

Bioregions Facility In a nutshell

Forest bioeconomy into action



BIOREGIONS

Forest bioeconomy in action



INNOVAForONE

Innovations and networking in European Forestry

ONEforest
Final Conference



VALLADOLID

April 18-19 2024

What?

A collaborative platform of regions to advance in the forest-based bioeconomy:

- Full members: Basque Country (Spain), North Rhine-Westphalia (Germany), and Catalonia (Spain)
- Observers: Thuringia (Germany), North Karelia (Finland), Castile and León (Spain), Bioeconomy Austria
- Extended networks: Open collaboration with other regional networks and regions (PRI, Eriaf, Errin, CoR,...)

Open to:

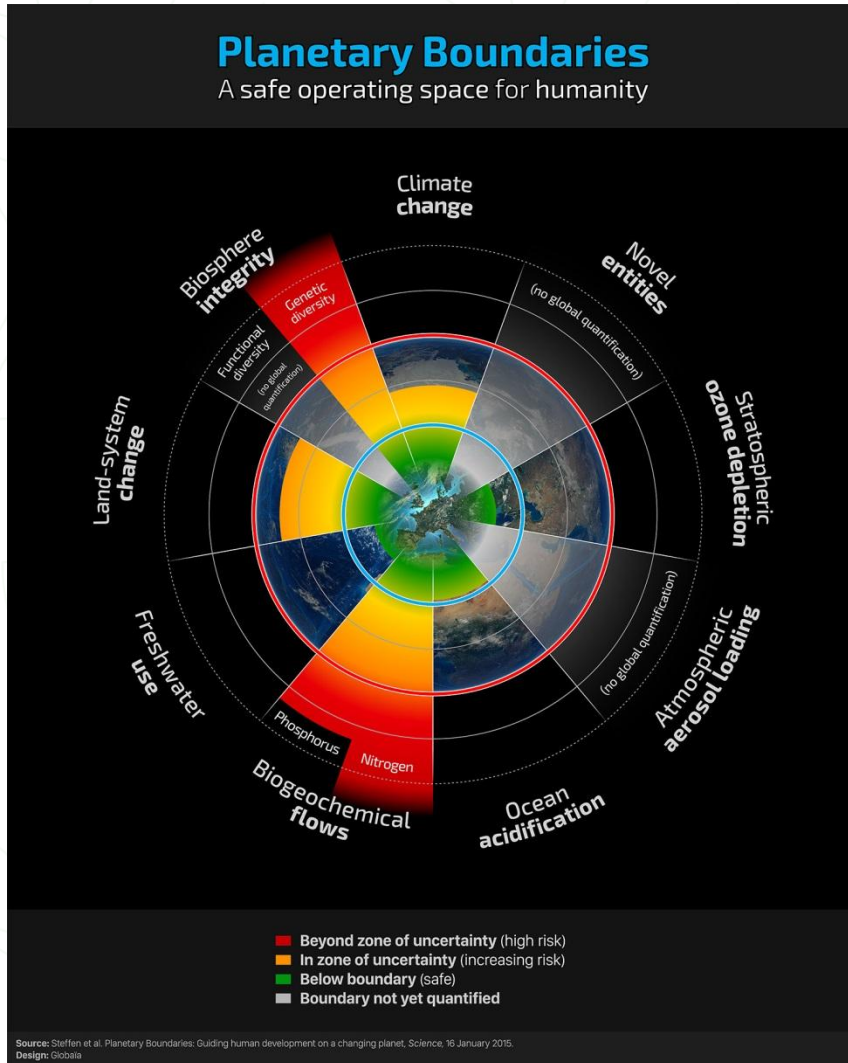
- European regions committed to sustainable, circular and territorial based bioeconomy
- Regions with political will and capacity to advance towards a sustainable bioeconomy
- Regions with a focus on forest and forest-based resources



