should be considered as part of the new EU bioeconomy strategy.

Regulatory and policy measures

	Very Important	Important	Neutral	Slightly important	Not at all important	I do not know
* Simplify and speed up permitting procedures and biotech and biomanufacturing solutions	○	○	○	○	○	◉
* Create regulatory sandboxes and/or pilot regulatory regimes for bio-based products and services	◉	○	○	○	○	○
* Improve policy consistency and harmonisation between EU and national regulations and reduce administrative burden	○	○	○	○	○	◉
* Promote integrated territorial biomass strategies that take into account environmental, climate and anthropogenic risks to the biomass stock and balance ecosystem, climate adaptation/mitigation and biomass supply needs	○	○	○	○	○	◉
* Introduce regulatory incentives such as mandatory bio-based content requirements (e.g. bio-based plastic in packaging) to promote biomaterials and bioproducts	◉	○	○	○	○	○
* Develop sustainability criteria for biomass use beyond energy use	◉	○	○	○	○	○
* Improve monitoring and knowledge of the condition of biodiversity, ecosystems and ecosystem services and its uptake to underpin ecosystem conservation and restoration, secure long-term provision of biomass, and increase the value and the resilience of the bioeconomy	○	○	○	○	○	◉

Measures to engage with value chain actors

	Very Important	Important	Neutral	Slightly important	Not at all important	I do not know
* Introduce platforms, networks or alliances to boost development and uptake of the bioeconomy and efficient implementation and achievement of the EU bioeconomy strategy's objectives	○	○	○	○	○	◉
* Raise awareness of benefits and environmental impacts of bio-based materials and products compared to fossil-based ones	◉	○	○	○	○	○
* Support public-private partnership programmes for biotech solutions, biomanufacturing and other bio-based products	◉	○	○	○	○	○
* Introduce a support scheme for small to medium-sized enterprises, with grants to promote collaboration and the scaling-up of operations	○	○	○	○	○	◉
* Develop education and training programmes to support reskilling and upskilling of workers in the bioeconomy, e.g. biotech and regenerative and circular business models	◉	○	○	○	○	○
* Support involvement of primary producers in bioeconomy value chains and diversification of economic activities	○	○	○	○	○	◉
* Support for regions and Member States to develop bioeconomy strategies and monitor progress	◉	○	○	○	○	○
* Develop market opportunities in non-EU countries	○	○	○	○	○	◉
* Promote global partnerships and cooperation for sustainable and circular bioeconomy	◉	○	○	○	○	○

Funding and financing measures

	Very Important	Important	Neutral	Slightly important	Not at all important	I do not know
* Develop and facilitate the uptake of sustainable financing tools, in particular private investments, that reward primary producers and landowners for environmentally sustainable biomass production, improving the resilience and integrity of ecosystems and the provision of ecosystem services (e.g. carbon/nature credits)	○	○	○	○	○	◉
* Finance more research and innovation to strengthen knowledge based on bioeconomy, including biomass supply and demand innovations	◉	○	○	○	○	○
* Improve funding and capacity building for regions and Member States to scale-up bioeconomy innovation and allow the transition from laboratory to the market	○	○	○	○	○	◉
* Support the uptake of innovative bio-based products and services (e.g. product-as-a-service applications for example related to fertilizers)	◉	○	○	○	○	○
* Incentivise data-driven approaches to the bioeconomy value chain: from satellite data for biomass production to new digital solutions in support of logistics, traceability, etc.	○	○	○	○	○	◉

Please, specify any additional policy measures that should be considered:

1500 character(s) maximum

Additional input

Please, specify any additional issues that should be raised:

1500 character(s) maximum

You are welcome to upload a position paper on bioeconomy with possible recommendations on specific issues here (three pages maximum).

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