



## 01 THE CHALLENGE

Bioeconomy is a major opportunity for regional and local communities. Despite broad political agreement, the potential of many European regions to develop a thriving circular bio-based economy, better deploying their own resources remains largely untapped.

New, sustainable technology options or business models suitable for local deployment are needed. Supporting new bio-based value chains and business models through raising awareness activities, knowledge development (studies), clustering and networking is a central focus of several Coordination and Support Actions.



## 02 HOW COORDINATION AND SUPPORT ACTIONS (CSAs) ADDRESS THE CHALLENGE

### Platform and cluster development

**BIOPEN** aims to support collaboration and knowledge sharing in the bio-based industry and to stimulate the setup of co-innovation partnerships for the development of new products and markets. Key asset of the project is an actively managed online **innovation platform** capable to involve industries, research centres and universities, and offering support actions including matchmaking among project ideas and stakeholders for joint development, funding opportunities, sharing of information etc.

**ICT-BIOCHAIN** aims to identify opportunities for the introduction of ICT, Internet of Things and Industry 4.0 to increase the efficiency and sustainability of high potential biomass supply chains for the bio-based industry. The project develops Digital Innovation Hubs within two test bed bioeconomy regions: South East Ireland and Andalusia. The hub includes a bioresource modelling platform with two components: (1) statistical data on regional biomass availability (2) social network connecting ICT providers and users.

**Bio-Reg** created the **European Wood Waste Platform**, a platform of stakeholders who are able to influence and develop their regions towards bio-based industries and products. Model regions include Gothenburg (SE), Baden-Wurttemberg (GE), Lombardy, Emilia-Romagna (IT), North West England (UK) and Vorarlberg and Syria (AT). Recipient regions include: Normandy (France), Lublin (Poland), Andalusia (Spain). The platform provides information on the expected evolution of the regulatory and normative framework (regulatory watch), or structural trends (cascade use, carbon storage, circular economy, etc.).

In cooperation with **BIO-TIC**, **BioBaseNWE** (Interreg) set-up a partnering platform the BIO-TIC/Bio Base NWE Technology Database.



### Business models

POWER4BIO and BE-RURAL share the overall goal of exploring the potential of regional and local bio-based economies.

- **POWER4BIO** developing a catalogue of business model pathways to fully realise the bioeconomy potential of its ten partner regions.
- **BE-RURAL** supporting relevant actors in the participatory development of bioeconomy strategies, roadmaps and business models.

**RUBIZMO** supports rural business success across Europe and is funded to identify the vital ingredients for developing rural entrepreneurship through the replication of successful business ideas. It identifies business models with high potential for empowering rural communities to take advantage of the opportunities arising from improved value chain optimisation. First tools and findings, including a Beta-version of a library of business cases, were published online in December 2019.





**ENABLING** aims to support the spreading of best practices and innovation in the provision (production, pre-processing) of biomass for the bio-based industry. In particular, ENABLING is collecting several cases of business models of circular economy in different value chains.

## Supporting (new) value chains

**Biobridges** has the objective to support the establishment of at least 2 new cross-cutting interconnections in bio-based economy clusters and define replicable procedures and good practices leading to the establishment of new cross-sector partnerships and business opportunities.

## Beyond Coordination and Support Actions (CSAs)

Various further EU-funded projects support the development of (new) value chains.

**SuperBio** (H2020) supported promising cross sectorial and **cross border new bio-based value chains** by offering to SMEs, vouchers to be spent on technical and non-technical innovation support services, including: scale-up and proof-of-concept, IP support, life cycle assessment, techno-economic appraisal, feedstock analysis, market research, sustainability appraisal, regulatory landscape evaluation, business planning, access to investors and grant writing. The project developed 41 new and innovative value chains with EU companies.

**DanuBioValNet** (Interreg) targeted the establishment of cross-clustering partnerships in order to boost eco-innovation and to develop a joint bio-based value added network in the Danube Region. Development of new cluster services was a key element in supporting cluster members in becoming more innovative and more competitive in the context of the new industrial value chains and in particular in the bio-based industry. The project is focused on bio-based value chains with high potential, including Phytopharma, Eco-construction, Bio-based packing (bioplastic). DanuBioValNet developed new methods, strategies and tools to **connect Danube actors in a bio-based industry**, and produced a library containing action plans, toolkits/toolboxes, different reports, value chains.

**AlpBioEco** (Interreg) targets the valorisation of innovative bio-economical potentials along bio-based food & botanical extract value chains in the Alpine Space. Especially apple pomace, walnut press cakes and herbal extract by-products are valuable leftovers from for new bioeconomic applications. AlpBioEco contributes to the framework conditions for innovation, resulting in eco-innovative business ideas and concepts for small and medium-sized enterprises in the Alpine region.

**Baltic For Bio** (Interreg) will produce a GIS platform and database for producing spatially explicit estimates of forest biomass potentials, and innovative **business models** for developing small-scale forest bioenergy plants in rural area in the Baltic Sea Region.