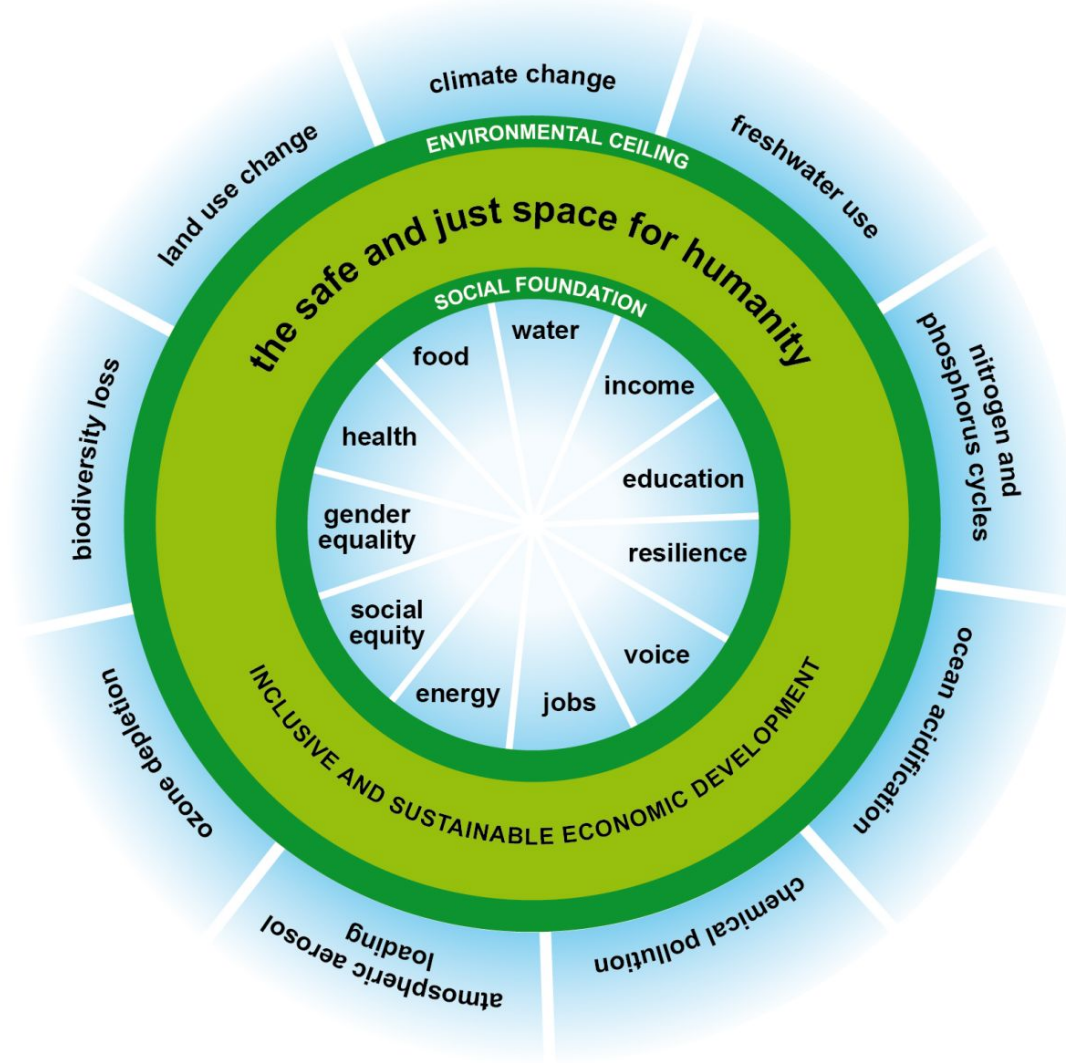
The Bioregions Facility

Rationale

multifaced challenges



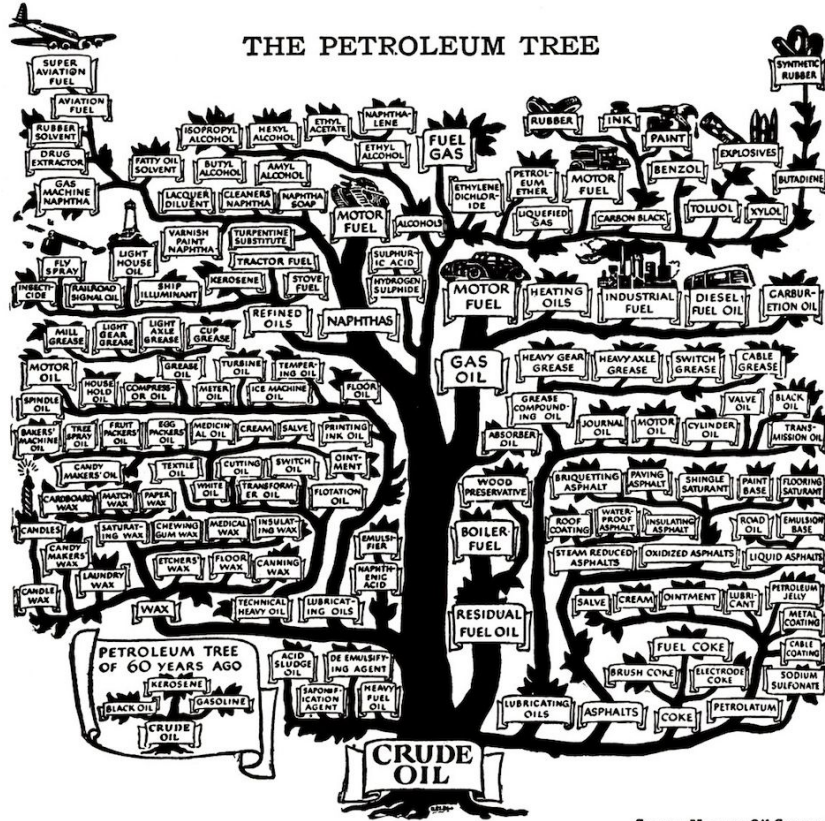
Steffen et al 2015



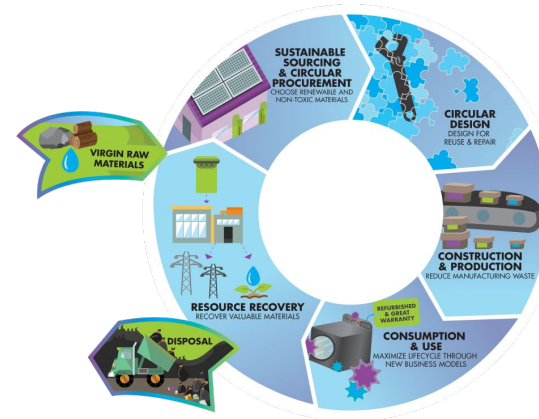
Raworth 2017

A transition is needed

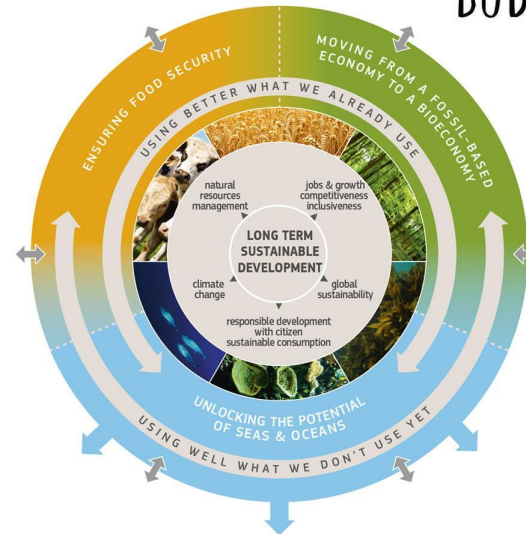
Fossil, non-renewable, linear economy



Crude oil has as many by-products as there are leaves on a tree. Sixty years ago, most of them were unknown. Socony-Vacuum Oil Company

