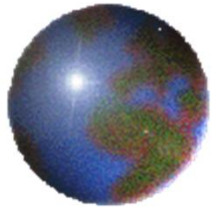


Cesena, November 27, 2018



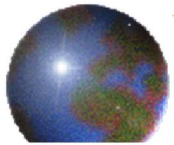
Circular Bioeconomy: basics and opportunities

Fabio Fava

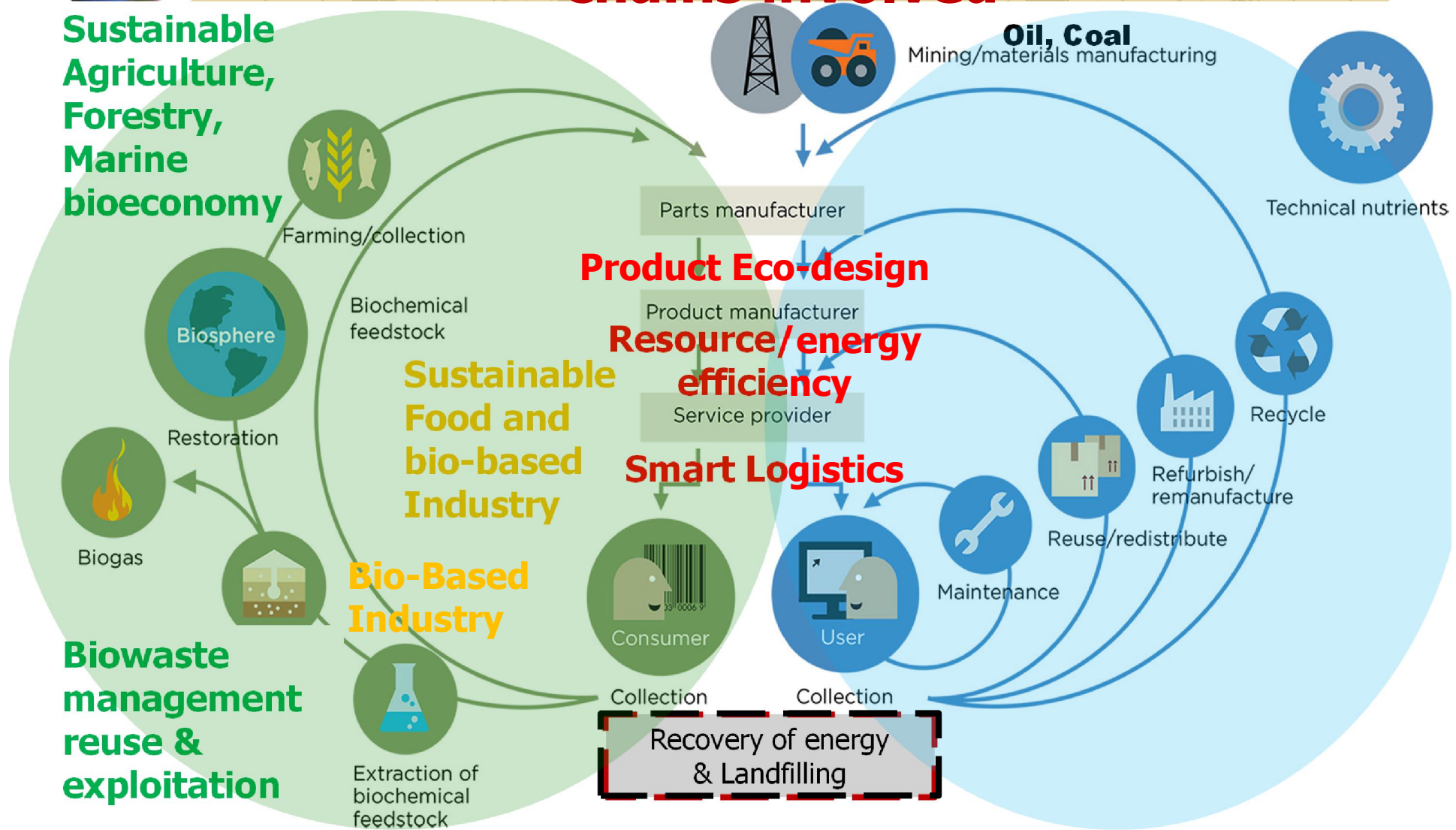
Italian Representative, i) *Horizon2020 SC2* Programming Committee; ii) "States Representatives Group" of *Public Private Partnership Biobased industry (BBI JU)*; iii) *BLUEMED Initiative* GSO WG

