

# **Il Gruppo Coordinamento Nazionale Bioeconomia (GCNB) e il suo contributo al consolidamento della Bioeconomia nazionale, Europea e internazionale**

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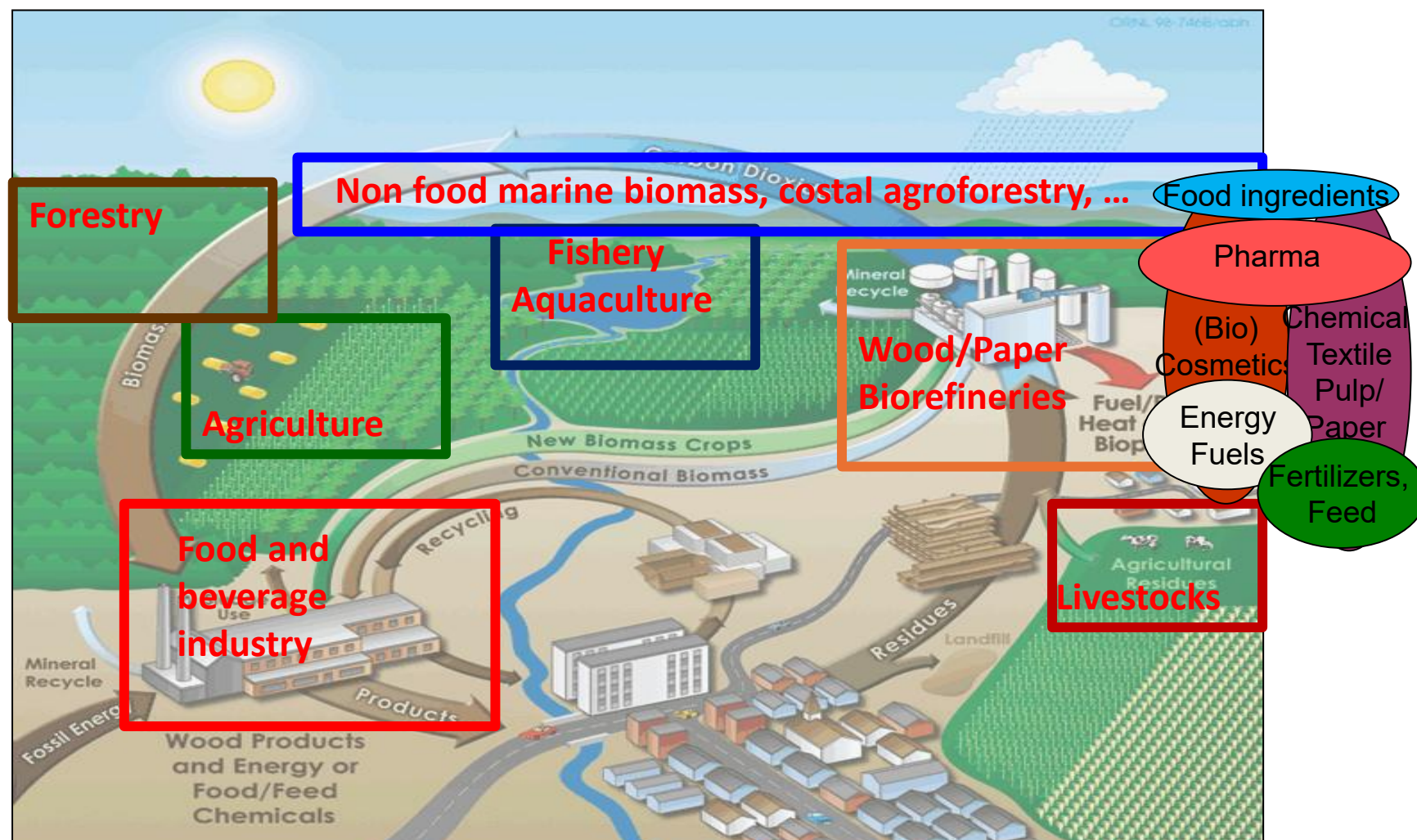
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Presidente CNR & Università di Roma “La Sapienza” & Cattedra UNESCO *Healthy City*

# The European Bioeconomy landscape (a)



**About 2,7 Trn EUR (5% GDP), 17,1 Mln employees (8% of total) (2023)**

*Lasarte-López, J., M'barek, R., The EU bioeconomy at a glance: Focus on economic value added, employment and innovation. Commissione europea, Siviglia, 2025. JRC143759*

## The European Bioeconomy landscape (b)

### Environmental benefits

- Forestry and seas assimilate CO<sub>2</sub>;
- Produces bio-based products from biomass with lower CO<sub>2</sub> emissions than when produced from oil;
- Produces biodegradable products and plastics, preventing their accumulation in the environment and delivering organic carbon to the soil;
- Disposes impacting bio-waste and wastewater with the production of clean water, bio-products and organic matter to be used for restoring soils;
- Restores biodiversity and ecosystems, regenerates forest, rural, coastal and former industrial areas, preventing/containing future zoonoses and epidemics.

### Social benefits

- Produces food, and for all, along with clean water and essential products;
- Guarantees healthy ecosystems services;
- Creates new jobs in rural and costal areas and abandoned lands.