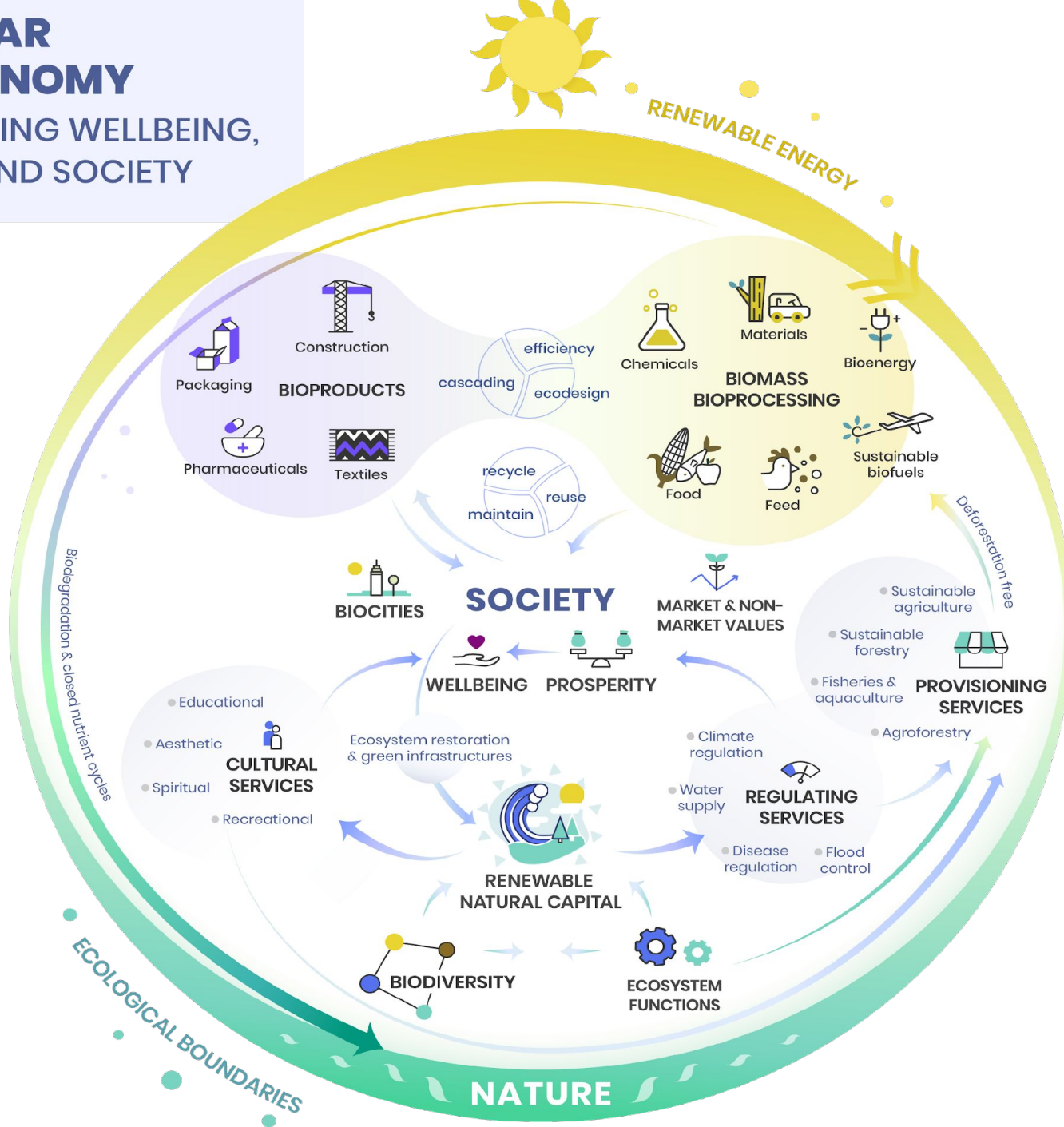


DEGROWTH WEEK
BUDAPEST 2016



CIRCULAR BIOECONOMY

CONNECTING WELLBEING, NATURE AND SOCIETY



The bioeconomy is not about the *sectors that rely on biological resources...*

Is about biologizing the main economic sectors!



1. Cross-Sectoral engagement of systemic change!

The way we build and live in cities



constructconnect.com

 Adsorbi



 woodio

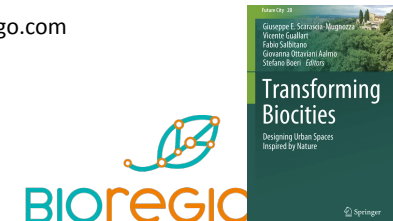


Lombard street

<https://ar.inspiredpencil.com>



<https://external-content.duckduckgo.com>




BIOREGIO

2. Focus on Regions!

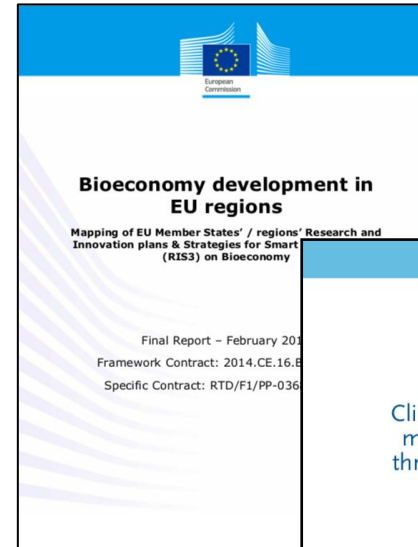
Bioeconomy is rooted in regional social, economic and ecological structures

- Biomass availability and types
- Leading economic sectors
- Societal needs and preferences

Regions have necessary policy tools

- RDPs/ RIS3 / RTD Policies / Land Use and Urban Planning/Forestry...

Regions provide economies of scale



3 Forest-Based!

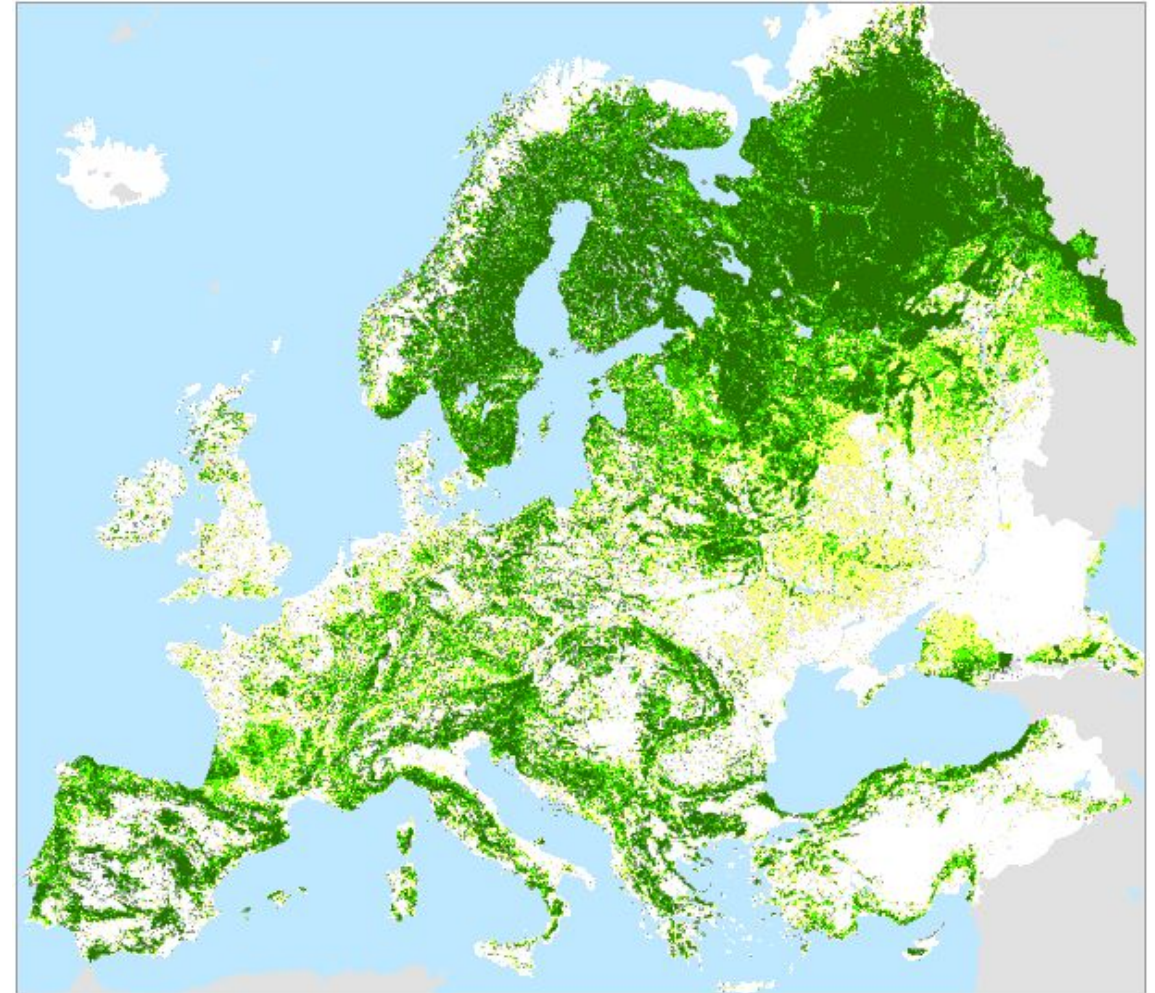
Forests are Europe's most relevant green infrastructure:

- 175 million ha and 40% of the EU area

Provide multiple ecosystem services

- capture 10% of EU Emissions
- Produce 500 million cubic meters of wood, with great potential for Low carbon, versatile materials
- Are critical for Europe's natural and cultural heritage

Europe has a solid forest-based industrial base with over 1.5 Million Jobs



4. Strengthen regional drivers and enablers



Inter-regional cooperation to strengthen positive drivers and create framework conditions for forest-based, sustainable and equitable bioeconomy transitions



The Bioregions Facility

Approach and work programme

Facilitate *systemic transitions* towards (forest) bioeconomy



Missions

Enabling framework conditions at regional level

Vibrant, interconnected regional bioeconomy ecosystems

Well-informed and engaged societal actors

<p>CLUSTERS</p>	<p>LEADING COMPANIES</p>	<p>RESEARCH AND TECHNOLOGICAL CENTRES</p>	<p>ACCELERATORS AND INCUBATORS</p>	<p>BIOECONOMY EDUCATION AND TRAINING</p>
<p>PUBLIC AGENCIES SUPPORTING FOREST BIOECONOMY</p>	<p>INVESTORS AND VENTURE CAPITALISTS</p>	<p>STARTUPS AND TECH SMEs</p>	<p>EVENTS</p>	<p>INFORMATION SOURCES</p>

Three areas of work

Bioregions work together to share ideas, experience and good practice through areas of work, supported by the Secretariat.