&

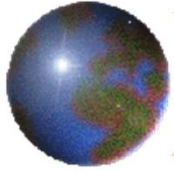
School of Engineering, *AlmaMater Studiorum*-Università di Bologna, Italy
(E-mail: fabio.fava@unibo.it)



Circular (Bio)Economy: actions and value chains involved

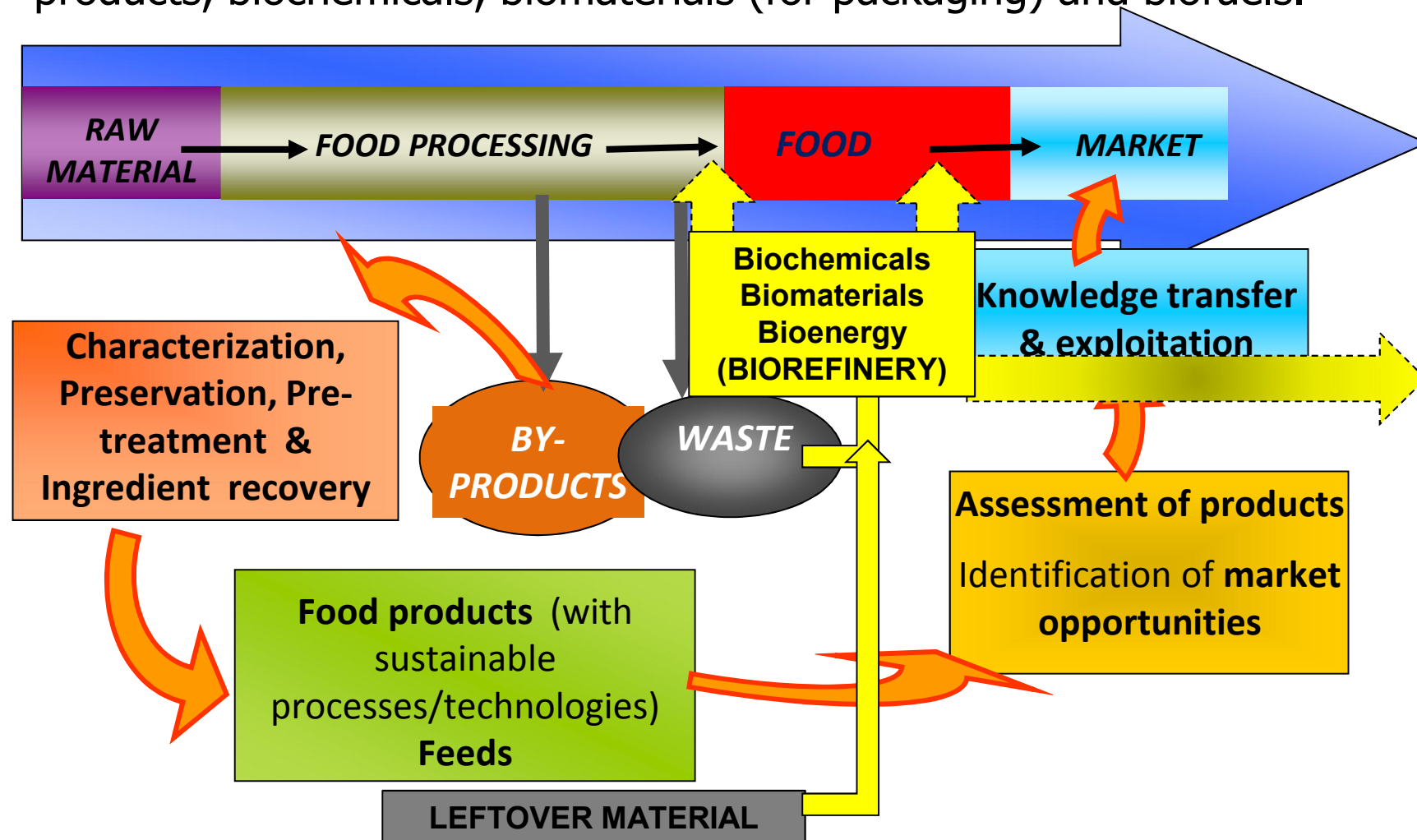


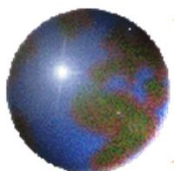
By 2030 in EU: about -50% CO₂ production; -30% resource use; +2% additional annual turnover; +0.5 M jobs



Circular BioEconomy in the food sector

Integrated exploitation of food processing byproducts and waste (in IT: ≈ 15 M T/y) with the production of food and feed ingredients and products, biochemicals, biomaterials (for packaging) and biofuels.





