

SESSION 1

RAISING AWARENESS FOR THE TRANSFORMATION TOWARDS A SUSTAINABLE BIOECONOMY

BIOECONOMY IN SPAIN AND IN ITS EUROPEAN PRESIDENCY

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THE BIOECONOMY SECTOR IN SPAIN

As reported by the JCR for 2008-2020:

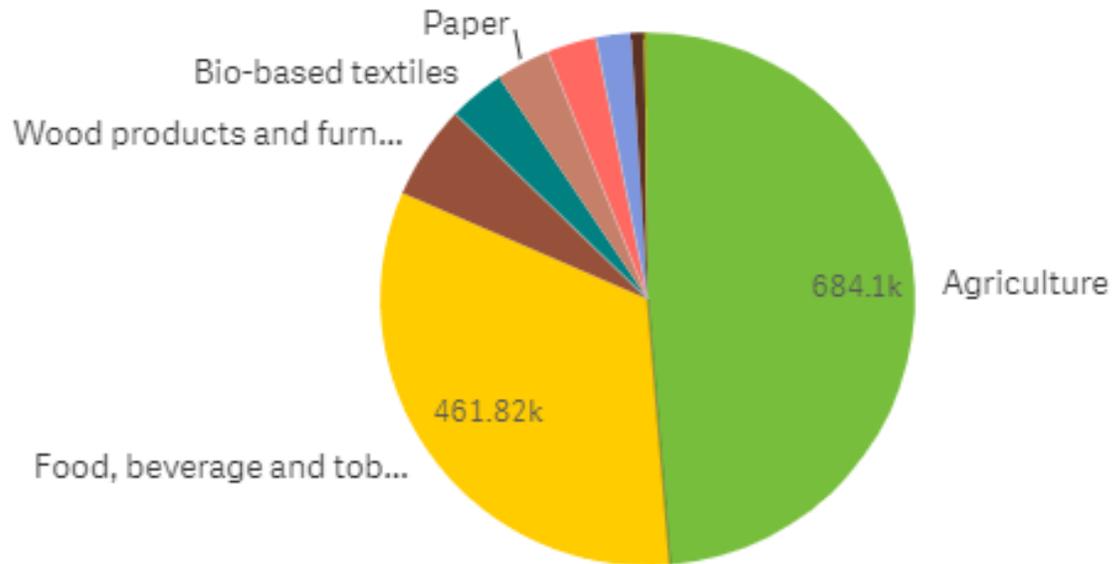
<https://datam.jrc.ec.europa.eu/datam/mashup/BIOECONOMICS/index.html>

(consulted in August 1, 2023)

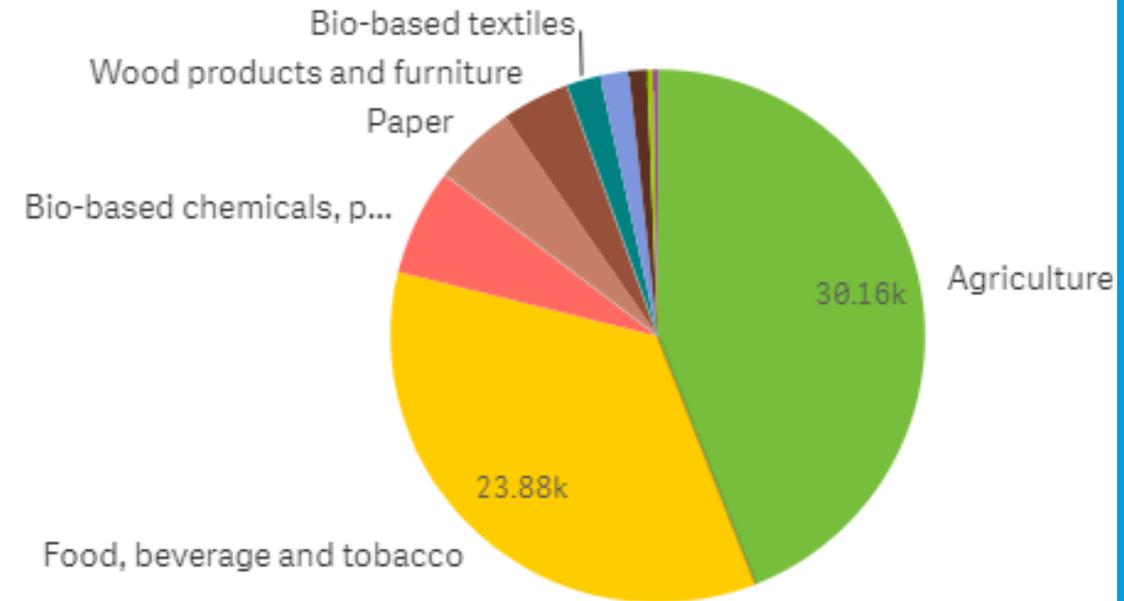
COMPARING THE EU (17 M EMPLOYEES AND 665 G€ VALUE ADDED) AND SPAIN (1.4 M EMPLOYEES AND 69 G€ VALUE ADDED)