Policy learning platform

- Region to Region co-learning
- Access to knowledge, networks, resources and best practices
- Understanding the Regional dimension of Bioeconomy Policies





Bio-based solutions in public procurement: 7 ingredients of successful regional programmes

Public procurement can serve as a powerful tool to speed up the market uptake of innovative and more sustainable products and services, and thus to support the development of a circular bioeconomy. Regional and local governments have a major purchasing power and have the potential to influence the market. While most of them have embraced Green Public procurement practices with some intensity, much more can be done to open public procurement to innovative bio-based and nature-based products and services.

No one size might fit all needs, and each region needs to establish its own recipe to increase the uptake of biobased solutions in public procurement. Experience shows, nevertheless, that all regions will require to mix, at list, the following ingredients.

- 1. Political will** to facilitate market entry to bio-based products as part of a larger strategy of sustainable development and regional growth. This will must be translated into regulations and programmes.
- 2. A systematic approach** to incorporate bio-based products into public procurement, that incorporates the principles of circular economy, promotes innovation in regional relevant value chains and maximises positive environmental, economic and social impacts.
- 3. Active scanning** of innovative bio-based products and open discussion channels with current and potential suppliers, to identify opportunities, and to engage producers and suppliers in the regional procurement programmes.
- 4. Security and tools** for procurement officials, such as a checklist or database of certified or purchasable products that are acceptable for public procurement. This will be based on a permanent dialogue with suppliers and incorporate transparent means of verification.
- 5. Support for the development of solid means of verification** on the technical and environmental performance of the different products and services, including LCA, standards and certifications, to create long term trust and guarantee positive environmental impacts.
- 6. Dedicated capacity building, training and knowledge sharing** for public procurement officials, to identify and replicate best practices.
- 7. Awareness raising** on the benefits of circular bio-based procurement among public procurement authorities, suppliers and society at large, supported in successful examples.



MEASURABLE IMPACT

The Province of Zeeland defined measurable effect indicators for the Sustainable Procurement Plan.

Province of Zeeland selected 7 impact indicators. The measurement starts at the time when the contract is signed. During the contract phase the effect is monitored and discussed to learn how to make impact.

[READ MORE](#)

Catalan Bioeconomy Strategy 2030

Edition: June 2021
Period: 2021 - 2030
Published by: Secretary General
 Ministry of Climate Action, Food and Rural Agenda
Type of strategy: Dedicated Bioeconomy strategy



Main focus and drivers

The strategy encourages the transition to an economic model based on the optimal use of renewable and local biological resources.

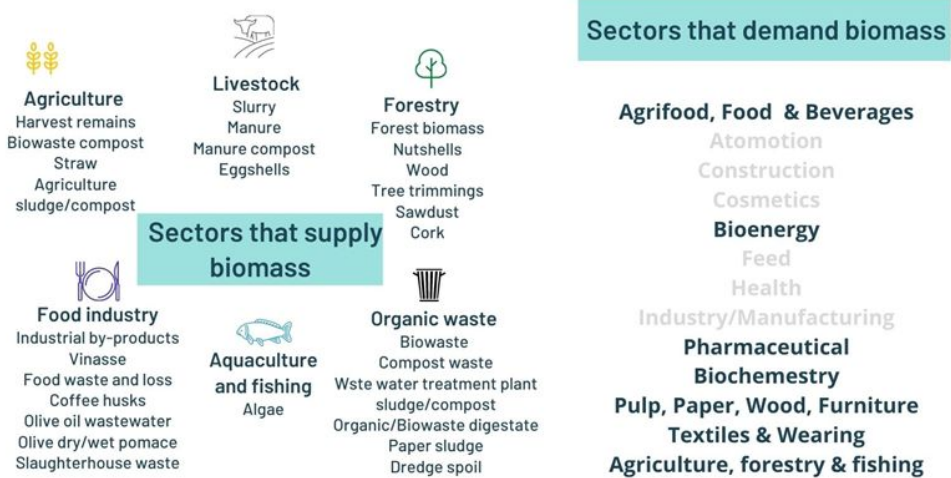
It has a focus on the areas that are less developed (primary sector). It also encourages the creation of quality jobs and the impetus for knowledge generation

The strategy sets 10 major targets in line with the objectives of the European Green Deal, and with the Sustainable Development and climate goals.

The scope includes the production of bioproducts excluding the use of biomass from the primary sector for food consumption... forest biomass, agricultural food waste...

Strategic goals

1. Improve the use of biomass through the characterization, quantification, optimization of management and distribution
2. Develop a business fabric based on the circular bioeconomy throughout the territory, with special attention to the primary sector
3. Encourage the use and consumption of bioproducts, bioenergy and biomaterials in the market
4. Promote resilient agroforestry landscapes and the sustainable provision of ecosystem services
5. To situate knowledge as the engine of the circular bioeconomy
6. Strengthen the role of the government and adapt the regulatory and legal framework
7. To prepare the Catalan society for the change towards the circular bioeconomy



Policy measures

Governance

The governance model aims to ensure a correct strategy deployment through four goals:

- Check the adequacy of the development measures and actions to the established principles
- Ensure maximum coordination within the Government and between all the departments involved
- Ensure the participation (co-governance) of all economic and social agents involved
- Have sufficient operational capacity to execute the forecasts included in the action plans

The Strategy co-management Board will monitor the strategic goals based on the major targets and the action plans' development.

Funding

Although the Strategy does not have its own funding, different sources were identified, which will be complemented by resources available in the ordinary budgets of the Spanish and Catalan governments.

In the Action plan for 2022-2024, a total budget of €203.7 M was anticipated.

Monitoring

The monitoring will be executed through a series of indicators. These indicators coincide with the ones proposed on a European level and those provided in public sources.

Moreover, the Action Plan 2022-2024 sets 15 transformative actions covering the seven strategic goals, with specific indicators each. The tracking and assessment of the Action Plan will be done with periodic reports.

How many indicators per aspect are assessed?



The role of forests

Forests are recognized by their importance on the supply chain of food, industrial products and biomass; the benefits of their ecosystem services; and their role in resilience to climate change. Forests are included in two of the four value chains that gear the **Action Plan 2022-2024**:

Value chain 1: Improvement in forest management and the use of forest resources. Entailing the value chains for timber production including raw materials for industry and energy; and the value chain for Non-wood products.