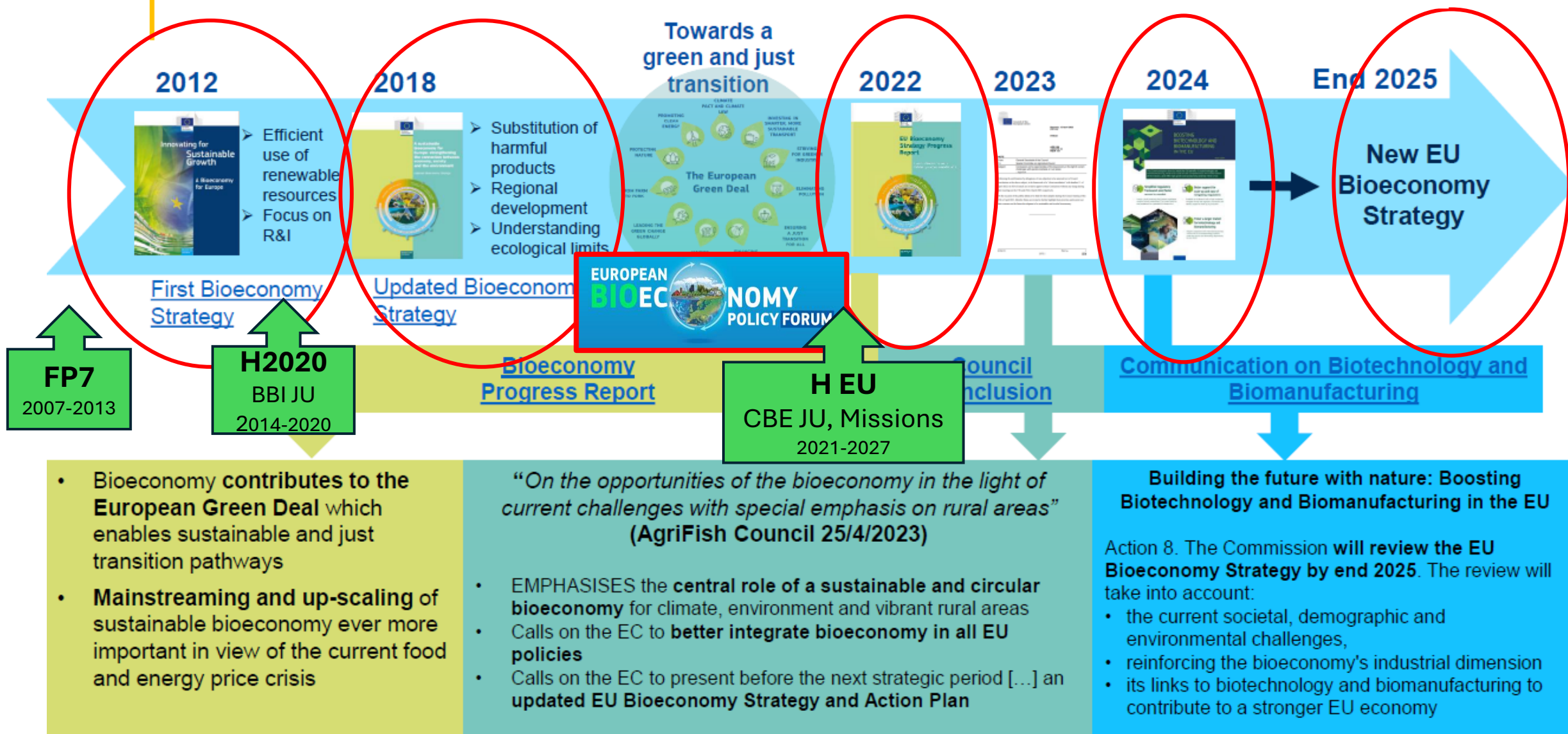
**High resilience**, given its value chains longer and deeply routed in the territories.

# Sustainable Bioeconomy as a key priority of Europe

**NEW BIOECONOMY STRATEGY.** Copenhagen, December 2, 2025

[https://environment.ec.europa.eu/strategy/bioeconomy-strategy\\_en](https://environment.ec.europa.eu/strategy/bioeconomy-strategy_en)

“Expert Group on the implementation of the strategy...” & “Deployment Group...”



# EU Bioeconomy Strategy

**EU Bioeconomy (2023): 2,7 Trn EUR (5% GDP), 17,1 Mln employees (8% of total)**

Planned  
Q4 2025

Public  
Consultation  
Closed 23 June  
2025



- **Scale-up and commercialisation:** identifying measures to scale up and commercialise existing and emerging biotech solutions and bio-based products
- **High-value applications:** increasing resource-efficient and circular use of biological resources
- **Biomass sourcing/supply:** securing the competitive and sustainable supply of biomass, both domestically and from outside EU
- **International markets:** positioning the EU in the rapidly expanding international market for bio-based materials, biomanufacturing, biochemicals, and agri-food and biotech sectors.

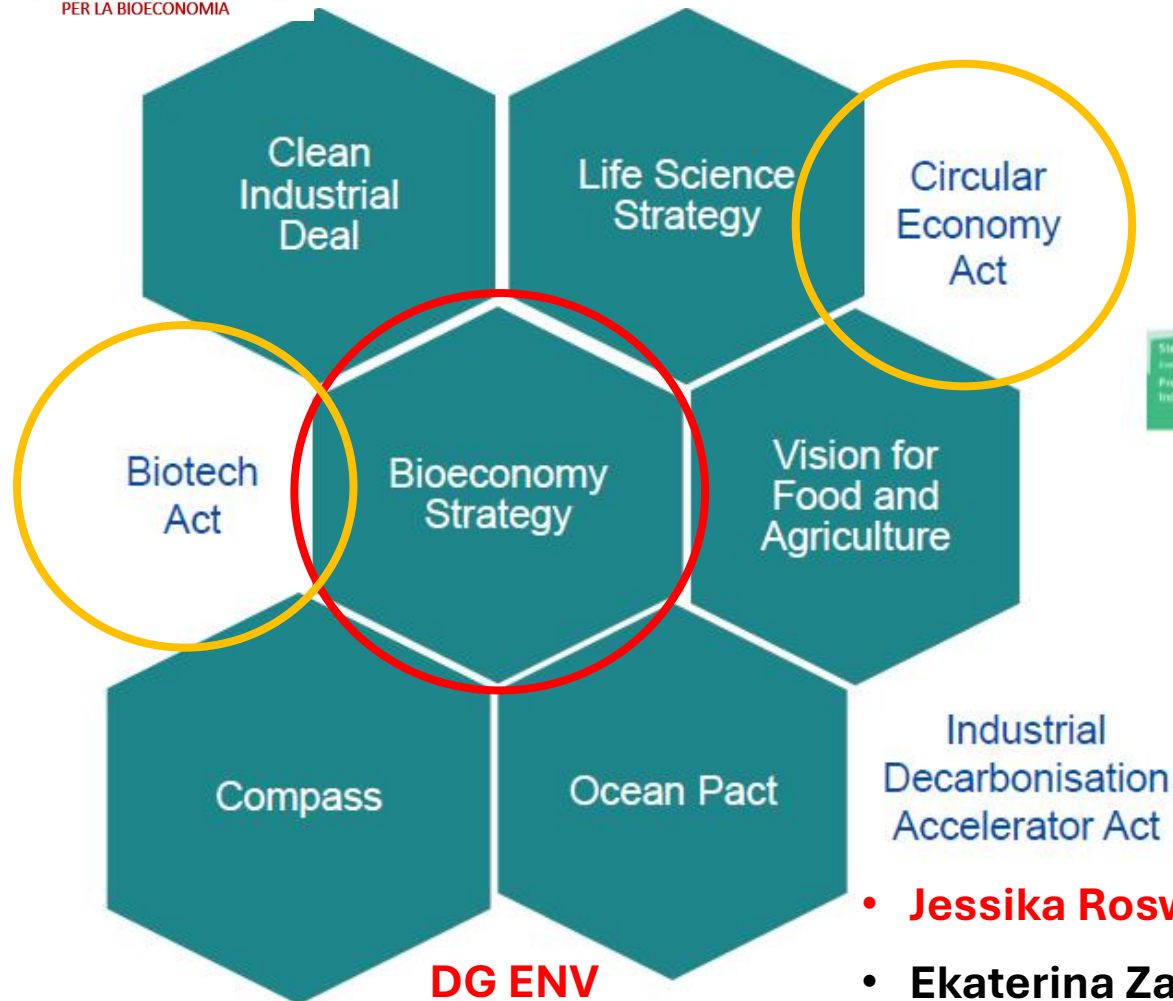
➤ **Strengthen and scale bio-based sectors, via a) a dedicated financial instrument:** the *Circular Bioeconomy Thematic Investment Platform*, with initial €100 Bln, b) **removal of regulatory and market barriers** that prevent bioproducts reaching the market (**lack of NACE codes, EU Taxonomy, Packaging/Packaging Waste Regulation**. Harmonised regulations across EU). **Promote markets and demand for bio-based products, also through a *Lead Market Initiative*.**