- High value added per person in 2020: 49 k€ for Spain vs. 39 k€ for EU
- Slightly decreasing employees since 2008, increasing added value

Employment by sector in Spain (2020)
(number of people employed)



Value added by sector in Spain (2020)
(million €)



COMPARING THE EU (17 M EMPLOYEES AND 665 G€ VALUE ADDED) AND SPAIN (1.4 M EMPLOYEES AND 69 G€ VALUE ADDED)

- Great potential for growth in Spain (and the EU):
 - Bio-based chemicals
 - Paper
 - Electricity
 - Bio-fuels
 - Aquaculture

SCIENTIFIC PRODUCTION IN BIOECONOMY IN SPAIN: 2005-2014

A report by FECYT, using keywords in Elsevier on Scopus data

A BIBLIOMETRIC ANALYSIS

- Bioeconomy: 0.8% of the scientific production in the world (19 k publications in 2014)
- World leaders (2005-2014): USA (23%), CHN, IND, BRA, GBR, **DEU (4.8)**, AUS, CAN, **ESP (4.3)**, **FRA (3.9)**...
- Bioeconomy research represents 0.64% of publications in USA, 2.06% in BRA, **0.52% in DEU**, **0.96% in ESP** and **0.59% in FRA**
- World Institutions in bioeconomy: USDA, Agrofood Canada, **INRA**, **WUR**, CAS, CAU, UFL, **CSIC**, CAAS, Embrapa

DOCUMENTS PRODUCED IN SPAIN



- More documents, a bit more share

0,9%	0,9%	0,9%	0,9%	1,0%	0,9%	1,0%	1,1%	1,0%	1,0%
390	442	476	508	595	572	738	803	789	765

■ Porcentaje ■ Número de documentos

SPANISH PUBLICATIONS AMONG 10% MOST CITED



- Large increase in number
- Moderate increase in percentage

WHO IS WHO IN SPANISH BIOECONOMY RESEARCH?

- CSIC
- Universidad Cordoba
- Universidad Politécnica de Madrid
- Universidad de Almería
- Universitat de Lleida
- IFAPA
- IRTA
- Universidad Politécnica de Valencia
- IVIA...

INTERNATIONAL PARTNERS OF SPAIN

- By countries: USA, GBR, **ITA, FRA, DEU, NLD**, MEX, BRA, PRT, ARG
- By institutions: **INRA, WUR**, UC Davis, USDA, UFL, **JCR**, Rothamsted Research, U Buenos Aires, **CNR, CNRS**...

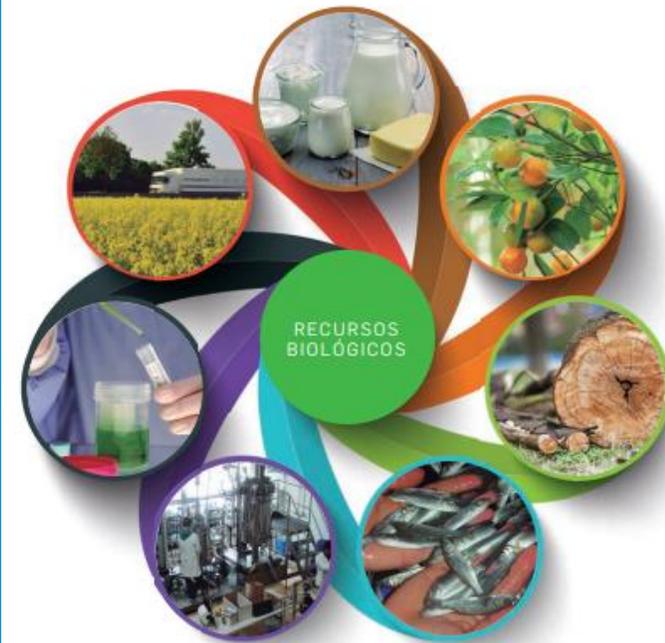
SPANISH STRATEGIES ON BIOECONOMY

Published in 2015, planned investments of 0.7 G€ till 2020

BIOECONOMY STRATEGY (2015): HORIZON 2030

SOME OF ITS OBJECTIVES

- Improve competitiveness and internationalization of Spanish companies
- Keep bioeconomy as a key economic sector in Spain, an area of strategic innovation
- Foster cooperation and dialogue: government, industry and society
- Identify and remove barriers to its expansion, integrating support tools
- Facilitate the internationalization of companies
- Contribute to rural development and diversification
- An observatory has been set up
- In addition: regional bioeconomy strategies