Value chain 4: Creation of resilient farm and forest landscapes and the sustainable provision of ecosystem services

Basque Country Circular Economy Strategy 2030

Edition: September 2019
Period: 2019 - 2030
Published by: Basque Government
 Ministry of the Environment, Territorial Planning and Housing
Type of strategie: Dedicated Circular Economy strategy



Main focus and drivers

The strategy aims to promote the transition towards a more efficient economy in the use of resources through innovation oriented towards a new model of production and consumption, and an effective public-private collaboration.

The industrial sector is defined as the pillar of the transformation to a circular economy, The agri-food sector, the bioeconomy and the construction sector are also identified as potential.

The strategy's objectives, are in line with the priorities of the European Commission and with the UN Sustainable Development Goals.

Strategic goals

Strategic objectives:

1. Increase material productivity by 30%.
2. Increase the rate of circular material use by 30%.
3. Reduce by 30% the rate of waste generation per unit of GDP.
4. Reduce food waste generation by half.
5. Achieve 100% recyclability of plastic packaging.

Additional targets:

1. Increase in the turnover of Basque companies in more circular products to 10,000 million euros.
2. Creation of more than 3,000 jobs in the field of circular economy.
3. Reduction of 26% of carbon emissions associated with consumption.

Bioeconomy focus

The **Plan for Circular Economy and Bioeconomy 2024**, was launched to support government's objectives related to emissions reduction, the increase of bioenergy, among others. The bioeconomy's development is still incipient but it is expected to develop in the coming years. It aims to integrate the opportunities and challenges based on longer, more diverse, sustainable and local value chains. The following specific objectives are mentioned:

- Contribute to the protection of the environment
- Strengthen the agri-food, marine and forestry sector
- Strengthen and guide scientific and technological capabilities and reinforce specific training.
- Promote and attract business activity related to the high value-added bioeconomy.
- Generate demand and other market conditions.

Sectors

The Strategy establishes 4 strategic areas:

Competitiveness and innovation



Production



Consumption



Waste and Secondary Raw Materials Management



Policy measures

Governance

The strategy works to identify and include the different actors working towards a circular economy. The actors identified for each sector are:

- **Competitiveness and Innovation:** Technology Centres, the Society for the Promotion and Industrial Conversion (SPRI) and Neiker.
- **Production:** Ecodesign centres, business clusters, Udalsarea 2030, Basque Network of Municipalities towards Sustainability, Development Agencies and the Basque Circular Hub.
- **Consumption:** the Departments of Environment and Public Governance, Hazi and Elika.
- **Waste Management and Secondary Raw Materials:** the Department of Environment through the Ihoibe Public Company.

Funding

In addition to the budgetary resources of the Deputy Ministries of Environment and Housing, it is expected additional budgets from other actors such as municipalities or the Department of Economic Development and Infrastructure.

The Plan of Circular Economy and Bioeconomy 2024, estimated a total budget of €31,975,000 for the period from 2021 to 2024.

Monitoring

The **Plan for Circular Economy and Bioeconomy 2024** sets indicators aimed at measuring the strategic objectives which are also in line with the Circular Economy Strategy. These indicators emerge from the deployment of objectives, strategic lines and action lines further developed in the Plan.

The evaluation of the Plan for Circular Economy and Bioeconomy 2024 as well as the Circular Economy Strategy will be carried out through biennial follow-up reports and an Action Plan Evaluation Report.

Which aspects are assessed in the indicators?

Economic ●●●●●●
 Environmental ●●
 Social
 Circularity, recycling and cascading ●●●●●●
 Waste reduction and management ●●●
 R&D

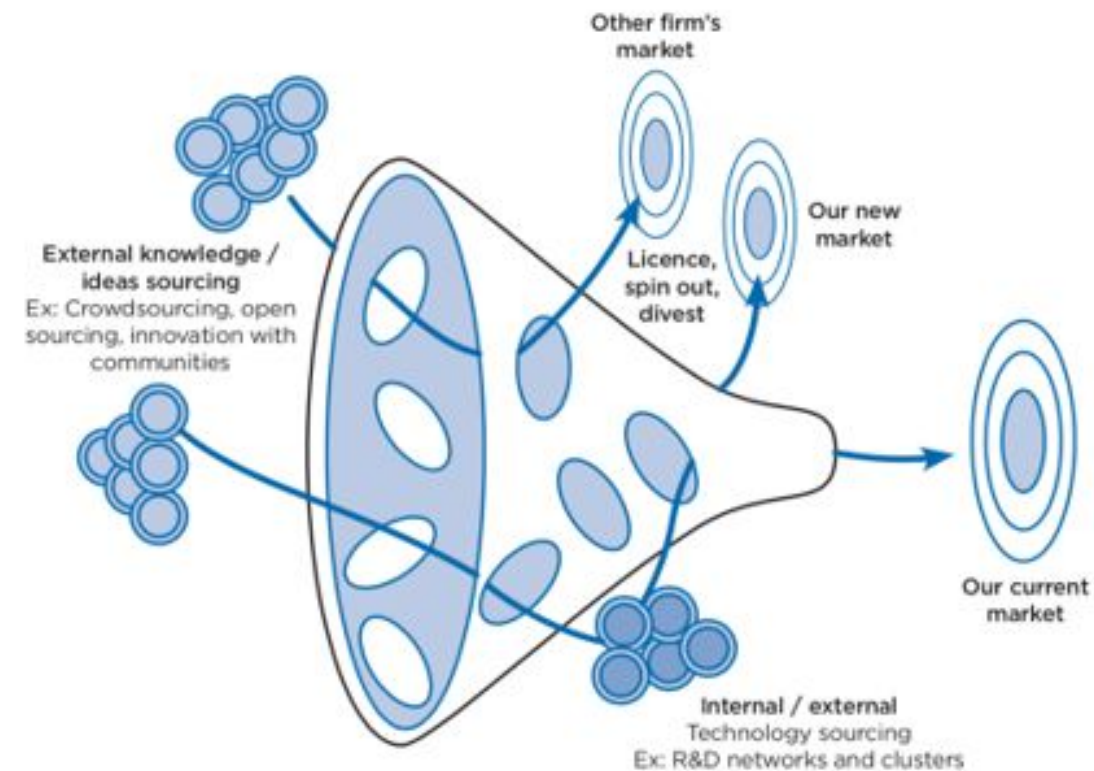
The role of forests

The Foundation for Rural and Coastal Development of the Basque Government (HAZI) has published the **Strategic Plan for the Timber Sector (PEMA) 2021-2024**, which plans actions to improve the forest-timber sector, and seeks to create strategic synergies with government policies within the framework of the three horizontal objectives of the Rural Development Programme (RDP): Environment Climate Change Mitigation and Adaptation, and Innovation.

The plan launches concrete actions in the areas of competitiveness, training, environment, communication and internationalization. In the area of competitiveness, one of the objectives is to focus on the Bioeconomy linked to wood, aiming to support the implementation of viable business projects in the fields of wooden construction, chemicals and bioenergy.

