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Common Action Plan towards better framework conditions for bio-based eco-innovation in Danube Region

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For further information about the DanuBioValNet project, you will find a short description in this document. To learn more and to download additional resources please refer to the project website <http://www.interreg-danube.eu/approved-projects/danubiovalnet>. The information is provided without assuming any legal responsibility for correctness or completeness. The data presented in the report are based on the information given by the project partners.

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List of abbreviations

ASP	Associated Strategic Partner
BIIE	Bio-Based Innovation Express
BW	Baden-Württemberg
DTP	Danube Transnational Programme
ERDF	European Regional Development Fund
EU	European Union
IPA	Instrument for Pre-Accession
JBCS	Joint Bio-based Industry Cluster Policy Strategy
LP	Lead Partner
OSIA	Open Space Innovation Arena
PLA	Policy Learning Arena
PP	Project Partner
R&D	Research and Development
RIS3	Research and innovation smart specialisation strategy
SME	Small and Medium Enterprise
S3	Smart Specialisation Strategy

Glossary

Bioeconomy	Bioeconomy is 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. Its sectors and industries have strong innovation potential due to their use of a wide range of sciences, enabling and industrial technologies, along with local and tacit knowledge. (Source: European Commission (2012). <i>Innovating for Sustainable Growth: A Bioeconomy for Europe</i> , p. 3)
Cluster	Clusters are geographic concentration of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (for example, universities, standards agencies, and trade associations) fields that compete but also cooperate. (Source: M. Porter (1998). <i>On Competition, Updated and Expanded Edition</i> . Harvard Business Review Book, p. 213)
Cluster initiative	Cluster initiatives are organised effort to increase the growth and competitiveness of a cluster within a region, involving cluster firms, government and/or the research community. (Source: Ö. Sölvell, G. Lindqvist and Ch. Ketels (2003). <i>The Cluster Initiative Greenbook</i> , p. 9)
Cluster organisation	By a cluster organisation one should understand organised efforts to facilitate cluster development, which can take various forms, ranging from non-profit associations, through public agencies to companies. (Source: PricewaterhouseCoopers (2011). <i>Uncovering excellence in cluster management</i> , p. 6) Cluster management can be defined as the organisation and coordination of the activities of a cluster in accordance with certain strategy, in order to achieve clearly defined objectives. (Source: PricewaterhouseCoopers (2011). <i>Uncovering excellence in cluster management</i> , p. 3)
Cluster participants	Cluster participants are representative's industry, academia or other intermediaries, who are commonly engaged in a cluster initiative. Given the case a cluster initiative has a certain legal form, like association, cluster participants are often called cluster members.
Cluster Policy	Cluster policy is an expression of political commitment, composed of a set of specific government policy interventions that aim to strengthen existing clusters and/or facilitate the emergence of new ones. Cluster policy is to be seen as a framework policy that opens the way for the bottom-up dynamics seen in clusters and cluster initiatives. This differs from the approach taken by traditional industrial policies which try (and most often fail) to create or back winners. (Source: European Commission (2016). <i>Smart Guide to Cluster Policy, Guidebook Series: How to support SME Policy from Structural Funds</i> , p. 11).
Eco-innovation	Eco-innovation aiming at significant and demonstrable progress towards the goal of sustainable development. Eco-innovation projects will therefore aim to produce quality products with less environmental impact, whilst innovation can also include moving towards more environmentally friendly production processes and services. Ultimately, they will contribute towards

the reduction of greenhouse gases or the more efficient use of various resources. (Source: European Commission (2015). Eco-innovation, When business meets the environment. *FAQ: What is Eco-Innovation?* Online).

Programme

Programmes are a vehicle to implement a policy, e. g. funding programme for R&D in environmental technology. In addition to programmes, policies are also implemented through regulation (= regulatory framework, e. g. law on consumer protection).

Smart Specialisation Strategies – S3

Smart Specialisation is a strategic approach to economic development through targeted support for research and innovation. It involves a process of developing a vision, identifying the place-based areas of greatest strategic potential, developing multi-stakeholder governance mechanisms, setting strategic priorities and using smart policies to maximise the knowledge-based development potential of a region, regardless of whether it is strong or weak, high-tech or low-tech. (Source: Foray (2015). *Smart Specialisation, Opportunities and Challenges for Regional Innovation Policy*, Routledge).

Value Chain

The value chain describes the full range of activities that firms and workers do to bring a product from its conception to its end use and beyond. A value chain refers to the full lifecycle of a product or process, including material sourcing, production, consumption and disposal/recycling processes. This also includes activities such as design, production, marketing, distribution and support to the final consumer. (Source: University of Cambridge (2017). *What is a value chain? Definitions and characteristics*. Online).

