

PA #8 The Spanish Bioeconomy and supporting knowledge on the transition to a local circular bioeconomy

The Spanish Bioeconomy sector encompasses the food and agriculture sector, forestry, water, bioenergy, and biomaterials sector employing 1.44 million people and an added value of €69 billion. Spanish Bioeconomy market represents near 6 to 7% GDP, and 9% of total national employment.

The main bioeconomy sector in Spain (according to turnover) is the food, feed, and beverages (55.8%) and agriculture (23.5%) sectors accounting also for the majority of biomass supply and use. These are still largely dependent on linear production systems though increasing efforts are being made towards sustainable use and sustainable production.

Forest and shrublands represent 50.1% of the Spanish surface, being agriculture 47.1%. Notwithstanding the large forestry area, forestry represents only a small fraction of the turnover, barely 1%.

This sector has a potential for expansion given the need for more sustainable management of forests to adapt to climate change and adopt fire prevention and measures for habitats resilience. Furthermore, this sector provides most of the biomass supply for Pulp and paper (5.9% of turnover) and Wood and furniture sector (4.2%).

Turnover by sector in Spain (2019)

(million €)

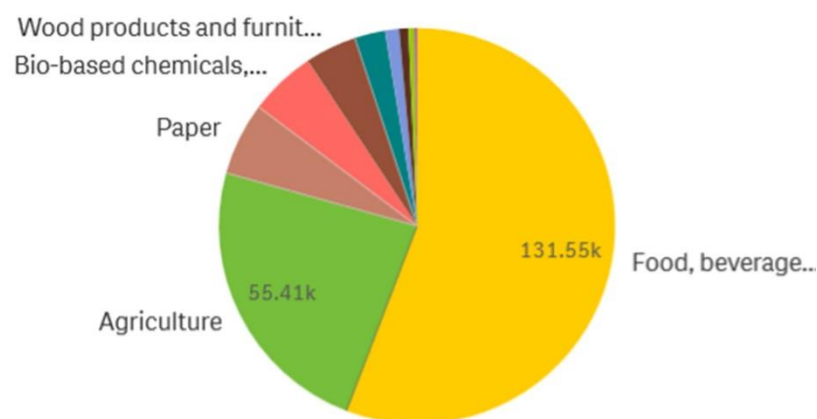


Figure 1: Turnover by Sector | Spain

Employment by sector in Spain (2019)

(number of people employed)

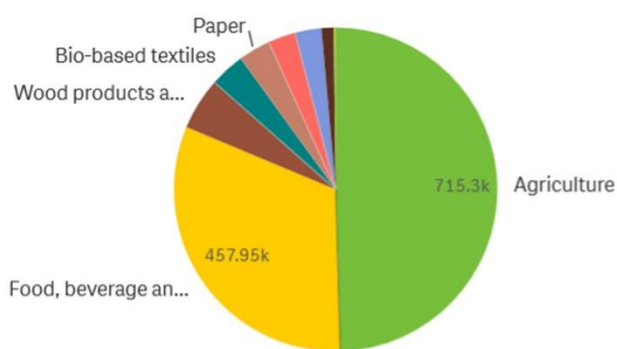


Figure 22: Employment by Sector | Spain

Value added by sector in Spain (2019)

(million €)

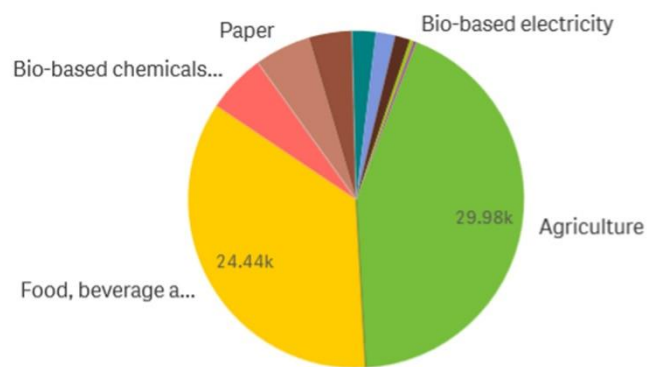


Figure 3: Value added by Sector | Spain

In general, bioeconomy trend is growing, though a deceleration occurred after 2008 (due to the Global Financial Crisis – GFC), recovered shortly afterwards in terms of turnover figures, though employments on 2020 have not been fully recovered. Food and beverage sector, biobased chemicals and agriculture have recovered and grown steadily afterwards, though other sectors like wood, furniture or fisheries have not reached the figures from previous periods, denoting a structural change in the behavior of these economic sectors (also affected by other conjunctural factors like global market, or bilateral treats).



Bioeconomy attains rural areas as the land where resources and a relevant part of the bioeconomy sector develops its activity. These rural areas currently face the challenge of revitalizing the aged population. The digitalization for improved competitiveness, and the adaptation to the already impacting effects of climate changes are as well a key challenge for a sustainable, modern, and resilient development of the sectors embraced by the bioeconomy.

Spain counts with a National Bioeconomy Strategy published in 2015, with 2 action plans in documents published in 2016 and 2018. These strategic plans have been followed by a wider and considered more referential strategy, the Spanish Circular Economy Strategy Spain Circular 2030. Bioeconomy as a habilitating strategy has been developed in several regions, where it marks specific objectives, though not every region counts with such planning. Bioenergy is included in the Spanish National Energy and Climate Plan (NECP), under review during 2023, and roadmaps have been developed for biogas and hydrogen.



Figure3: Spanish Rural Area