Open Innovation Hub

- Show the forest bioeconomy as attractive and innovative
- Foster innovation in forest bioeconomy
- Open Innovation approaches to get access to ideas, solutions and talent from outside the organisation, network and regions
- Mobilise talent, activate universities and research centres for the bioeconomy



Open Innovation Challenge



- First edition: End 2022
- Three winners selected
- 7000 EUR grant each to implement innovative solutions and make connections in our member regions
 - Participate in regional bioeconomy events

Theme 1: Carbon Farming & Climate-Smart Forestry

Many public and private actors are willing to invest in climate-smart forestry and carbon farming. However, this opportunity is yet to be implemented at significant scale, as barriers need to be overcome.

Solutions we are looking for:

Improved tools and solutions to monitor, trace, certify and monetise forest carbon, increasing trust at all levels.

Facilitate engagement of all actors (forest owners, companies, citizens, etc.), activating and matching carbon offer with demand.

Incorporate the different carbon sinks (e.g., biomass, soils, forest products) and possibly co-marketing of other ecosystem services.

Theme 2: Forest Monitoring, Early Warning and Response

Climate change is increasing the risk of forest decay, pests, diseases, and invasive species. New tools and approaches are needed to monitor forest health, detect threats, and deploy effective measures.

Solutions we are looking for:

Remote, land-based, and handheld solutions to monitor, diagnose and forecast forest conditions.

Cloud-based, smartphone and open source GIS solutions to improve forest conditions monitoring and management.

Tools and approaches for social engagement, awareness rising, and empowerment in forest health, including through gamification and e-learning.

Theme 3: Unleash the potential of Non-Wood Forest Products

The potential of NWFPs to increase wellbeing, create jobs, and support multifunctional forest management is frequently underdeveloped. New tools, approaches and business ideas are needed.

Solutions we are looking for:

Improved tools and mobile solutions for inventory, yield forecast, monitoring of NWFPs, resource management, picking permits, traceability, and certification.

New NWF-based products and services, and novel business models for rural areas.

Tools and approaches for awareness raising, engagement and empowerment of NWFPs value chains, including through communication, gamification and e-learning.

Forestry Speed Dating

- Short online matchmaking events
- Two or three innovations presented per event
- Break-out rooms where attendees can connect with presenters and seek collaboration opportunities

Series 1: Digitalisation of forest management, inventory and monitoring

Series 2: Bio-based solutions for sustainable construction

Series 3: Unlocking forest carbon markets with innovative solutions (14 September, October 19, November 22, and December 14, 2023)

Our ecosystem of collaborators

Guest Innovators

WEIHERSTEPHAN - TRIESDORF
University of Applied Sciences

LAPIN AMK
Lapland University of Applied Sciences

FESTMETER

NEIKER
MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE

agresta

TREEMETRICS

CETEMAS
CENTRO TECNOLÓGICO FORESTAL Y DE LA MADERA

GEORG-AUGUST-UNIVERSITÄT
GÖTTINGEN

KELLUU

BITCOMP

KWH 4.0
Kompetenzzentrum
Wald und Holz 4.0

TAXUS·IT
INNOVATION

gmv
INNOVATING SOLUTIONS

arbonaut

The James Hutton Institute

Bioregions Partners

NEIKER
MEMBER OF BASQUE RESEARCH & TECHNOLOGY ALLIANCE

BUSINESS JOENSUU

JOE
Landesbetrieb Wald und Holz
Nordrhein-Westfalen

Bioregions

EUSKO JAURLARITZA
GOBIERNO VASCO

Regional Council of
NORTH KARELIA

Ministerium für Umwelt, Landwirtschaft,
Natur- und Verbraucherschutz
des Landes Nordrhein-Westfalen

In collaboration with

Bioeconomy innovation days



First edition: 4 October 2023, Basque Country



Second Edition 5 June, 2024 North-Rhine Westphalia

- Cross-sectoral connections within NRW
- Networking opportunities for innovators and regional clusters
- Connect Bioeconomy innovation support initiatives
- Visibility to forest within Bioeconomy in NRW

An ecosystem of forest Start-ups

- Innovation community
- Access to innovative forest bioeconomy solutions
- Invitations to participate in OICs and events
- Pilot: 100+ solutions on carbon farming

The screenshot shows a website interface for discovering forest solutions. The header is teal with the text "Discover the perfect solution" in white and orange. Below the header is a search bar with the placeholder text "Search Solutions". There are four filter buttons: "Location", "Seeking", "Organization Type", and "All Filters". A "Reset Filters" button is in the top right. Below the search bar, the text "All Solutions 86 results" is displayed. There are two dropdown menus: "Status As" set to "Active" and "View As" with options for "Map" and "Grid". A "Select Solutions" button is also present. The main content area displays a grid of solution cards, each with a thumbnail image, a title, and a brief description. The cards shown are: Drone-LiDAR (Treeconomy), Skoog, CarbonStack, CO2OFFSET, Silvalytics, Silvaconsult AG, SWS Forestry, and Carbexx. The bottom of the page shows a partial view of a "Make your money" section.

Discover the **perfect solution**

Search Solutions

Location Seeking Organization Type All Filters Reset Filters

All Solutions 86 results Status As Active View As: Map Grid Select Solutions

Drone-LiDAR
Treeconomy
Innovative technology to measure land ecosystem services for carbon offsetting. To deal with increasing environmental...

Skoog
Offering landowners access to technology-based carbon market. Norwegian start-up Skoog aims to provide high-quality carbon...

CarbonStack
Scientific modeling to monitor forest carbon capture. CarbonStack creates forest reforestation initiatives that actively absor...

CO2OFFSET
Methodology to measure sequestered forest carbon. CO2OFFSET joins together forest owners and businesses seeking carbon...

Silvalytics
Evidence-based forest forecasting and monitoring services. Silvalytics is an evidence-based consultancy company led ...

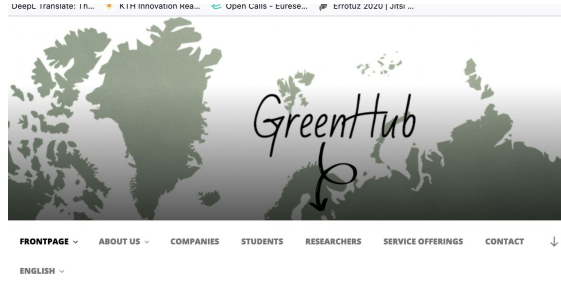
Silvaconsult AG
Forest valuation, monitoring, and mapping services. Silvaconsult AG is a Swiss consulting firm that offers solutions in the...

SWS Forestry
Reducing carbon footprint through forest carbon accounting. SWS Forestry is a private Irish forestry services company tha...

Carbexx
Bearfeldt Global Reforestation
Platform to connect global forestry projects with investors. German company Bearfeldt Global Reforestation aims to help achieve...

Make your money

Support and inter-connect regional ecosystems



GreenHub — we tackle global challenges through cooperation of business, research and education.



Alianza Vasca por la Bioeconomía



Landesbetrieb Wald und Holz Nordrhein-Westfalen



Social awareness toolbox

- Highlight bioeconomy in European regions
- Understand regional perceptions
- Engaging and mobilising societal actors

REGIONAL BIOECONOMY PERCEPTIONS SURVEY

DEPLOYMENT CHECKLIST

01 GETTING STARTED
A briefing meeting with the Bioregions survey team will begin the survey effort. We'll walk through the launch process together, answer any questions you might have, and explain the expected outcomes of the survey process.

