

The importance of adequate policies and governance mechanisms to build a Sustainable Bioeconomy Strategy

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- BIOECONOMY STRATEGY: EUROPEAN AND PORTUGUESE CONTEXT
- PUBLIC POLICIES, INSTRUMENTS & BIOECONOMY
- FUTURE APPROACHES SUPPORTING A SUSTAINABLE BIOECONOMY DEVELOPMENT



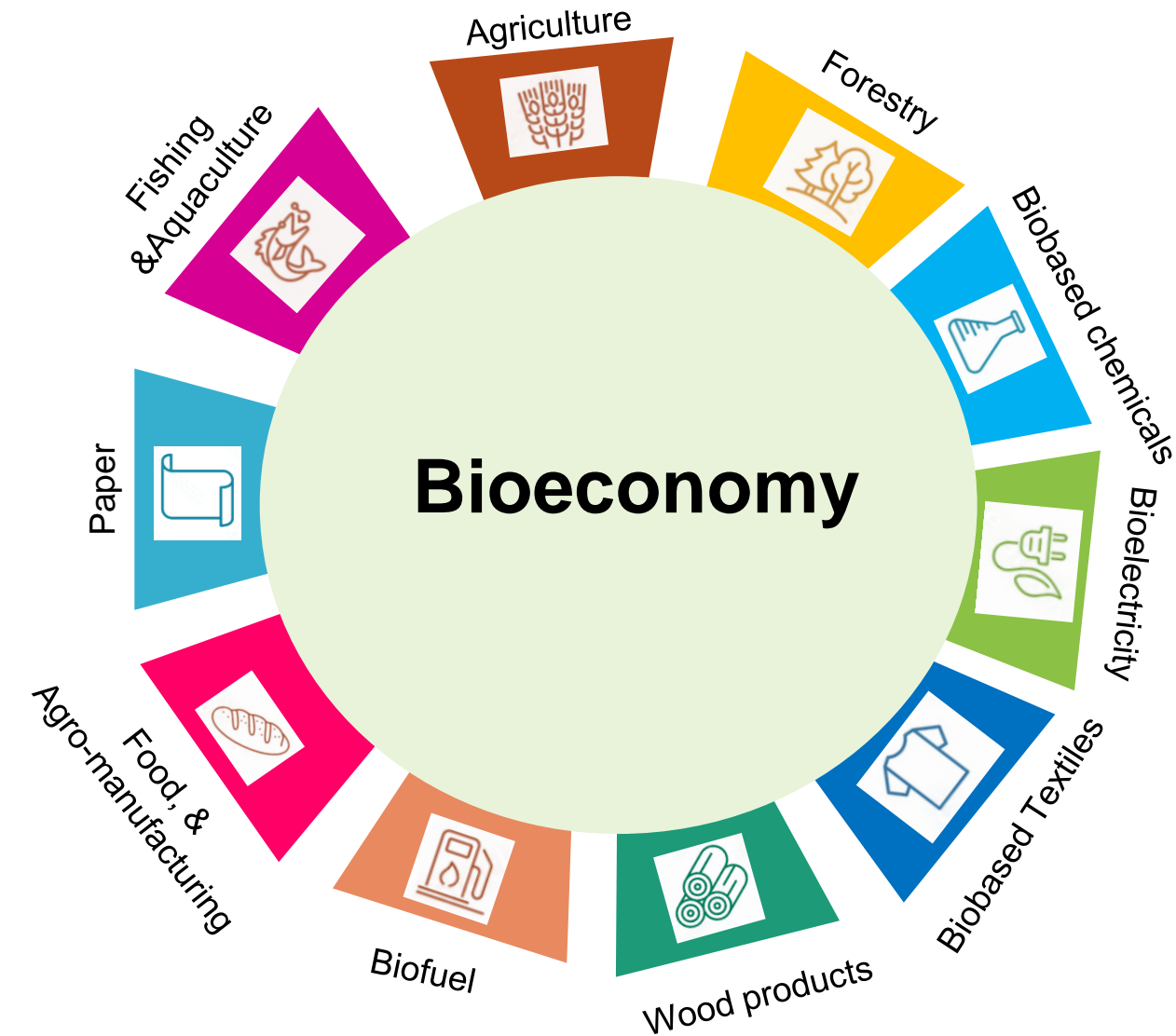


BIOECONOMY

**DEFINITION AND RELEVANCE WITHIN CURRENT
GLOBAL SITUATION**

Bioeconomy

Definition



"**Bioeconomy** encompasses all sectors, associated services and investments that produce, use, process, distribute or consume biological resources, including ecosystem services"