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## 03 MAIN OUTCOMES FROM THE COORDINATION AND SUPPORT ACTIONS (CSAs)

- Online platforms/clusters supporting the development of new bio-based products and the creation of value chains, supporting co-innovation partnerships, facilitating knowledge sharing across European bioeconomy regions, promoting good practices and inspiring examples.
- Catalogues of replicable business models pathways to fully realise the rural/regional bioeconomy potential.
- Identify and address cross-collaboration and implementation challenges along the value chain.
- Identify and facilitate the creation of cross-sectorial and cross-border new bio-based value chains.

## 04 GAPS TO BE ADDRESSED

- There is a lack of awareness and understanding about emerging opportunities and replicable business models, as well as a lack of skilled workforce along the value chains;
- Need for a supportive environment promoting integrated solutions for full biomass valorisation into diverse and cross-connected value chains;
- Involvement of all actors along the value chain, in particular primary producers (feedstock suppliers) and investors, is needed;
- Need for innovative, scalable, transferable and replicable business models that match local realities to adapt global ideas and process to local conditions, resources and mindsets;
- Need for impact assessment studies to validate the applicability of new business models;
- There is a need to make less-mature (but long-term promising) value chains competitive with markets that are incentivised (like biogas).

## 05 RECOMMENDATIONS









- A collaborative **assessment of the different business models** and value chains proposed by the above-mentioned projects could be conducted, to generate insights and recommendations for new bio-based value chains. The outcome of this exercise could be consolidated in an **online catalogue of business models** based on different feedstocks with high potential.
- **Raise awareness, educate, showcase and demonstrate** the added value of new business opportunities and scalable innovative business models to primary producers and industries to drive the transition, create new value chains and attract investments.
- Successful concepts and initiatives **stimulating networking** and knowledge transfer should be continued and replicated in different contexts.
- Build regional **multi-stakeholders** bioeconomy hubs engaging different types of stakeholders, representing the quadruple helix (QH) stakeholders as well as actors from along the value chains, to create a critical mass, decrease risks and address hurdles and barriers.
- Support initiatives interconnecting different value chains **for promoting full biomass valorisation** to create more resilient, effective and sustainable ecosystems for the Bioeconomy (logistics, dialogue and collaboration e.g. between farmers and industries, technology transfer, et cetera).





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## COORDINATION AND SUPPORT ACTIONS (CSAs) IN A NUTSHELL

Acronym/logo	Programme	Duration	Website
 <b>BIOPEN</b>	BBI JU	May 2017 – Oct 2019	<a href="http://www.biopen-project.eu/">www.biopen-project.eu/</a>
 <b>ICT - BIOCHAIN</b>	BBI JU	June 2018 – May 2020	<a href="http://ictbiochain.eu">ictbiochain.eu</a>
 <b>biobridges</b>	BBI JU	Set 2018 - Aug 2020	<a href="http://www.biobridges-project.eu">www.biobridges-project.eu</a>
 <b>BioReg</b> <small>GIVE WOOD WASTE A SECOND LIFE</small>	H2020	Jan 2017 – Dec 2019	<a href="http://bioreg.eu/project">bioreg.eu/project</a>
 <b>POWER4BIO</b> <small>REGIONS FOR BIOECONOMY</small>	H2020	Oct 2018 - March 2021	<a href="http://power4bio.e-p-c.de">power4bio.e-p-c.de</a>
 <b>BE-Rural</b>	H2020	April 2019 - March 2022	<a href="http://be-rural.eu">be-rural.eu</a>
 <b>Rubizmo</b>	H2020	May 2018 – Apr 2021	<a href="http://rubizmo.eu">rubizmo.eu</a>
 <b>Superbio</b>	H2020	June 2016 – Mar 2019	<a href="http://www.h2020-superbio.eu/">www.h2020-superbio.eu/</a>
 <b>Interreg</b> <small>Danube Transitional Programme DanuBioValNet</small>	Interreg B	Jan 2017 – June 2019	<a href="http://www.interreg-danube.eu/approved-projects/danubiovalnet">www.interreg-danube.eu/approved-projects/danubiovalnet</a>
 <b>Interreg</b> <small>Alpine Space</small>	Interreg B	Apr 2018 –Apr 2021	<a href="http://www.alpine-space.eu/projects/alpbioeco/en/home">www.alpine-space.eu/projects/alpbioeco/en/home</a>
 <b>Interreg</b> <small>Baltic Sea Region</small>	Interreg B	Oct 2017 – Sep 2020	<a href="http://www.slu.se/balticforbio">www.slu.se/balticforbio</a>
 <b>enabling</b>	H2020	Dec 2017 – Nov 2020	<a href="http://www.enabling-project.com">www.enabling-project.com</a>

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## RESOURCES

Innovation platform – Accelerating and supporting business development of bio-based industries and downstream sectors.

**BIOPEN project**

<https://www.biopen-project.eu/>

European Wood Waste Platform. **BIOREG project**

<https://www.bioreg.eu/platform/>

DANUBIOVALNET Library – Methods, strategies and tools to connect Danube actors in a bio-based industry. **DanuBioValNet project**

<http://www.interreg-danube.eu/approved-projects/danubiovalnet/outputs>

This factsheet has been developed by the LIFT project with the information collected from desk research and interviews to the Coordination and Support Actions or similar projects funded by European programmes such as FP7, H2020, BBIJU and Interreg.

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