

Research Summary Sheet

Enabling the bioeconomy uptake with an approach to develop sustainable regional business concepts for co-products valorization

Context and Challenges

The NoAW project focuses on the development of sustainable innovative approaches to create added-value by converting unavoidable agricultural waste into eco-efficient bio-based products, in a cascading approach and with respect of the nutrient cycle. Designing regional sustainable business and marketing concepts for cross-sectorial valorisation of agro by-products is a real challenge as it implies many actors and knowledge from multiple domains.

Results and Applications

An holistic eco-innovative approach allowing to develop the most fitting regional business concepts to ensure long term sustainability in real industrial context has been developed and applied to 2 NoAW values chains. All the relevant techno-economic and environmental insights demonstrated along the NoAW project have been valorized via a strategic approach relying on the Business Model Generation methodology and the collective intelligence. 2 business concepts are described including relevant actors, organizational set-up, infrastructures and investment efforts, material flows, key sustainability indicators, key transversal success factors, potential legal entities and financing model, SWOT analysis, suggested policy levers and mapping of the European potential.

Breakthroughs, benefits and added value

An examples of potential identified is a regional business concept for manure/straw valorisation into bioenergy and biodegradable biobased plastic as alternative to fossil-based plastics for niche markets where biodegradability is an asset, for instance for mulching films in agriculture; or a regional business concept for polyphenol extraction from wine pomaces for future usages in active packaging combined with the use of the residues for energy production (biogas) or filler application (biomaterials).

Further information on NoAW project: http://noaw2020.eu

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