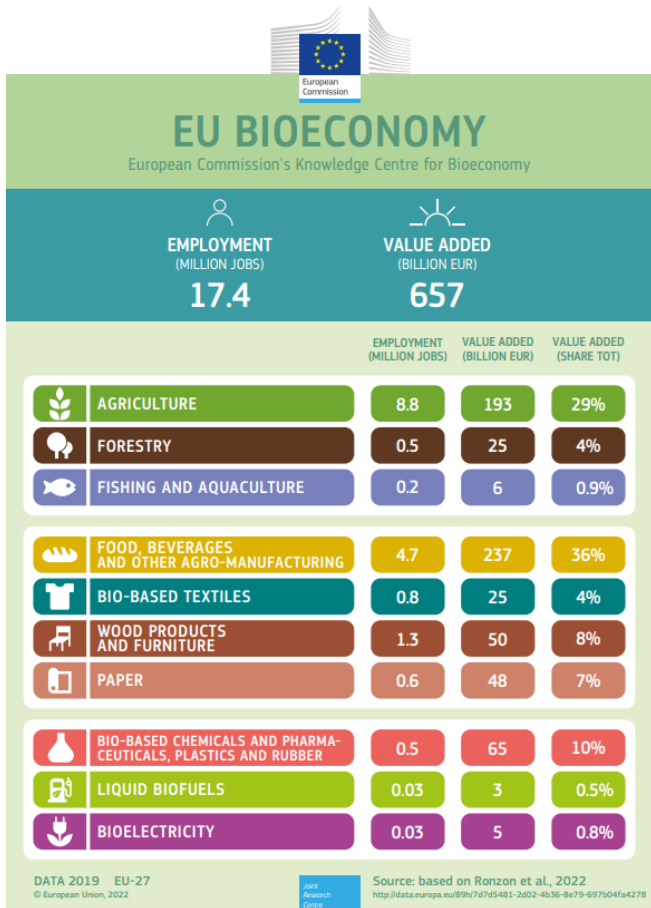
"**Bioeconomy** refers to the production of renewable biological resources and the conversion of these resources and waste streams into value-added products, such as food, feed, bio-based products and bioenergy."

"**Bioeconomy** means use of renewable biological resources from land and sea, like crops, forests, fish, animals and micro-organisms to produce food, materials and energy."

Bioeconomy

Relevance for Economic and Sustainable Development

The 2030 UN SDGs and the European Green Deal Strategy set the ambition for a climate neutral, resource-efficient, competitive and sustainable development



Bioeconomy activities are aligned and support the achievement of the **Green Deal Strategy**:

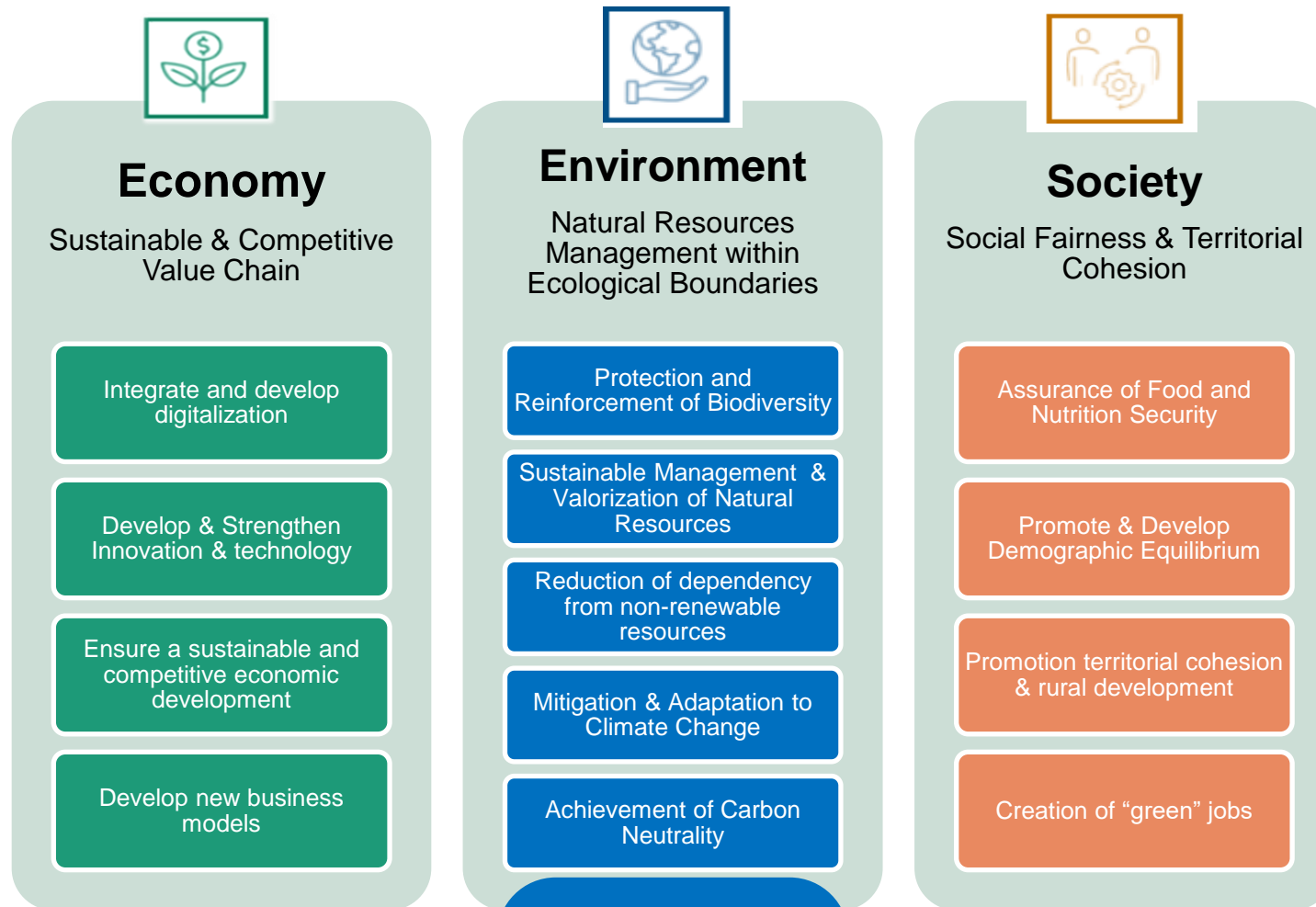
- assurance of food and nutrition security
- management of natural resources and ecosystem services
- reduction of non-renewable resources
- replacement of these by renewable, non-fossil based resources (wind, solar, bioenergy, etc)
- improvement of European competitiveness
- creation of sustainable business and additional jobs

A paved road winds through a lush forest. The trees are tall and dense, with sunlight filtering through the canopy, creating dappled shadows on the road. The overall atmosphere is serene and natural.