Circular Bioeconomy in Horizon2020

Societal challenges



Tackling societal challenges for a better society

1. Health, demographic change and wellbeing (7.472 Bln)

2. Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the bioeconomy (3.851 Bln)

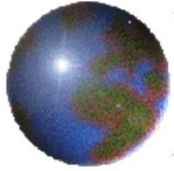
3. Secure, clean and efficient energy (5.931 Bln)

4. Smart, green and integrated transport (6.339 Bln)

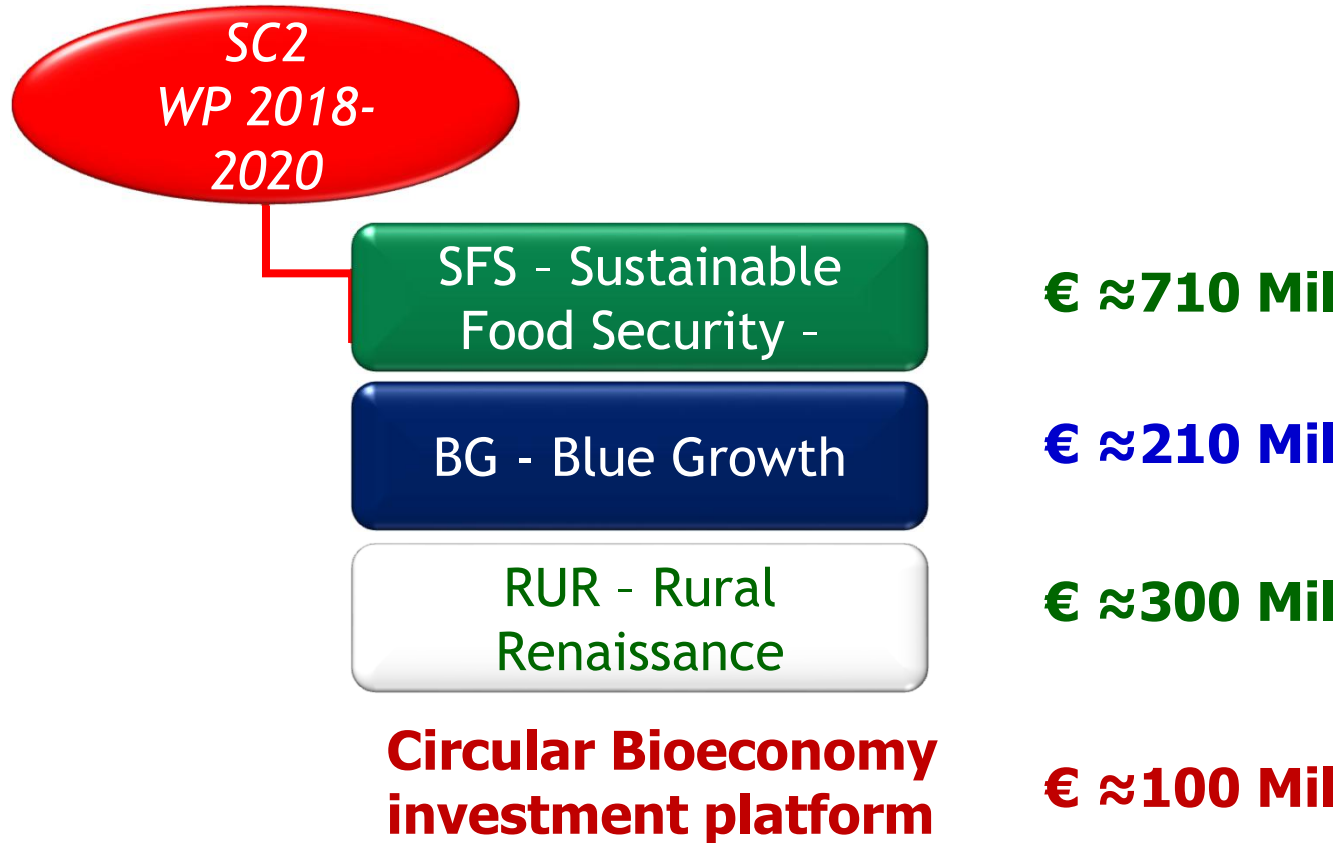
5. Climate action, resource efficiency and raw materials (3.081 Bln)