02 TARGET CONTACTS
The target identification exercise will help you compile the lists of government and industry contacts who will receive the survey. It will provide advice on how to go about identifying, reaching, and keeping track of those contacts.

03 SEND SURVEY
EFI will provide you with a fully prepared SurveyMonkey link and an invitation email to send to your identified participants using your institutional mass email software. Both the survey and the email will be prepared in your local language. All you'll have to do is hit "send!"

04 DISSEMINATE YOUR RESULTS
EFI will assess the results of the survey. We'll provide a short policy-brief style report, as well as a package of dissemination materials that includes a PPT with summarized results and some posts for social media.

05 CONTRIBUTE TO EUROPE-WIDE INSIGHTS
We will be gathering similar insights from regions across Europe and beyond for a large-scale comparative study which will have a lasting impact to help us understand how perceptions of the bioeconomy differ across regions.

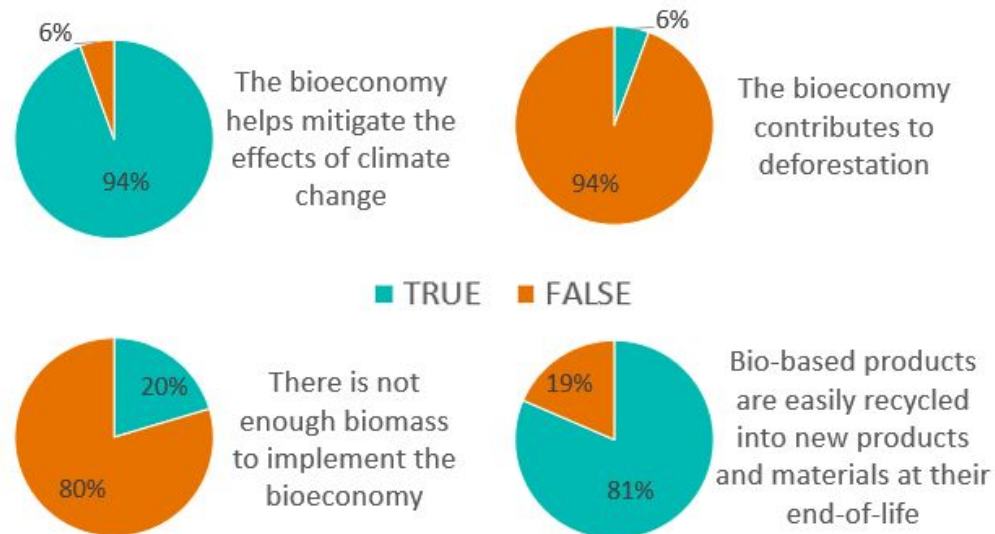
EUSKO JAURLARITZA GOBIERNO VASCO
DEPARTAMENTO DE DESARROLLO ECONOMICO E INFRAESTRUCTURAS

BIOREGIONS
Forest bioeconomy in action

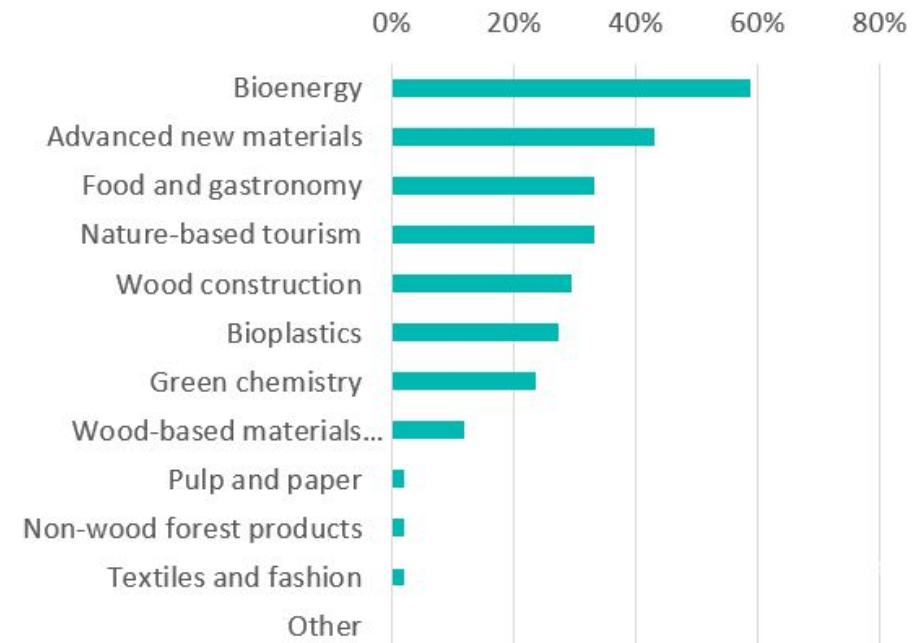
Social Awareness survey

Survey Toolkits

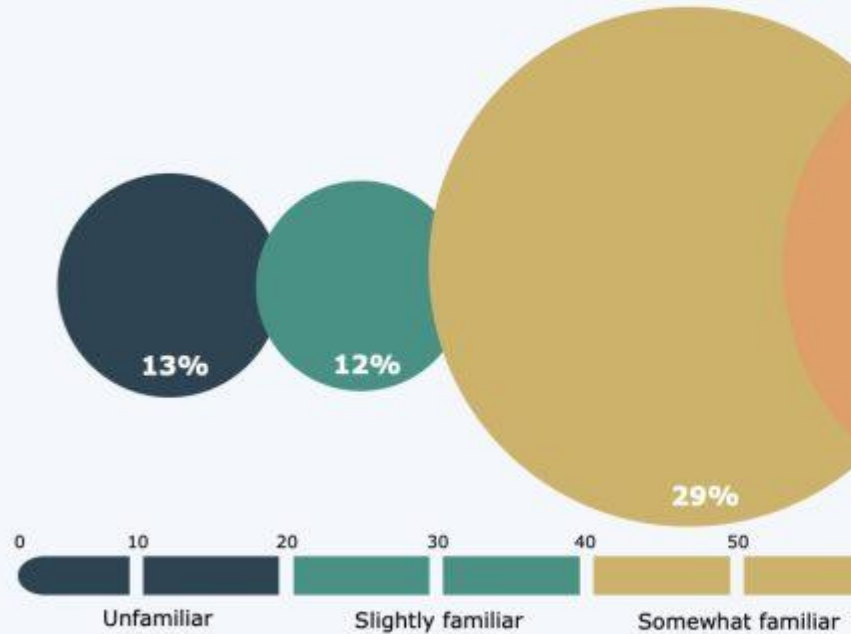
How do business and policy actors perceive the bioeconomy?



Which bioeconomy sectors have the highest potential for growth in Central Bohemia?