BIOECONOMY STRATEGY

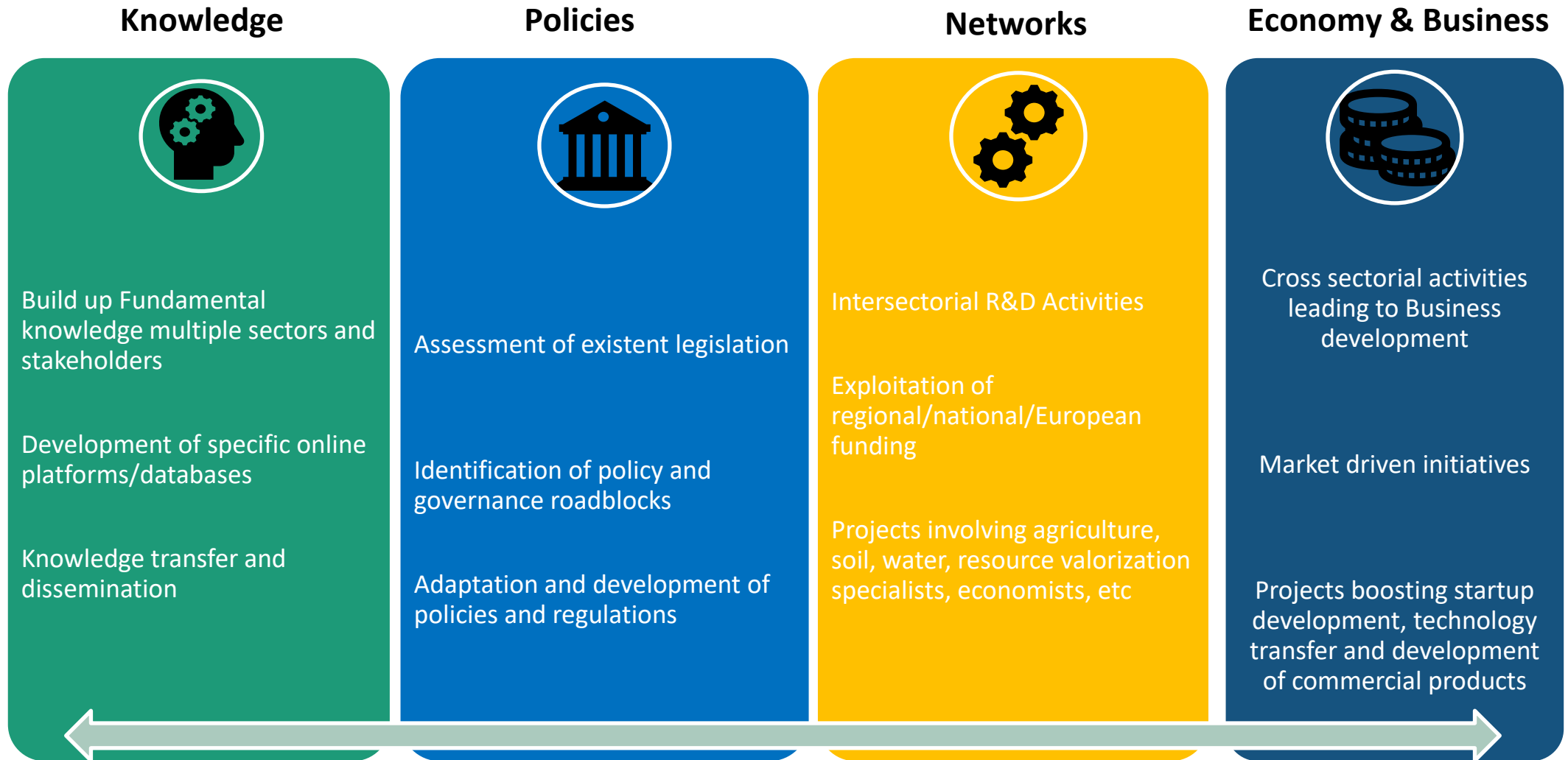
EUROPEAN AND PORTUGUESE CONTEXT

European & Portuguese Bioeconomy Sustainability 2030 Strategies aligned and integrated into the 2030 Portuguese Strategic Agenda



Bioeconomy

Enablers for Implementation of 2030 Portuguese Strategy





BIOECONOMY

PUBLIC POLICIES, INSTRUMENTS AND MECHANISMS

Direct regulations:

- Waste management, separation, classification
- 1^o and 2^a Industries Category Subproducts (waste to secondary by-product)
- Implementation of restricted areas (ecological zoning)
- Chemical fertilizer restrictions
- Regulations for manure, wastewater and agro-industry effluents management

Economic instruments:

- Financial incentives supporting associate/collaborative groups
- Rural development incentives for sustainable farming
- Systems/technologies/practices leading to decarbonization, waste fees, etc
- Specific loans, grants, subsidies, feed-in tariffs, tax incentives, premiums and general R&D funds

Voluntary Instruments:

- Voluntary certification schemes, labelling (e.g. organic farming)
- Development of platforms for info-sharing and communication
- Capacity building and knowledge build-up initiatives



National Plan for Carbon Neutrality 2050 (RNC2050)



Strategic Plan for the Common Agriculture Policy (PEPAC 2021-2027)