6. Inclusive, innovative and reflective societies (1.310 Bln)

7. Secure societies (1.695 Bln)



Societal Challenge 2: the WP 2018-2020



<https://ec.europa.eu/programmes/horizon2020/en/what-at-work-programme>

A Public-Private Partnership on Bio-Based Industries

Realising the European Bio-economy Potential



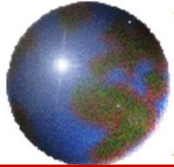
Supported by



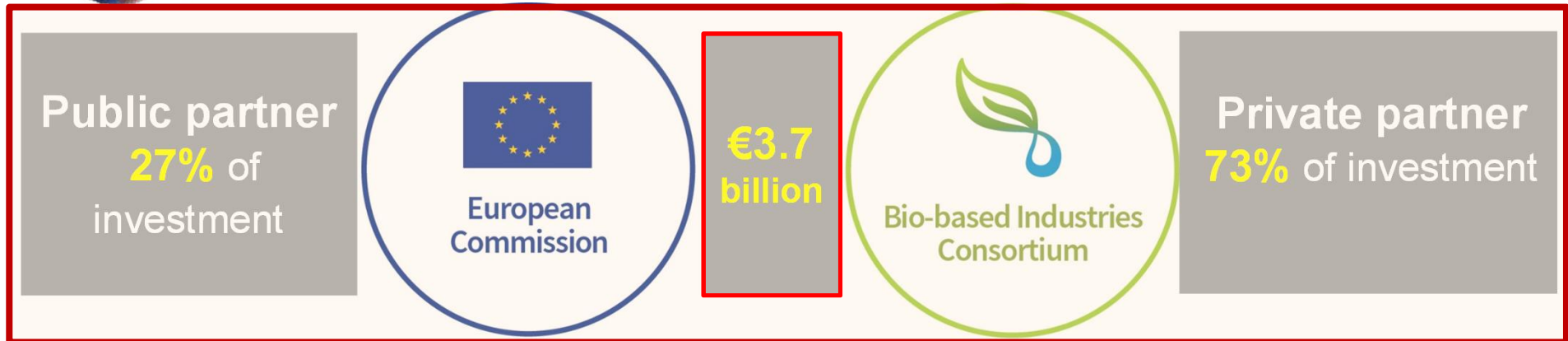
<http://www.bbi-europe.eu/>

 Bio-based Industries
Consortium





The BBI JU: structure and priorities



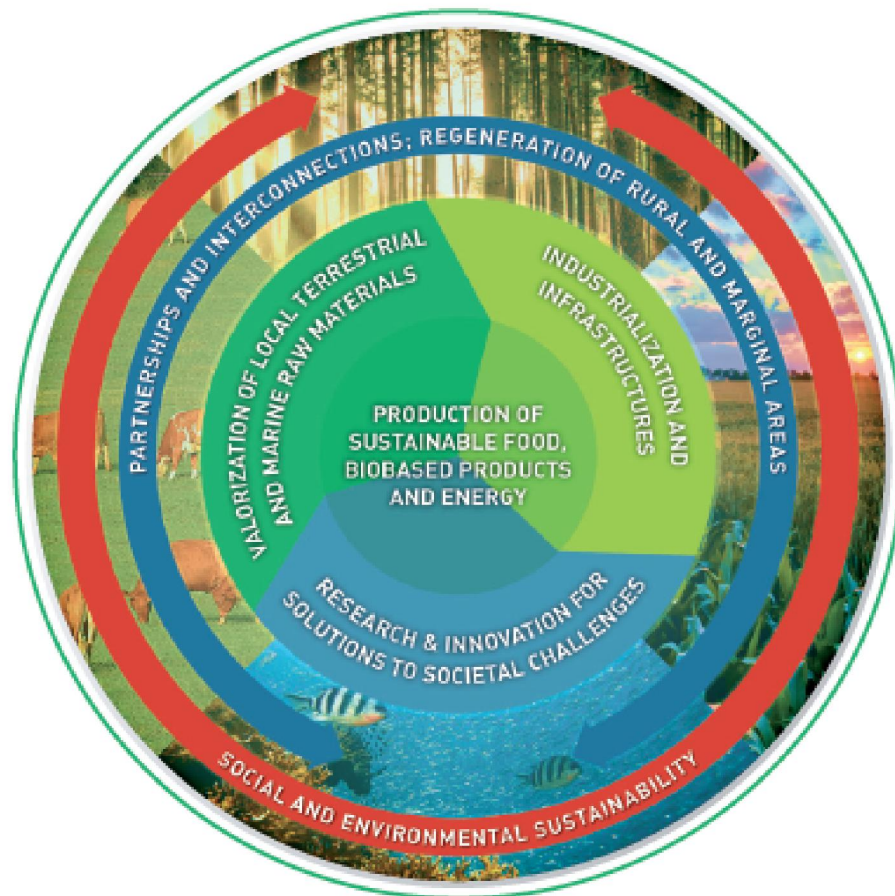
A structured approach via 5 **Value Chains** (VC)...

- ❑ VC 1: From ***lignocellulosic*** feedstock to advanced biofuels, bio-based chemicals & biomaterials
- ❑ VC 2: Next generation ***forest***-based value chains
- ❑ VC 3: Next generation ***agro***-based value chains
- ❑ VC 4: New value chains from (organic) ***waste***
- ❑ VC 5: ***Integrated*** energy, pulp and chemicals biorefineries

Plus a marine bioresource exploitation value chain...

BIT

Bioeconomy in Italy



A unique opportunity to reconnect
ECONOMY, SOCIETY
and the **ENVIRONMENT**

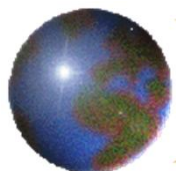
The Italian Bioeconomy strategy

AVAILABLE AT web site:

www.agenziacoesione.gov.it/it/S3/Consultazioni_publiche/Bioeconomy.html

Promoted by Italian Presidency of Council of Ministers and endorsed by:

- Ministry Education, University, Research;
- Ministry Agriculture, Food, Forestry;
- Ministry Economical Development;