➤ **Deploy the bioeconomy at local and territorial level,** Launch pilot actions in rural, coastal and urban areas

➤ **Monitoring, governance, innovation and sustainability.**

**Needs: a dedicated Action Plan, alignment and synergies with *Circular Economy Act*, the *EU Biotech Act II* and the regulatory framework for the *Circular Bioeconomy* and a **EU Bioeconomy Regulators and Innovators' Forum** to share best practices.**

# Sustainable Bioeconomy as a key priority of Europe



**DG ENV**

DG RTD

DG GROW

DG AGRI

DG MARE



- **Jessika Roswall** – Environment, Water Resilience and Competitive Circular Economy
- **Ekaterina Zaharieva** – Startups, Research and Innovation
- **Christophe Hansen** – Agriculture and Food
- **Wopke Hoekstra** – Climate, Net Zero and Clean Growth
- **Stéphane Séjourné** – Prosperity and Industrial Strategy



# Multiannual Financial Framework, 2028-2034 (EC proposal)

National and Regional  
Partnership Plans

European Competitiveness Fund  
(incl. Horizon Europe)

Erasmus+ &  
AgoraEU

Global  
Europe

Other (\*)

Totale  
1816,9 mld eur

865

410

49

200

292

- Da 52 a 16 programmi
- 410 mld a ECF, i programmi equivalenti nel 2021-27 = circa 150 mld
- 175 mld a Horizon Europe, da 95,5 nel 2021-27
- Agricoltura e coesione insieme

# New Horizon Europe, 2028-2034, 175 Bln (EC proposal)



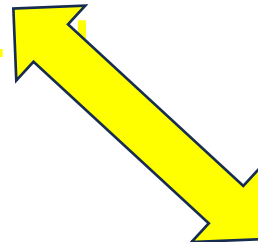
**ERC:** ~31,5 Bln **+100%**  
**MSCA:** ~10,0 Bln  
**JRC:** ~2,6 Bln

**Competitiveness:** ~68,5 Bln  
a) Clean transition & Decarbonisation ~25,3 Bln  
b) **Health, Biotech, Agri, Bioeconomy** ~19,6 Bln  
c) Digital lead ~16,8 Bln  
d) Resilience, Security, Defence ind., Space ~6,4 Bln

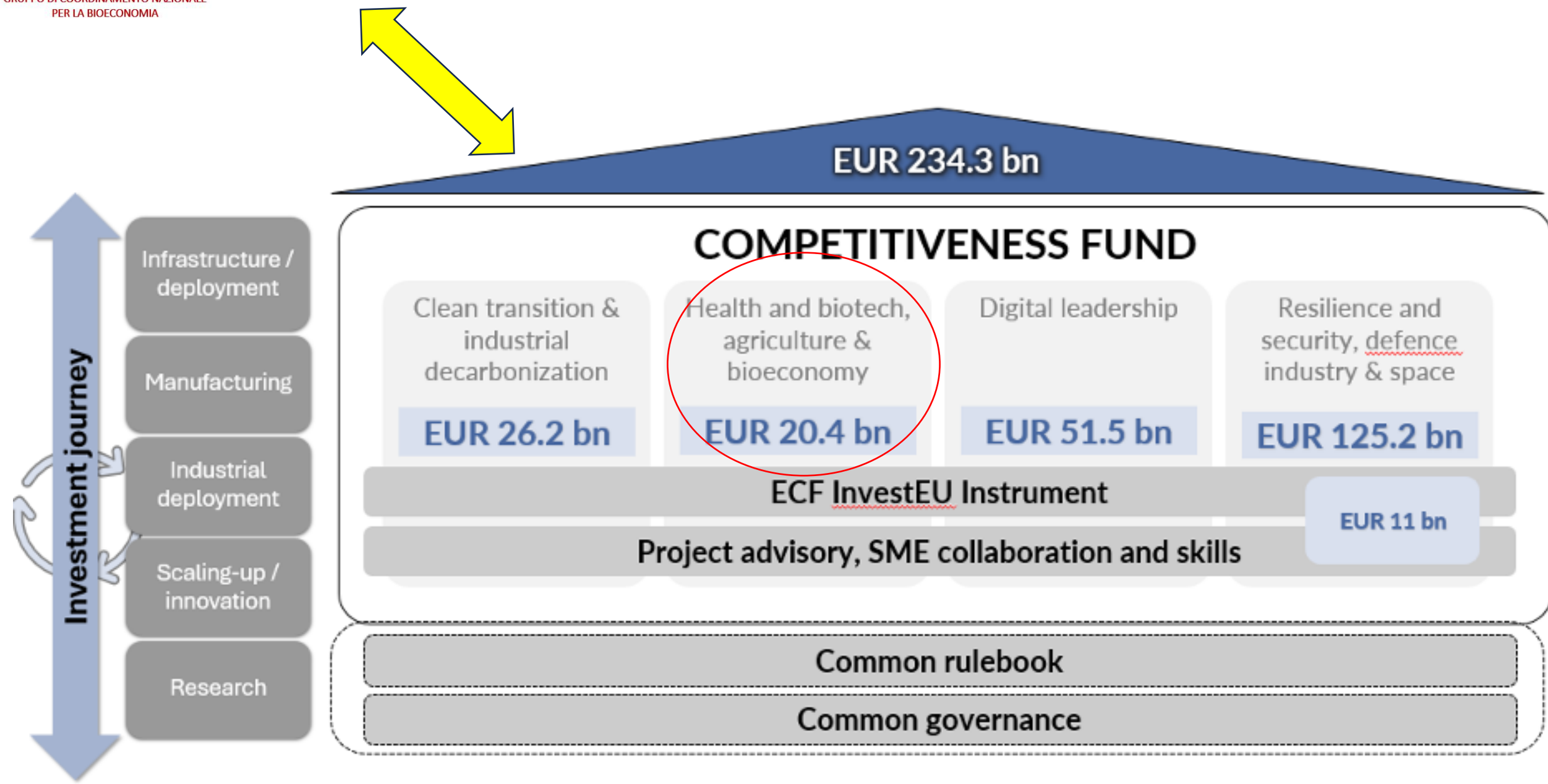
**Society:** ~7,6 Bln  
a) Social challenges  
b) Missions  
c) EU Bauhaus Facility (NEB)