- European Strategy for Reduction of Methane emissions



National Strategy for Farm and Agroindustrial effluents (ENEAPAI) 2030

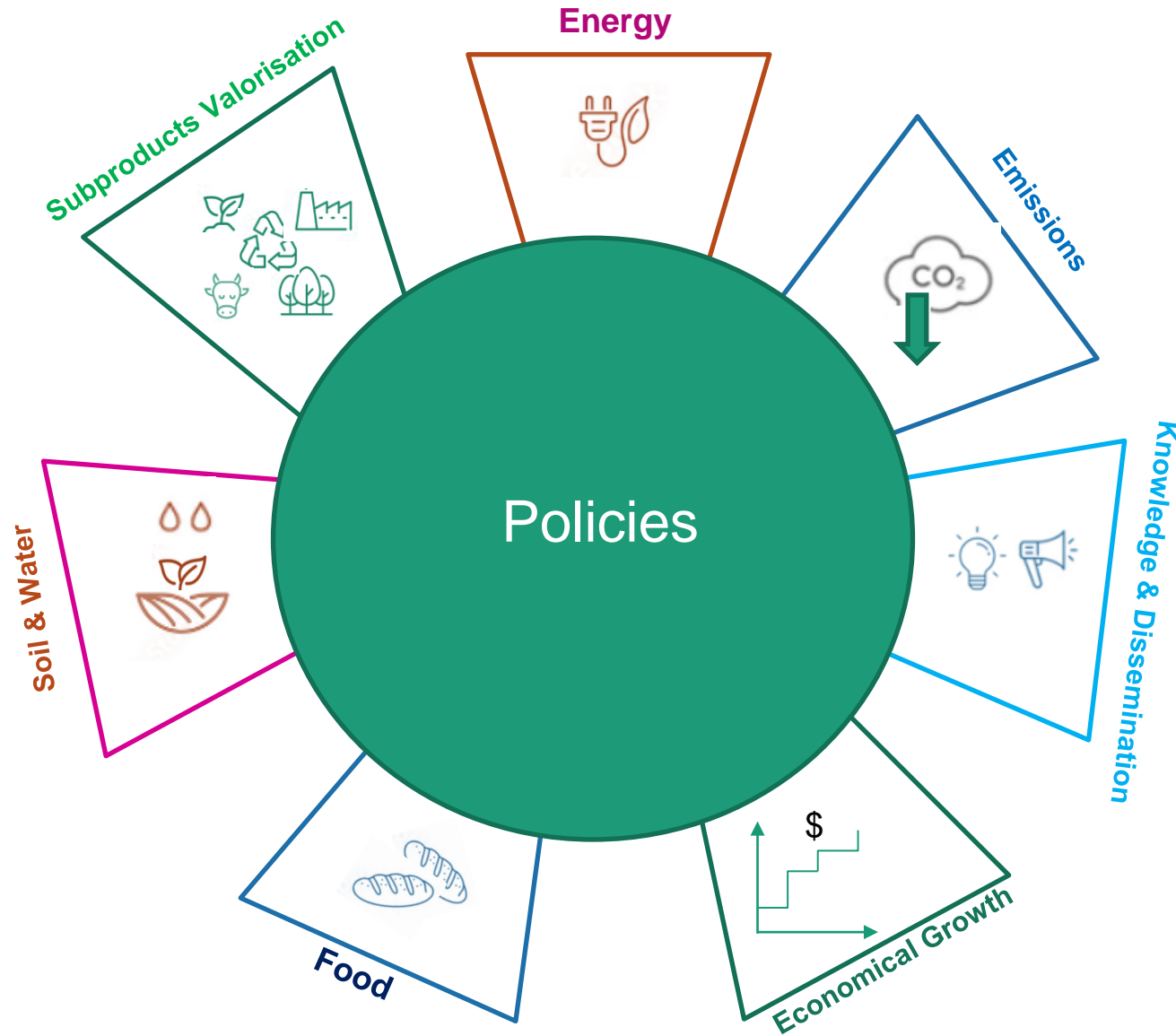


National Plan for Energy and Climate 2021-2030 (PNEC2030)



Portuguese Agenda for Agriculture Innovation

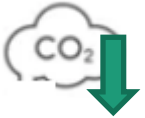
- National Plan for the promotion of Biorefineries
- Fertilizer Regulations (Regulamento (CE) nº. 2019/1009 de 25 de Junho de 2019)





Food

- Target 20% increase of Mediterranean diet
- Initiatives leading to a more sustainable, efficient and economically balanced agriculture
- Enhancement of use of Precision agriculture, Digitalisation, Biotechnology
- Improvement of soil quality and overall crop yield by the application of organic matter as soil fertilizer



Energy & Emissions

- Increase energetic efficiency and increase annual agriculture renewable energy consumption by 47% till 2030
- Reduce Greenhouse gas emissions by 85% (in comparison with 2005)
- Overall reduction of emissions in the agriculture sector
- Reduce emissions associated with farming and fertilizer usage
- Apply agriculture management practices promoting carbon capture (e.g. biodiverse pasture and regenerative agriculture)
- Capture of 13 million tons of carbon within the agriculture and forestry sectors



Sub-product valorisation & Effluents Management

- Valorisation and new business models for residual agro-industry, forestry and agriculture biomass
- Establish valorization schemes for agropecuary and agro-industrial waste
- Develop suitable management schemes agroindustry effluents (recovery, treatment, reuse and valorization)



Research and Development, Knowledge Build-up and transfer

- Increase R&D investments by 60% and general reinforcement from R&D on the areas of relevance for Bioeconomy
- Promote initiatives to boost training, literacy and overall communication to civil society and other relevant stakeholders (sustainable agroindustry practices, bioeconomy, resource valorization, decarbonization and other relevant topics)

The background of the slide is a close-up photograph of parched, cracked earth. The soil is a reddish-brown color and has formed a complex network of irregular, polygonal cracks that extend across the entire frame. The lighting is somewhat uneven, with darker shadows in the crevices and lighter highlights on the raised edges of the soil plates.