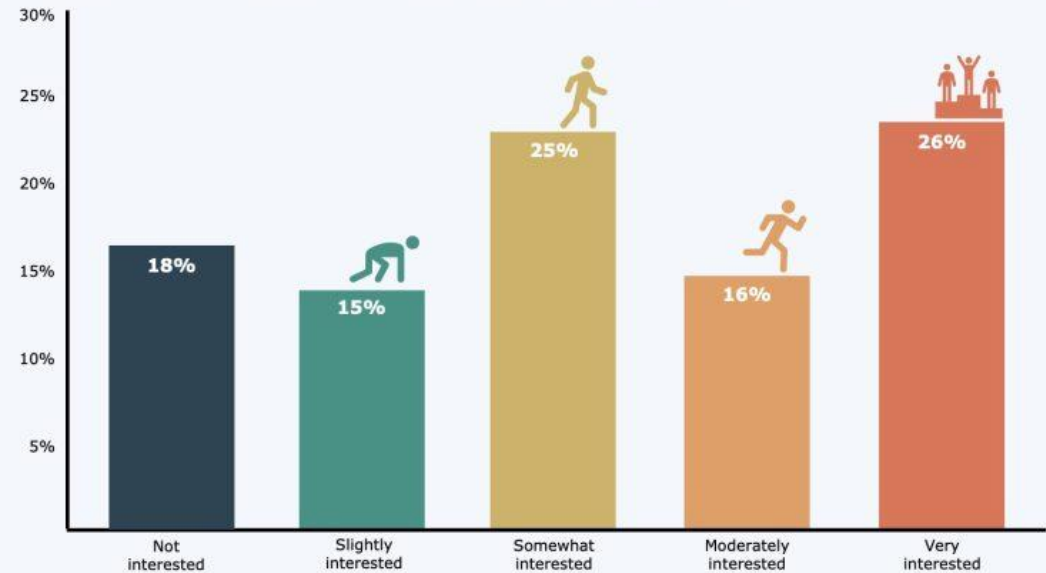


STUDENTS' FAMILIARITY WITH BIOECONOMY



Source: Bioregions' Students Perceptions Survey
December 2022–February 2023

STUDENTS' INTEREST IN ENTREPRENEURSHIP

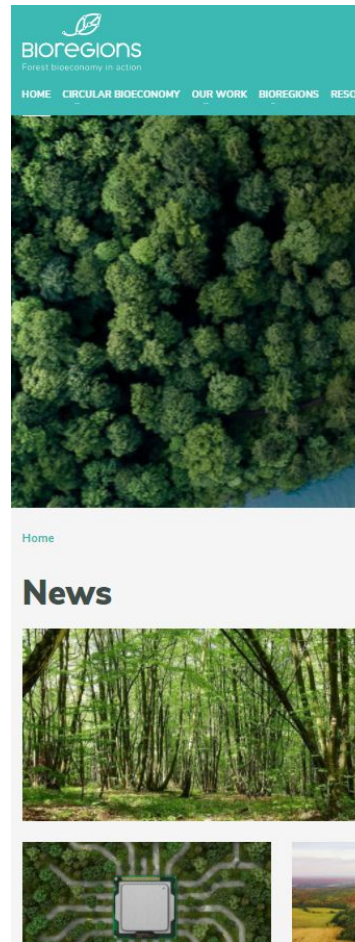


- Range of interest
- 00–20 Not interested
 - 21–40 Slightly interested
 - 41–60 Somewhat interested
 - 61–80 Moderately interested
 - 81–100 Very interested

Source: Bioregions' Students Perceptions Survey
December 2022–February 2023

Bioregions' communication channels – At a glance

- Website
- InfoFlash
- Twitter
- LinkedIn



#12 - November 2021

Aerial inspection and remote sensing services for forest management

22 Nov 2021, 09:00-10:30 CET, Hybrid

A second Bioregions Forestry Speed Dating event puts innovators in contact with potential partners and end-users. This edition, featuring three innovations related to aerial inspection and remote sensing in forestry, is organised back-to-back with Forest&Photonics 2021.

[Read more & register](#)



Canopée Challenge
Canopée challenge is the international competition for all innovative projects in the forest and wood sector. It is a French initiative with the aim of encouraging, supporting and valuing innovation in the sector. All students, professors, researchers, and entrepreneurs willing to share their ideas in order to make the wood and forestry sector more innovative, are invited to participate. Participants can benefit from prize money as well support and visibility.

[Read more](#)



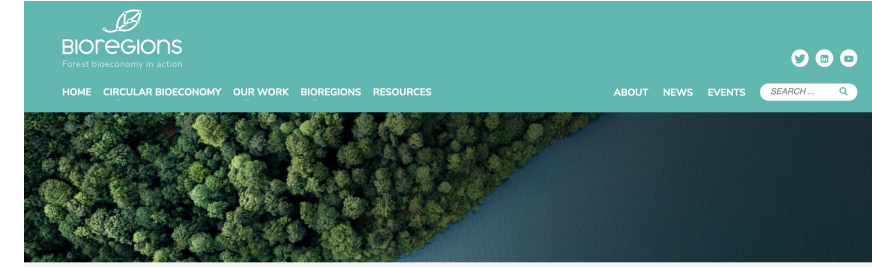
Tapping into regional differences to power cross-border innovation
Acknowledging the strengths and differences of German and Dutch actors in the agri-food sector of the Euregio Rhein-Waal yields lessons in promoting cross-border cooperation and innovation.

A screenshot of the Twitter profile for 'EFI Bioregions Facility'. The profile header shows the name, bio 'Forest bioeconomy in action', location 'Environmental Services · Barcelona, Barcelona', and 244 followers. Below the header is a tweet from the account dated 21h, mentioning a 'Forestry Speed Dating' event on December 15th. The tweet includes a link to 'efi.int/bioregions' and a 'Join' button. The bottom of the screenshot shows a banner for 'Forestry Speed Dating' with the text 'Mobile applications for forest'.



Catalysing EU regional action!

BIC platform for regions
*Stimulating bio-based investment
 by connecting regions & industry*



Save the date: Bioregions international workshop – Unlocking regional bioeconomy transitions

BY BIOREGIONS FACILITY / WEDNESDAY, 20 APRIL 2022 / PUBLISHED IN HOME, CIRCULAR BIOECONOMY



Bioregions Facility and DBFZ (German Biomass Research Centre) are co-organising a two-day hybrid workshop about "Unlocking Regional bioeconomy transitions. State of the art and ways forward". The workshop features several keynotes and panels to address the role of regions in the European bioeconomy, to better understand regional key drivers and



BIOREGIONS
 Forest bioeconomy in action



Forest-based Sector
 Technology Platform



European Committee
 of the Regions





Representation of the Free State of Bavaria
to the European Union

Kindly hosted by



Forest-based Sector
Technology Platform



5th Edition of the Forest Innovation Workshop

“The role of innovation in managing new challenges in the forest-based sector at regional level in the EU”

January 18th, 2023, 9:00-17:00 CET

At the Representation of the Free State of Bavaria to the European Union,
Rue Wiertz 77, 1000 Brussels

LIGNA.21

People. Technology. Innovation.

27 Sept. - 1 Oct.
Hannover • Germany
ligna.de/en/

new date
27 Sept. - 1 Oct.
2021

LIGNA.21 GOES INTO AUTUMN

**New Date from 27 September
to 1 October 2021**



BIOREGIONS

Forest bioeconomy in action

Thank you!!

Interested to
collaborate?

siebe.briers@efi.int

inazio.martinez@efi.int