**EIC:** ~34 Bln **+250%**

**Infra R&T** ~10.8 Bln **+350%**  
**Widening** ~5.3 Bln **+80%**



# European Competitiveness Fund, 2028-2034, 234 Bln (EC proposal)





G20 Initiative on Bioeconomy



# Sustainable Circular Bioeconomy in the G7/G20 tracks

## Bioeconomy among priorities of “G7 Climate, Energy and Environment”

**The triple global crisis: climate change, pollution, and biodiversity loss**

**Circular and Sustainable Bioeconomy** can contribute to **mitigate the triple global crisis** by: i) producing sustainable biomass within the ecological limits and efficiently converting it into food and biobased products; ii) restoring and increasing resilience of ecosystems, hydrosphere, soils, marginal lands and abandoned industrial sites; and iii) ensuring social, economic and other environmental benefits in rural and coastal areas.

## Environmental restoration and regeneration, “G20 Bioeconomy Initiative GIB”

The G20 Initiative on Bioeconomy (GIB) aims to **foster international dialogue and actions among G20 countries on regenerative Bioeconomy**. An effective global bioeconomy must enable the **reduction of inequalities** within and between countries and improve cooperation.

**Ethical implications.** i) **Engaging vulnerable communities by respecting and valorizing their territories, rights, cultural practices, and knowledge systems** through inclusive policies and social safeguards. ii) Benefits of the bioeconomy should be shared equitably. lii) **Avoid potential conflicts with food and food production.** → **The 10 High Level Principles.**

**International collaboration.** Establishment of platforms to share best practices and ensure **cooperation between governments and international public and private actors** to create an enabling environment that incentivizes sustainable bio-based practices.

# The national Bioeconomy strategies at the global level

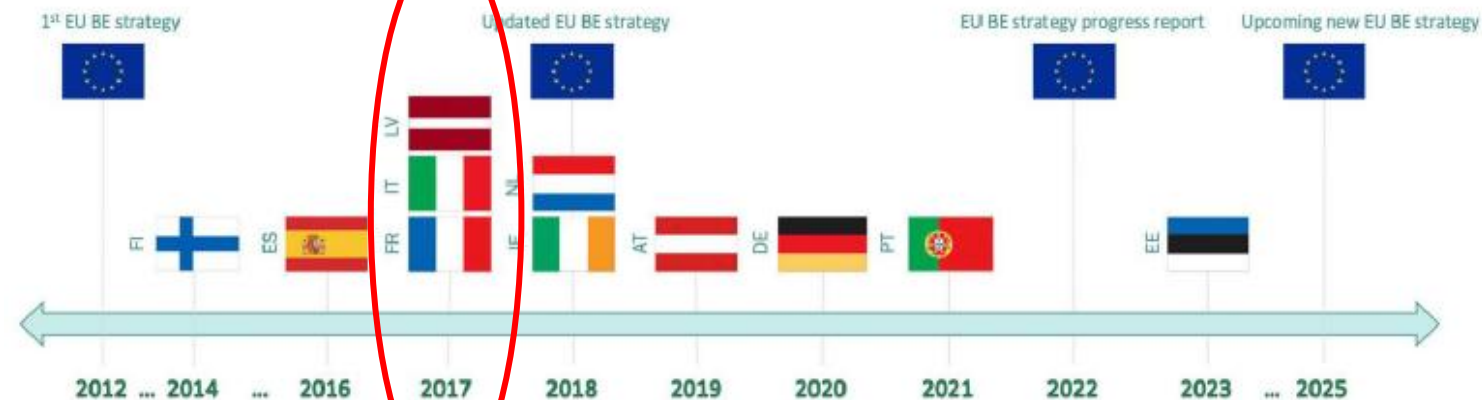
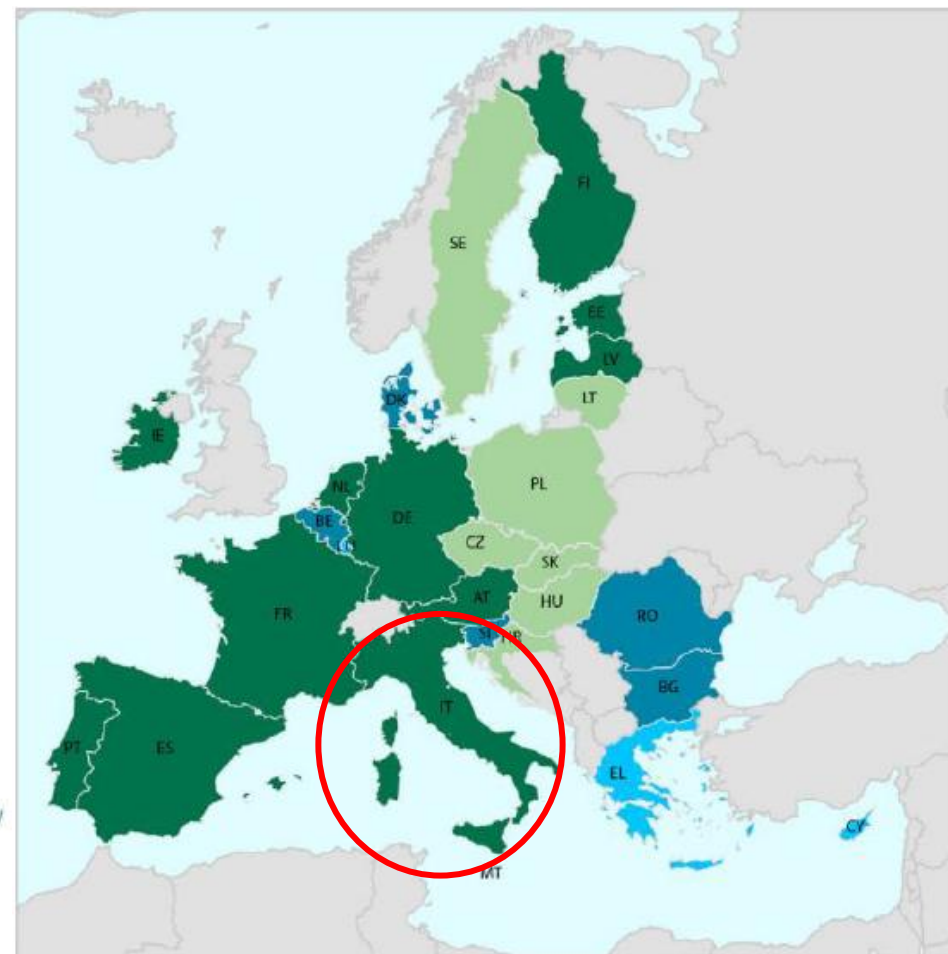


