

Enabling transition towards circular and systemic BIOeconomy model regions by a Regions-to-Regions approach

Concept note on technical and logistical support for HORIZON-CL6-2024-CircBio-01-7 (BioFairNet)

Deliverable 6.3

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BIO2REG in a nutshell

A sustainable, circular bioeconomy is essential for achieving the goals of the Green Deal. However, implementing a regional bioeconomy comes with various challenges. Bioeconomy model regions offer a systemic approach to transitioning to sustainable development. The EUfunded BIO2REG project aims to help greenhouse gas-intensive economies unlock their circular bioeconomy potential by moving towards bioeconomy model regions.

The project will encourage networking of regions, interregional exchange and cooperation, providing regional stakeholders with a conceptual framework for regionalisation in bioeconomy model regions. This involves mapping best practices in a circular and sustainable bioeconomy, assessing bioeconomy potential, offering mentoring and training, forming transition alliances, and making policy recommendations. The project adopts a multi-actor approach by collaboratively creating tools and guides with regional stakeholders and engaging with regions through guided on-site exchanges.

Find out more:

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Table of contents

1	Summary			
2	Ove	Overview of BIO2REG and BioFairNet		
	2.1	BIO2REG objectives and expertise	4	
	2.2	BioFairNet goals and scope	6	
	2.3	Synergies between projects	7	
3	Tec	hnical and logistical support framework	7	
	3.1	Support modalities	7	
	3.2	BIO2REG results and tools	8	
	3.3	Integration into the BIO2REG network and network events	9	
	3.4	Participation in the BIO2REG interregional exchange	10	
	3.5	Joint communication and dissemination	10	
4	Time	eline	10	
5	Con	clusions and next steps	11	

1 Summary

This Deliverable report outlines the technical and logistical support framework offered by BIO2REG to the BioFairNet project, aiming to facilitate the transition of greenhouse gas (GHG) intensive regions towards circular bioeconomy model regions. It provides an overview of BIO2REG's objectives, tools, and expertise, emphasising key areas of collaboration, such as mentoring through bi-monthly Jour Fixe sessions, participation in interregional exchange activities, and tailored capacity-building measures. The deliverable also highlights opportunities for joint communication and dissemination efforts. Furthermore, a timeline of activities is presented, proposing interactions planned for the period 2025–2026.

2 Overview of BIO2REG and BioFairNet

2.1 BIO2REG objectives and expertise

BIO2REG seeks to equip regional stakeholders with an array of practical knowledge and tools to design and implement a region-specific transition. Regional stakeholders throughout Europe benefit from the project's range of support services to facilitate capacity building and knowledge dissemination for regional stakeholders.

BIO2REG provides tools to identify systemic regional and circular bioeconomy potential. This includes a holistic regionalisation framework for bioeconomy model regions, a Multi-Criteria Assessment (MCA), and best practices, common challenges and transition hurdles in bioeconomy model regions that can serve as inspiration for other carbon-intensive regions. The project will build the capacity of regional stakeholders through mentoring, trainings and a guided, knowledge-based exchange that will initiate interregional transition alliances between GHG-intensive regions that transition towards bioeconomy model regions in different maturity stages (emerging, developing and mature). Furthermore, BIO2REG establishes a vibrant network community of European regions to facilitate the exchange of regional stakeholders with each other and with experts, practitioners and decision-makers from politics, business and industry, finance, society, science and education.

The integrative concept of BIO2REG founding on a systemic and circular bioeconomy understanding requires expertise from almost all sectors of the bioeconomy system. Therefore, BIO2REG implements a multi-disciplinary approach, in which each partner brings in complementary competences, experiences and networks ensuring a trans-disciplinary internal knowledge base to jointly achieve the project objectives. To take into account the diversity of transition challenges of different GHG-intensive economies towards bioeconomy model regions, each partner represents either a GHG-intensive (e.g. Murcia, in Spain, with intensive agriculture, Western Macedonia, in Greece, as a coal region facing major challenges due to the forthcoming beyond-coal transition) or a region already in transition (e.g. Rhenish region as coal region in transition towards a developing bioeconomy model region) as well as representing expertise in one crucial activity field of bioeconomy model regions (e.g. circular bio-based value chains, education, funding, etc.). The consortium covers regions from all kinds of GHG-intensive economies in different parts of Europe and different stages of transition (see Figure 1 and Table 1).