DanuBioValNet Project

The DanuBioValNet project is aiming at establishing bio-based industry networks across the Danube Region. The emerging transnational cooperation of clusters will foster bio-economy and eco-innovations and lead to a strengthening of the regional economies. Consequently, with this project the partners pursue a strong strategic orientation beyond the immediate and medium-term economic objective of strengthening the regional economy. It is the strategic goal to establish cross-border strategic partnerships, particularly in developing regions, with the help of powerful cluster organisations. In this way, project results will be sustained beyond an immediate effect and the creation of strategic investments, especially in emerging industries such as the bio industry, will be enabled and facilitated. This will be achieved mainly by newly emerging or transforming value-added chains, which are increasingly being transnationally established and further developed as a result of the increasing internationalisation of value-added processes.

In this way, long-term economic effects are achieved, based on a network of agile clusters, which prepare the investment approaches in a targeted manner and implement them with high efficiency. One example of the present project is the establishment of bio-refineries in the regions, which can form a strategic technological backbone of a successful independent bio-industry.

The partners intend to develop and implement a long-term, industry-driven roadmap for such collaboration along the entire value chain based on cluster partnerships for these processes. With the project, a pilot function of the implementation is taken over and the prerequisite for creating a blueprint for similar and similar cross-national cooperation, also in other industries, is created.

For achieving these tasks, 17 project partners from 10 countries have joined forces. The project will pave the way from an economy based on fossil resources towards an economy using renewable resources. The striving of the partners to minimise greenhouse gases and resource-saving as well as resource-efficient utilisation of available biomass will result in synergistic effects. These effects will improve the sustainability, regional development through diversification of the local economy and will also positively affect the workforce. The development of new bio-based value chains from primary production to consumer markets needs to be done by connecting enterprises from different regions and industries. But due to a missing holistic transnational approach, Danube actors in bio-based industry still operate disconnected and cannot properly benefit from the potential. Therefore, the aim of this project is to develop new methods, strategies and tools to connect enterprises transnationally.

Clusters as the strong representatives of a group of industries that are closely linked by common products, markets, technologies and interests are chosen to organise and bear the industry cooperation and creation of new value chains, because they are performant and sustainable partners and guarantee the upgradeability in the dimension industry, sciences and also politics.

One of the planned outputs of this project will be the development of a Joint Bio-based Industry Cluster Policy Strategy (JBICS) to describe the procedure and to make it actionable and reusable. Furthermore, a bundle of new methods and tools to support clusters for transnational working will be developed and joint into a strategy. They will be tested in three pilot actions where it is planned to create new bio-based value chains in the Danube Region. The main target groups are on the one hand the policy – four Ministries are involved –, on the other hand clusters and their SMEs – nine cluster organisations are involved. The policy level will benefit from the JBICS, which can be used as a political framework.

The clusters and SMEs will benefit from the new innovative tools and methods developed for transnational cross-clustering. Successfully established new bio-based value chains in the pilot actions can motivate other clusters and SMEs to test this newly developed approach in the future.

The following partners commit to the implementation of the cluster partnership and transnational cooperation:

Role	Official Name in English	Acronym	Country
LP	BIOPRO Baden-Württemberg GmbH	BIOPRO	Germany
ERDF PP1	ClusterAgentur Baden-Württemberg	CA BW	Germany
ERDF PP2	Anteja ECG	ANT	Slovenia
ERDF PP3	PROUNION	PU	Slovakia
ERDF PP4	Romanian Cluster Association	CLUSTERO	Romania
ERDF PP5	Association of Business Clusters	ABC	Bulgaria
ERDF PP6	National Cluster Association – CZ	NCA	Czech Republic
ERDF PP7	Business Upper Austria – OÖ Wirtschaftsagentur GmbH - Upper Austrian Food Cluster	UAFC	Austria
ERDF PP8	Ministry of Economy	ME	Romania
ERDF PP9	Ministry of Economy, Entrepreneurship and Crafts	MEC	Croatia
ERDF PP10	Ministry of Education, Science and Sport	MIZS	Slovenia
ERDF PP11	Croatian Wood Cluster	CWC	Croatia
ERDF PP12	Institute for Economic Forecasting	IPE	Romania
ERDF PP13	Business Upper Austria – OÖ Wirtschaftsagentur GmbH – Cleantech-Cluster	BizUp	Austria
IPA PP1	Innovation Center of Faculty of Mechanical Engineering	ICME	Serbia
ASP1	Montenegro Vine Cluster	MVC	Montenegro
ASP2	Ministry of Economic Affairs, Labour and Housing Baden-Württemberg	WM	Germany

LP = Lead Partner, PP = Project Partner, IPA = Instrument for Pre-Accession, ASP = Associated Strategic Partner, ERDF = European Regional Development Fund

Common Action Plan towards better framework conditions for bio-based eco-innovations

Context and Rational

Eleven Danube regions, led by Baden-Württemberg (BW) and Slovenia, decided in 2015 to spend higher efforts to develop the idea of bioeconomy and the connection of actors along the bioeconomy related value chains further. The joint undertaken resulted in the DanuBioValNet project, one of the frontrunner initiatives to bring bioeconomy in the Danube region further.