More than 40 States worldwide currently pursue explicit political strategies to expand and promote their Bioeconomy. However, the available Bioeconomy strategies are often considerably different in focus sectors, governance and framework to monitor progress in reaching the planned targets.

# Bioeconomy, a priority for many EU MSs

## National bioeconomy policies in the EU-27

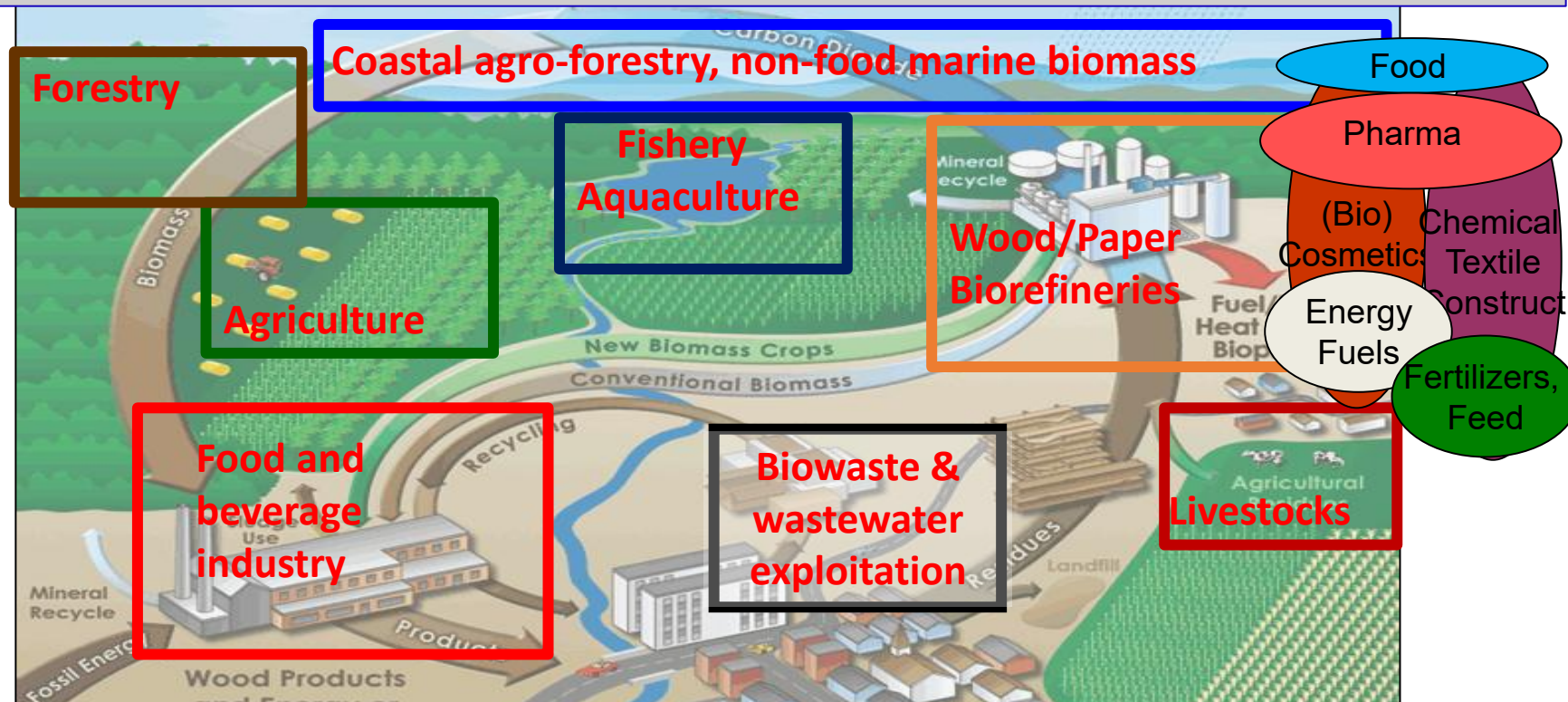
- **11 Member states** with dedicated bioeconomy strategies at national level (AT, DE, ES, FI, FR, IE, IT, LV, NL, PT, EE)
- **6 MS** in the process of developing their respective dedicated national strategies (CZ, HR, HU, LT, PL, SK)
- **7 MS** are involved in other macro-regional (BG, DK, EE, RO, SI, SE) or sub-national (BE) policy initiatives dedicated to the bioeconomy.
- **4 MS** have bioeconomy related strategies (CY, EL, LU, MT)



- Dedicated bioeconomy strategy at national level
- Dedicated bioeconomy strategy at national level under development
- Other policy initiatives dedicated to the bioeconomy
- Other related strategies at national level
- non-EU countries

# The Italian Bioeconomy landscape

**Agriculture** ~13Mln ha, 90% in rural areas, ~ 3 Mln ha of abandoned lands  
**Forestry** ~12 Mln ha, poorly exploited...; **coastal shoreline** ~ 8,000 km, poorly exploited...  
**Food industry** ~58.000 companies, 88% with < 9 employees....