- Ministry Environment, Land, Sea;
- Ministry for territorial cohesion;
- Committee Productive Activities, Regions Conference;
- Agency for Territorial Cohesion;
- IT Technology Clusters Green Chemistry, AgriFood and BlueGrowth.



The revised European Bioeconomy strategy



Rapidly deploying bioeconomies across Europe

- set up an EU Bioeconomy Policy Support Facility for EU countries to develop national/regional agendas;
- launch pilot actions for the development of bioeconomies in rural, coastal and urban areas, interconnecting the sectors.

Scaling up and strengthening the bio-based sectors via a €100 million Circular Bioeconomy Thematic Investment Platform.

Protecting the ecosystem and understanding the ecological limitations of the bioeconomy

Horizon Europe

Open Science

ERC (€16,6 Bln)

MSCA (€6,8 Bln)

Research
Infrastructure
(€2,4 Bln)

Tot: €25,8 Bln

Global Challenges Industrial Competitiveness

Health (€7,7 Bln)

Inclusive and Secure Society (€2,8 Bln)

Digital and Industry (€15 Bln)

Climate, Energy and Mobility (€15 Bln)

Food and Natural Resources (€10 Bln)

Incl. non nuclear activities JRC (€2,2 Bln)

Tot: € 52,7 Bln

Open Innovation

EIC (€10 Bln)
(Ecosystems: 0,5)

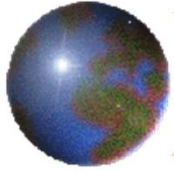
EIT (€3 Bln)

Tot: €13,5 Bln

Strengthening ERA (tot. € 2,1 Bln)

Sharing Excellence (€1,7 Bln)

Reforming/Enhancing R&I systems (€0,4 Bln)



The Circular Bioeconomy

Thank You!



The Future is Bio-Based