Estrategia española
de Bioeconomía
Horizonte 2030

THE STRATEGY FOR THE DIGITALIZATION OF AGRIFOOD AND FORESTRY SECTORS (2019)

- Ministry of Agriculture supporting developments in Bioeconomy
- Objectives:
 - Reducing the digital divide
 - Boost the use of data
 - Impulse related entrepreneurship
- Currently implementing its second action plan (2021-2023)
 - Initial funding of 64 M€
 - Additional funds from the Recovery and Resilience Facility... great impulse to digitalization, largely exceeding the original funds
 - For instance, the Agrifood project, RRF funds in excess of 1 G€
- An observatory has been set up
- Connected to calls for Operative Groups (EIP-Agri)

**DIGITISATION
STRATEGY
FOR THE
AGRI-FOOD AND
FORESTRY SECTOR
AND RURAL AREAS**

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD



BIOECONOMY IN THE CURRENT EU PRESIDENCY OF SPAIN



PRESIDENCIA ESPAÑOLA
CONSEJO DE LA UNIÓN EUROPEA

THE PRIMA INITIATIVE



- Supporting research in bioeconomy-related topics:
 - Water management
 - Farming systems
 - Agri-food value chain
 - The Water – Energy – Food – Environment nexus
- So far: 202 projects, 1914 beneficiaries, 286 M€
- Presidency proposals:
 - Extension from 2024 to 2027 (within Horizon Europe)
 - Complete financial allocation: 220 M€ in H2020; 105 M€ in HE (matched by participant countries)
 - Beyond 2027: Continuation? Additional areas (energy, environment, health and even blue economy, forestry)?

ENVIRONMENT

FOREST MONITORING AND CIRCULAR ECONOMY

- Forest monitoring initiative (proposal for a regulation)
 - Develop a forest observation framework
 - Open access to information on the condition, management and provisions of forests
 - Data-driven decision-making and sustainable management
 - September?
- Priorities for the Environment: circular bioeconomy
 - Revision of the waste management directive: food and textile waste
 - Reinforce policy on oceans (climate, biodiversity...)
 - Water management: circularity, drought, soils...
 - Biodiversity: EU implementing COP15 results

CONTRIBUTING TO THE HORIZON EUROPE STRATEGIC PLAN (2025-2027)

- Promoting resilience of agriculture, forestry, fisheries and aquaculture: climate challenges and food/water security
- Circular bio-based sectors, integrated water resources management
- Biodiversity recovery; securing ecosystem services
- Healthy natural resources for circular, sustainable bioeconomy
- Fostering social and technological innovation across sectors
- Involving civil society in the development of circular (bio) economy
- Development of large-scale, digital, circular systems for water, addressing pollution upstream, nutrient recovery
- Farming: reducing the use of chemicals, alternative models, low pollution
- Sustainable, low footprint, healthy, safe, secure, inclusive and resilient food systems, protein
- Sustainable fisheries and aquaculture
- Transformation of value chains: digital, securing access to food by citizens
- Funding the Soils, Oceans and Water missions... bioeconomy components

CONTRIBUTING TO THE HORIZON EUROPE STRATEGIC PLAN (2025-2027)

- Connecting to Partnerships:
 - Water4All
 - Biodiversa+
 - Circular Bio-based Europe
 - Agro-Ecology
 - Animal Health and Welfare
 - Safe and Sustainable Food Systems for People, Planet and Climate
 - Sustainable Blue Economy
 - ...

CONCLUSIONS

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- Bioeconomy in Spain and Europe:
 - A sector with high added value per person
 - Potential for growth in bio-based chemicals, paper, electricity, bio-fuels, aquaculture
 - Very good international position on Bioeconomy R&I
 - Some key R&I players in the EU
 - International R&I cooperation of Spain: mostly in the EU, with relevant connections outside
 - R&I strategies for bioeconomy being implemented
- Bioeconomy in the Spain EU Presidency:
 - PRIMA extension: 2027 and beyond? Including additional topics?
 - Finalizing the Forest Monitoring Initiative
 - Supporting bioeconomy research in the new HE Specific Programme and Partnerships
 - Bioeconomy in the Agenda... In the context of environmental protection, circular economy and empowering missions and partnerships



Thanks!