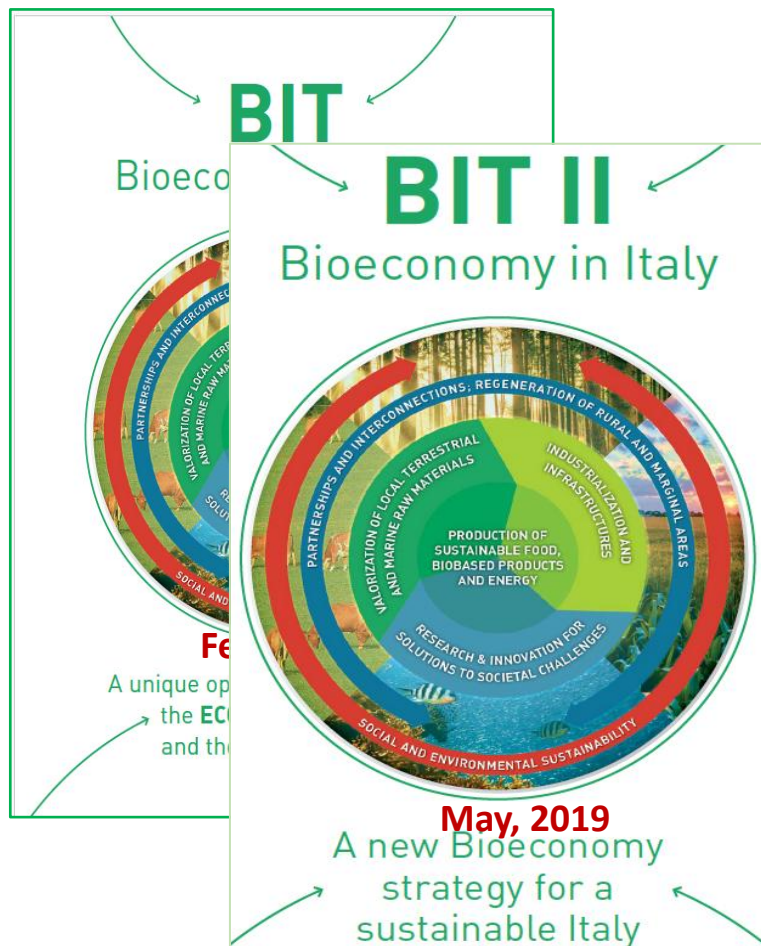
~335 Bln €/y, ~2.0 Mln of jobs (2018); **421 Bln €/y, ~ 2.0 Mln of jobs (2024)\***  
In EU: 3<sup>rd</sup> turnover/jobs; 1<sup>st</sup> Biodiversity richness and number DOP, IGP products on the market

\*<https://group.intesasanpaolo.com/content/dam/portalgroupp/repository-documenti/research/it/bioeconomia/2024/La%20Bioeconomia%20in%20Europa%20giugno%202024.pdf>

Environmental and social benefits, for sustainable/regenerative/inclusive growth

# Italian Bioeconomy strategies and related IAPs & “National Bioeconomy Coordination Board” Roma

## “National Bioeconomy Coordination Board” CNBBSV, Presidency Council Ministers, Rome



May, 2019

A new Bioeconomy strategy for a sustainable Italy

[http://cnbbsv.palazzochigi.it/media/1774/bit\\_en\\_2019\\_02.pdf](http://cnbbsv.palazzochigi.it/media/1774/bit_en_2019_02.pdf)

### Composition (PdCM decrees 2021, 2023, 2024):

- Ministry of Agriculture....;
- Ministry of industrial Dev...;
- Ministry of Environment, energy..
- Ministry of University Research..
- Ministry of Education...
- Ministry of Finance...
- Ministry of Health...
- Dept. Cohesion Policies, PdCM
- Conferences of Regions “Agriculture”, “Industrial dev.”, “Government-Regions”
- SVIMEZ;
- Institute for Environmental Protection and Research;
- National Technology Clusters: AgriFood (CLAN), Forestry and Wood, Circular Bioeconomy (SPRING), BlueGrowth (BIG).

### IMPLEMENTATION ACTION PLAN (2020-2025) FOR THE ITALIAN BIOECONOMY STRATEGY BIT II



Updated version

January, 2021

[http://cnbbsv.palazzochigi.it/media/1774/bit\\_en\\_2019\\_02.pdf](http://cnbbsv.palazzochigi.it/media/1774/bit_en_2019_02.pdf)

National Bioeconomy Coordination Board (NBCB)



### UPDATED IMPLEMENTATION ACTION PLAN (2025-2027) FOR THE ITALIAN BIOECONOMY STRATEGY BIT II



December, 2024

<https://cnbbsv.palazzochigi.it/media/gx3n4rwl/iap-16122024-en.pdf>

## **Updated IAP (2025-2027) of the IT Bioeconomy strategy (BIT II)**

The **updated IAP 2025-2027** (<https://cnbbsv.palazzochigi.it/media/gx3n4rwl/iap-16122024-en.pdf>) contains **still relevant priorities of the IAP BIT II 2020-2025** along with **new R&I and policy needs and opportunities**, identified with a wide 3 months national consultation.

**Major objectives to be achieved by 2030, identified from the lessons learned:**

- i) improve overall sustainability, circularity and regenerative potential of national Bioeconomy, by more wisely adopting bio-, digital- and AI-based technologies and more efficiently addressing the local specificities, leveraging the full potential of the wide rural, hilly, mountainous and coastal areas;**
- ii) improve connections/synergies among different sectors of national bioeconomy, establishing longer value chains better routed on the different territories, creating new opportunities for the rural, mountainous, costal and abandoned areas;**
- iii) overcome national and EU legislative barriers and development and adoption of a clear, stable and harmonized legislative framework that can truly boost the market;**
- iv) Ensure the active involvement from primary producers, citizens and public administration bodies, by also improving skills, education and entrepreneurship;**
- v) boost the cooperation with the Mediterranean and African countries (Mattei's Plan).**

# Implementazione priorità identificate dal *updated IAP (2025-2027)*

*Thank You!*

## Implementazione delle priorità urgenti via Gruppi di Lavoro dedicati (2025-2026)

- 1) “Food Design per la Sostenibilità Agroalimentare e Sistemi Informativi di Etichettatura” (CLAN);
- 2) “Gestione forestale sostenibile” (Custer Foresta Legno);
- 3) “Nuove Politiche e Semplificazioni Bioeconomia Circolare; Indicatori, Misura della Sostenibilità, Codici ATECO/NACE” (SPRING);
- 4) “Gestione spazio marittimo” (BIG);
- 5) “Formazione e Comunicazione istituzionale” (Inter-ministeriale GianMatteo PANUNZI)