Joint Bio-based Industry Cluster Policy Strategy for the Danube Region is a critical steppingstone of reinforcement of bio-based economy in the Danube region. It puts dedicated attention to a better and more aligned use of cluster-based regional innovation strategies. Furthermore, it builds on proposition that bioeconomy goes far beyond value creation chains and seeks to interconnect all economic sectors and puts the distributed manufacturing in the core to achieve local manufacturing scenarios that use the amounts of locally available renewable raw and residual materials for conversion to deliver locally demanded materials.

The bio-based brain trust was initiated to boost the agenda forward and to guide implementation of the action plan. BW and Slovenia will call the first meeting of the brain trust in 3 months after the DanuBioValNet project's finish to prioritize actions presented in this action plan and to agree on a working groups and champions to lead the implementation.

The present Action plan for the implementation of the Danube Bio-based Industry Cluster Policy Strategy contains activities and actions out of recommendations from the Policy maker forum and Policy Learning Arenas (PLAs), which can be taken as action plans on the regional level. It also follows the JBCS objectives and focus areas. The sustainability of DanuBioValNet project will be ensured by the implementation of actions among the project partners.

Common Action Plan

The Common Action Plan includes 28 actions in 6 Focus Areas of the Joint Bio-based Industry Cluster Policy Strategy, including the findings and outcomes of the Policy stress testing reports and PLAs on the regional/country level of the project partners.

The aim of the Common Action Plan is to foster better institutional and infrastructural framework conditions on the policy level for closing the bio-based value chains and to facilitate bio-based eco-innovations of SMEs.

FOCUS AREA A: DEVELOP BIO-BASED BRAIN TRUST

ACTIONS

- 1 Set up an ongoing bioeconomy dialogue across the relevant value chains involving actors of the quadruple helix in a macroregional brain trust.
- 2 Enhance collaboration of brain trust with relevant entities at the European level, such as the Commission's Knowledge Centre for Bioeconomy.
- 3 Implement bio-based brain trust actions:
 - Provide business intelligence as basis for the other focus areas.
 - Leverage networks between the actors of the quadruple helix.
 - Demonstrate business opportunities in the bio-based economy for the identification of transformative activities to be addressed by smart specialisation strategies.
 - Provide insights on synergies and gaps in bio-based value chains and revealing opportunities for cross-regional cooperation projects.

FOCUS AREA B: USE REGIONAL INNOVATION STRATEGIES TO DEVELOP BIOECONOMY

ACTIONS

- 1 Identify and develop Transformative Activities for the Bioeconomy.
- 2 Involve stakeholders in RIS (S3) decision making processes to alter project and product development plans.
- 3 Establish national /regional bioeconomy agency/coordination body.
- 4 Use tools such as S3-Synergy Diamonds, Entrepreneurial Discovery Workshops (EDW), and Action Development Workshops (ADW).
- 5 Assure bioeconomy support infrastructure for the RIS (S3) implementation.
- 6 Set up regional innovation management structures that involve cluster initiatives for the purpose of instituting consistent innovation in the bio-economy with sustainable cooperation and networking structures, through the existing S3 framework.

FOCUS AREA C: "BIO-ECONOMIZE" EXISTING CLUSTERS

ACTIONS

- 1 Involve biomass feedstock providers in existing cluster initiatives.
- 2 Incentive packages for start-ups and SMEs within clusters to investigate bio-based options.
- 3 Support matchmaking venues.
- 4 Support workforce training programs.
- 5 Streamline portfolio of cluster initiatives and entities dedicated to support the bio-based economy in the Danube region.

FOCUS AREA D: BIOECONOMIC DISTRIBUTED MANUFACTURING ENVIRONMENTS

ACTIONS

- 1 Foster new types of partnerships and collaboration for development of new business models.
- 2 Interlink various business sectors into demand responsive value added networks.
- 3 Incentivise business actors to use local raw materials and apply local manufacturing approaches.
- 4 Provide databases of locally available renewable raw and residual materials for conversion.
- 5 Demonstrate bio-based business opportunities on local level.

FOCUS AREA E: FOSTER CROSS-REGIONAL CLUSTER COOPERATION THROUGH SYNCHRONIZED FUNDING

ACTIONS

- 1 Synchronize funding for the development of specific transformative activities of relevance for the bio-based economy.
- 2 Build on the recommendations from the Proposal for Alignment of National & EU Funding Schemes.
- 3 Implement Bio-Based Innovation Express Scheme (BIIE).

FOCUS AREA F: STRENGTHEN THE COLLABORATION BETWEEN RESEARCH INSTITUTIONS AND CLUSTERS

ACTIONS

- 1 Assign roles to cluster initiatives in the regional research institution's strategies for knowledge transfer with the business community.
- 2 Foster synergies between the research and development of new products and services (market).
- 3 Involve clusters in education programmes that match the needs of their member firms and notably SMEs.
- 4 Engage clusters in increased and targeted interaction with available regional, national or macroregional funding instruments for research, development and innovation.
- 5 Develop specialized tools for streamlined projects like Innovation vouchers, contracted research and rewarding professional performance of R&D institutions.
- 6 Use OSIA as a platform to further develop initiatives to strengthen the collaboration between research institutions and clusters.