BIOECONOMY

FUTURE APPROACHES SUPPORTING A SUSTAINABLE DEVELOPMENT

Climate change and further reduction of water availability

reevaluate, adapt and optimize current legislation, considering a multisectorial approach (agriculture, tourism, industry, etc.)

Soil quality restoration

define adequate European and National procedures to monitor soil quality

define appropriate measures, policies and instruments to ensure soil quality improvement and restoration

Biomass

develop and implement solutions to regulate competition between the use of biomass in different sectors (food, energy)

Land & Water Management

develop mechanisms to regulate land and water management across different value chains (agriculture, industry, etc)

Cooperation

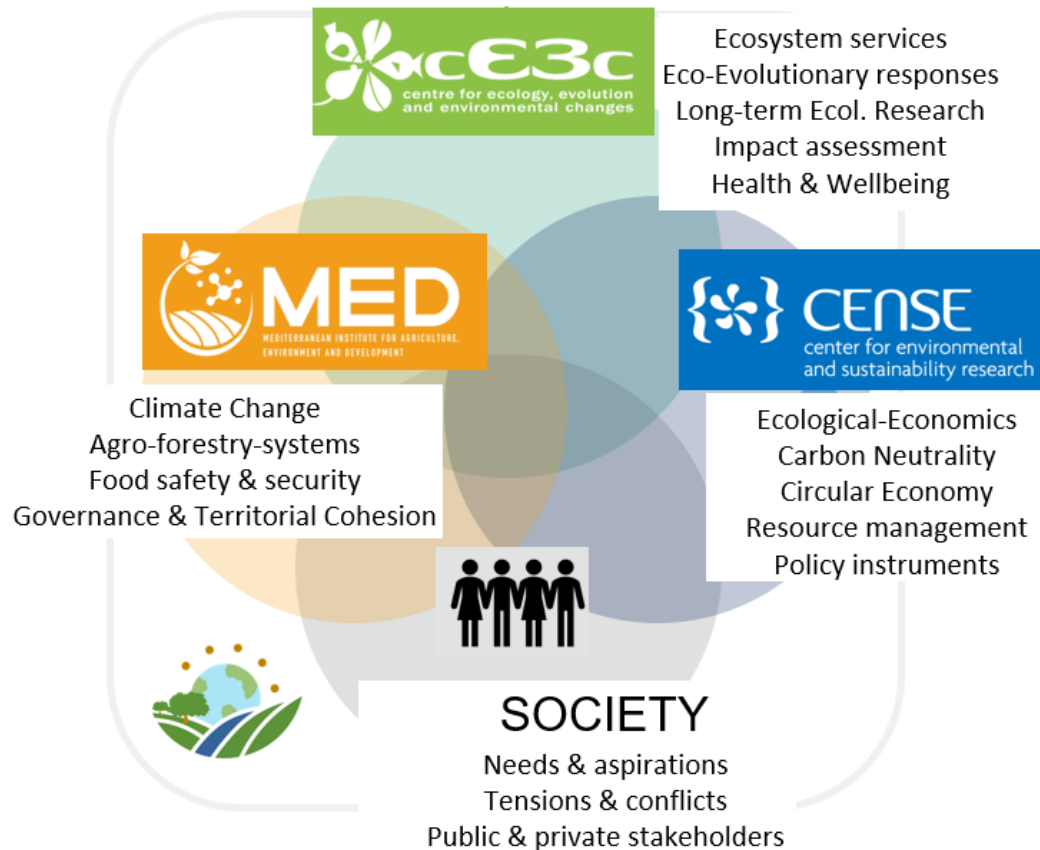
Fostering interministerial cooperation, policy coherence and coordination at different levels (local, regional, national, EU, international)

Knowledge

Create, make available and disseminate knowledge supporting Bioeconomy development (Academia, Industry, Civil Society, other)

CHANGE – Global Change and Sustainability Institute

R&D Centers, Mission and Vision



MISSION

Deliver realistic policy solutions contributing to environmentally-friendly, resource-efficient and competitive economies under current and future global changes.

VISION

Become the go-to R&I hub for developing, evaluating and operationalizing innovative and improved public policies with impacts on Global Change and Sustainability.