## Nuove necessità ed opportunità (anche in vista del nuovo H EU e ECF, OECD e GIB 2027)(2026-2027)

- 1) **Indicatori, codici e regolamentazione** (consolidamento lavoro fatto, su ambiti nazionali, EU, FAO, OECD);
- 2) **Adozione delle tecnologie emergenti**, i.e., biotecnologie avanzate, intelligenza artificiale, materiali avanzati, Quantum computing, etc. nelle diverse filiere della bioeconomia: rischi ed esempi di applicazione, anche combinata/convergente (*risks of deep techs adoption & converging technologies*);
- 3) **Consolidamento delle *start up* e *scale up*** nel settore;
- 4) **Uso delle infrastrutture di ricerca e tecnologiche nazionali** di competenza
- 5) **Coinvolgimento dei produttori primari, dei consumatori e dei giovani;**
- 6) **Sicurezza nella ricerca**, i.e., gestione «attenta» dei dati (*research security and FAIR -Findable, Accessible, Interoperable, and Reusable- use of data*), ma anche *biosafety* and *biosecurity*;
- 7) **Uso delle attuali tecnologie e prodotti della bioeconomia in ambito militare** (*dual use of existing innovation*);



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- **International markets:** positioning the EU in the rapidly expanding international market for bio-based materials, biomanufacturing, biochemicals, and agri-food and biotech sectors.

## The European Biotech Act

“The Biotech Act will propose a **series of measures to create an enabling environment** to accelerate the transition of biotech products from laboratory to factory and to the market, while **maintaining the highest safety standards** for the protection of the population and the environment.”



# The European Biotech Act - Content

**Early reflections – the content will be shaped by the consultations and study**

1. Biotech Act: la proposta mira a rafforzare il settore europeo delle biotecnologie, facilitando il passaggio dalla ricerca al mercato attraverso nuovi strumenti di finanziamento, regole più semplici e percorsi regolatori accelerati per terapie innovative, anche basate su dati e AI;
2. Safe Hearts Plan: nuovo approccio integrato contro le malattie cardiovascolari, principale causa di morte in Europa, puntando su prevenzione, diagnosi precoce e accesso alle cure;
3. Dispositivi medici: revisione norme su dispositivi medici e diagnostici in vitro per ridurre oneri e ritardi, mantenendo elevati standard di sicurezza. Ruolo chiave di EMA

Regulatory  
Simplification

Access to  
Capital

Creating  
Synergies/  
Clusters

Skilled  
Workforce

AI and Digital  
Solutions

[https://health.ec.europa.eu/document/download/ec1475b7-e3f9-409e-b927-fc7e69306a8c\\_en?filename=biotech\\_reg-com2025-1022\\_act\\_en.pdf](https://health.ec.europa.eu/document/download/ec1475b7-e3f9-409e-b927-fc7e69306a8c_en?filename=biotech_reg-com2025-1022_act_en.pdf)



## *Horizon Europe: Mission & NEB (2021-2027)*



The **New European Bauhaus (NEB)** is an EU policy and funding initiative launched by the European Commission in 2021 that fosters sustainable solutions for transforming the built environment and lifestyles under the green transition.

# Horizon Europe (€ 95,5 Bln, 2021-2027)

[https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/horizon-europe\\_en](https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/horizon-europe_en)



**PARTNERSHIPS:** Biodiversa, Agroecology living labs and research infrastructures, Agriculture of Data, Water4All, Animal Health, Sustainable food systems, Sustainable blue economy, Circular Biobased EU JU

**MISSIONS:** A Soil Deal for Europe; Restore our Ocean and Waters by 2030; Adaptation to Climate Change; 100 Climate-Neutral and Smart Cities by 2030.

# The PPP CBE JU (€ 2 Bln, 2022-2027)(a)



[www.cbe.europa.eu](http://www.cbe.europa.eu)

A €2 billion partnership between the European Union and the Bio-based Industries Consortium (BIC) that funds projects advancing competitive circular bio-based industries in Europe.

## **CBE JU's objectives**

- Accelerate the innovation and development of bio-based solutions
- Accelerate market deployment existing and innovative bio-based solutions
- Ensure high environmental performance of bio-based industrial systems

CBE JU is building on BBI JU's success while enlarging its scope and addressing the remaining challenges of Europe's bio-based industries by:

- Supporting R&I for sustainable bio-based solutions
- De-risking investments in innovative, circular bio-based production plants
- Addressing technological, regulatory & market challenges of the sector
- Strengthening the collaboration of all bioeconomy sectors and actors
- Engaging with more stakeholders along the value chains
- Primary producers/citizen's/consumers engagement; Education, communication

# The PPP CBE JU (€ 2 Bln, 2022-2027)(b)

## CBE JU-funded Innovation Actions

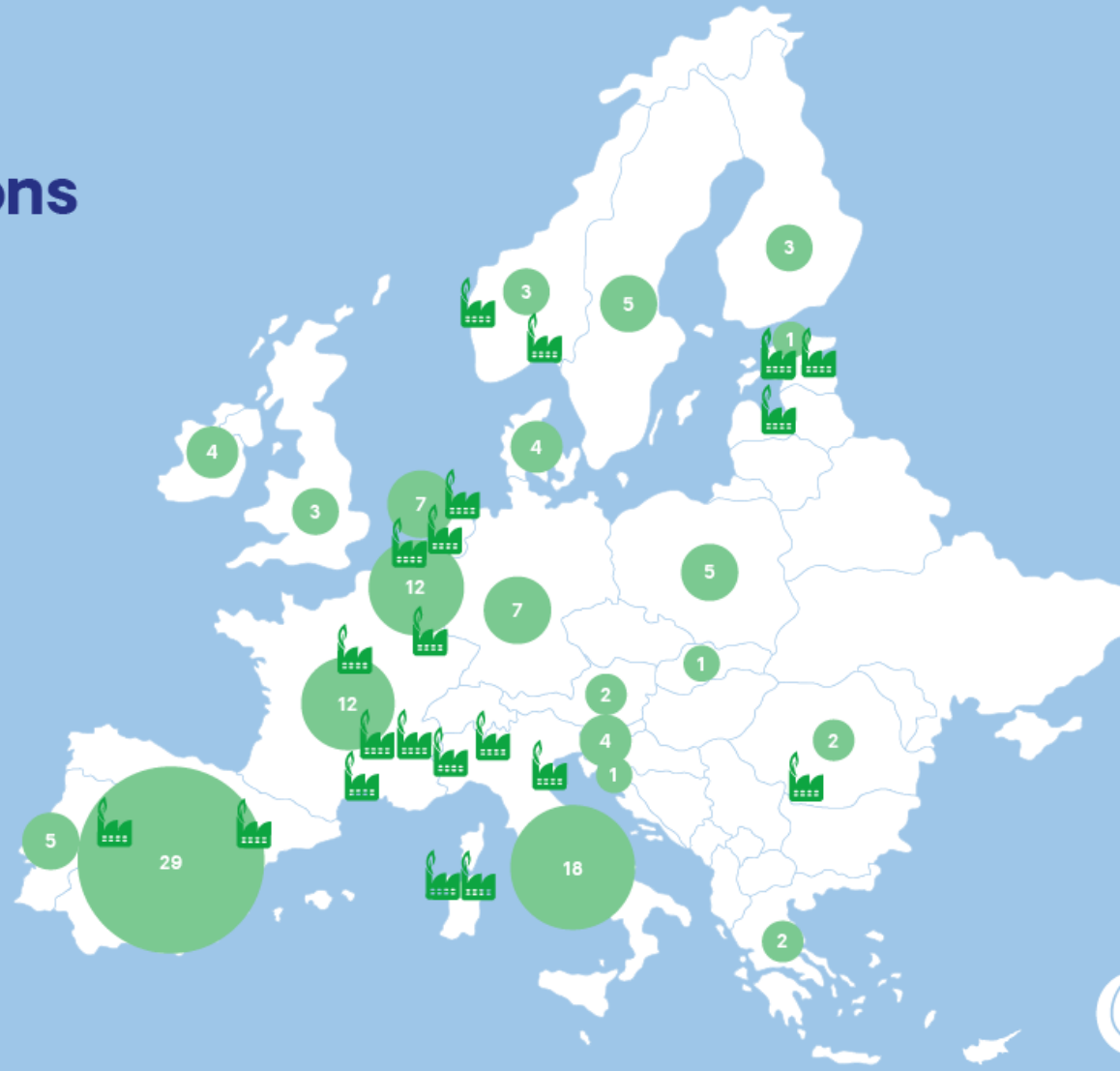


Flagship biorefinery



Demonstration plants

[www.cbe.europa.eu](http://www.cbe.europa.eu)



# Biorefineries in Europe

The EU Bio-based industry relies on **3455 plants**, of which **1366 produce biomethane**, **549 pulp and paper**, **491 timber**, **479 bio-based chemicals**, **338 liquid biofuels**, **172 starch and sugar**, **156 bio-based composites and fibres** and **226 other products**. Of these plants, **over 94% are in the commercial stage** (JRC, 2025)

**Italy: 351** (JRC, 2025)

133 Biomethane

44 Chemicals

4 Composites and fibers

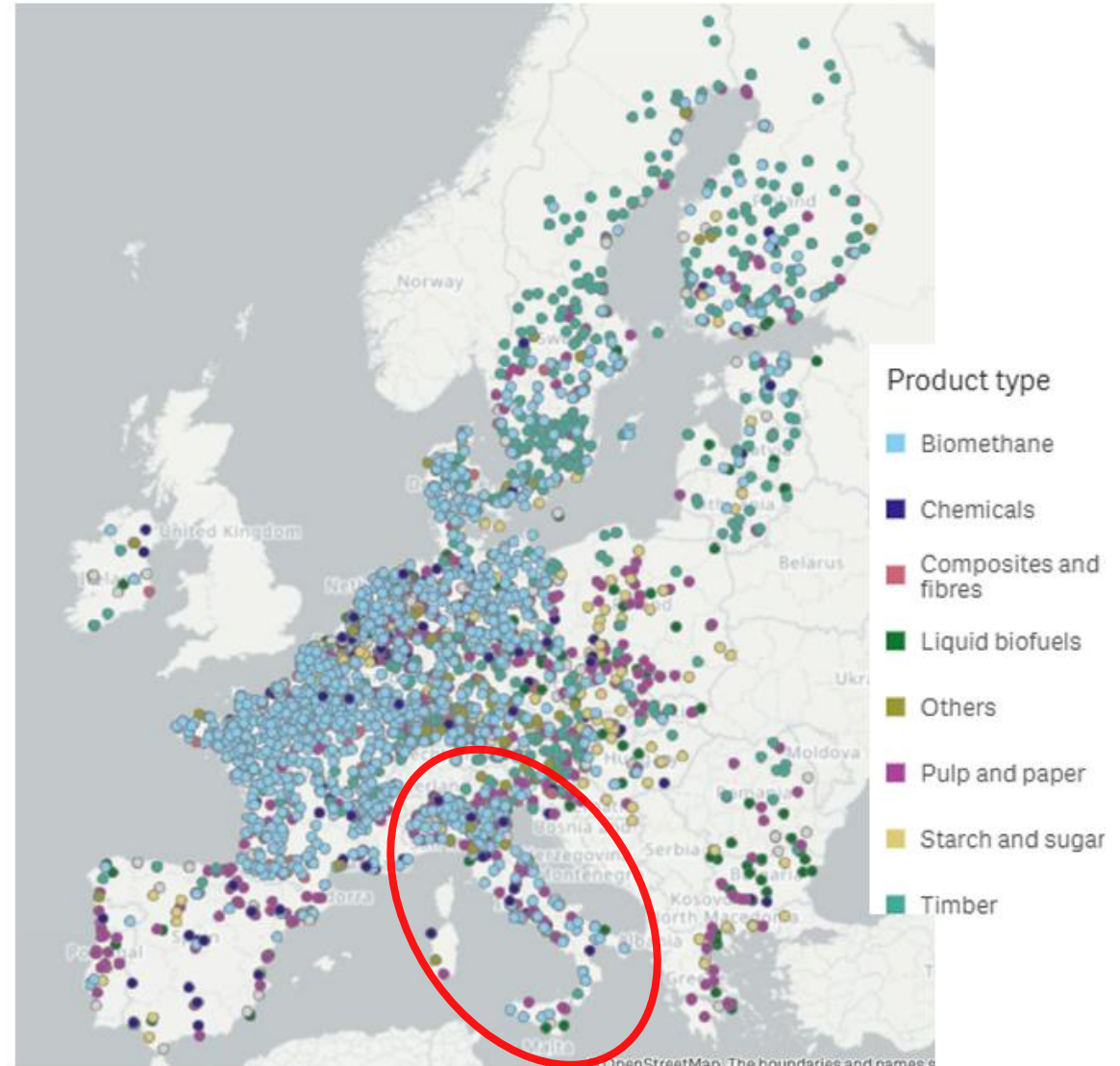
22 Liquid biofuels

17 Others

119 Pulp and Papers

6 Starch and Sugar

6 Timber



Source: JRC EU Bio-based industry dashboard.