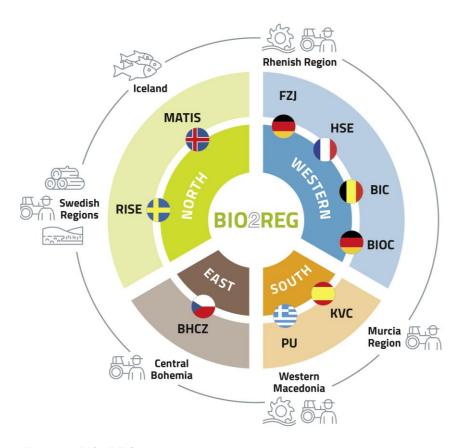


Figure 1: BIO2REG consortium, its regions and bioeconomy sectors

Table 1: BIO2REG consortium and expertise

Partner name	About	Expertise
BioökonomieREVIER, Forschungszentrum Jülich (FZJ), Germany	FZJ drives the green transition in the Rhenish mining region, advising and collaborating with companies, agriculture, and authorities and other local actors on transitioning to a bio-based circular economy.	Systemic bioeconomy demonstration in the Rhenish mining region, plant production systems and alternative biomass, innovation partnerships.
Senior Europa (Kveloce, KVC), Spain	KVC specializes in Social Sciences and Humanities (SSH) research, social impact assessments, and citizen engagement strategies.	Public engagement, systemic approach in SSH, social evaluation of bioeconomy model regions.
Panteion University Athens (PU), University Research Institute of Urban Environment & Human Resources, Greece	PU focuses on sustainable development, regional planning, and socio-economic policies through education, research, and scientific workshops.	Sustainable development, climate/energy economics, environmental economics, regional development, and urban space.
BIOCOM Interrelations (BIOC), Germany	BIOC specializes in bioeconomy communications, stakeholder engagement, and professional publications.	Bioeconomy communications, stakeholder engagement, professional publishing, multimedia design, exhibitions.
Bio-based Industries Consortium (BIC), Belgium	BIC is non-profit organization representing the private sector in an EU Public-Private Partnership,	Foster collaboration between bio- based industry, academia and regions; up-scale innovative projects,

Partner name	About	Expertise
	fostering collaboration across bio- based industries, research, and academia to strengthen sustainable value chains from primary production to market.	bridge gap between bio-based investment opportunities, funding and financial incentives.
RISE Research Institutes of Sweden, Sweden	RISE as independent, state-owned research institute is an innovation partner, helps the academia, private and public sector to develop technologies, products, services and processes to a sustainable world and competitive industry.	Develop competitive solutions that drive sustainable development forward, with a systemic perspective on complex sustainability issues; utilize 130 test beds for testing and scaling up future products and processes. Focus BIO2REG: agriculture and pulp and paper.
Matís , Iceland	Matís is an Icelandic R&D company specialising in food and biotechnology. Matís works on diverse projects focusing on value-addition and innovation, both international and national.	Food in general, special expertise in fish, value creation, side stream valorisation and exploitation; improved handling and processing of raw materials.
BIOEAST HUB CZ (BHCZ), Czech Republic	BHCZ is the first national BIOEAST HUB in the Central and Eastern European region, coordinator of two macro-regional thematic working groups – Fresh Water Based Bioeconomy and Bioeconomy Education – of the BIOEAST Initiative and the Ministry of Agriculture of the Czech Republic.	Working body of the BIOEAST initiative, focus on bioeconomy education, commercialisation of science and legal, social aspects of bioeconomy.
Homo Silvestris Europae (HSE), France	HSE is an SME specializing in consulting and advising forest-based industries and stakeholders on circular bioeconomy strategies, with a strong focus on fostering partnerships, innovation, and sustainable green growth across European networks.	European forest-based sector, circular bioeconomy; European policy making and strategy development; forestry, wood products, construction, first transformation processes; forest-based innovations.

2.2 BioFairNet goals and scope

The project BioFairNet¹ (Bioeconomy and Circular Economy Fair Network) aims to support regions heavily reliant on GHG-intensive industries, specifically agriculture and mining, in transitioning towards sustainable circular bioeconomy models. Through a digitally accessible platform, BioFairNet facilitates stakeholder knowledge exchange, co-creation, testing and validation processes, as well as stakeholder engagement to identify actionable pathways for regional transformation. The project focuses on developing a web-based transition tool collaboratively designed with end-users, enabling stakeholders to envision in what these sectors will look like post-transition. BioFairNet has identified two pilot regions to implement innovative bioeconomy solutions. Lesvos Island, Greece, is piloting PV-assisted hydropyrolysis technologies, including

¹ Bioeconomy and Circular Economy Fair Network Digitally fair and accessible network for reducing GHG activities with circular and bio-economy models, Grant Agreement No. 101181568.

hydrothermal carbonization and pyrolysis, to produce hydrochar and biochar using e.g. olive mill wastewater or olive pomace. Lesvos, which is part of the NUTS II region Voreio Aigaio (Northern Aegean), belongs to one of the regions with the lowest GDP per capita in Europe (Northern Aegean: 33.6% of the EU27 average)^{2,3}. Meanwhile, La Réunion, France, is focusing on anaerobic digestion to produce hydrogen and methane.

As of December 2024, when this deliverable was prepared, BioFairNet has been scheduled to begin in January 2025, and detailed information about its specific activities, regional focuses, and details on pilot initiatives remained limited to the BIO2REG project. This concept note is therefore mainly based on the official project announcement under HORIZON-CL6-2024-CircBio-01-7 and the initial information provided on CORDIS. Few details were added based on FZJ's participation at the Kick-Off Meeting of BioFairNet in Naples (17. January 2025) and an online exchange with the BioFairNet team on 29. November 2024.

2.3 Synergies between projects

This Deliverable was mainly prepared in December 2024 ahead of BioFairNet's scheduled start in January 2025, to accommodate the one-month review phase required for each BIO2REG Deliverable. The identification of synergies between BIO2REG and BioFairNet will start in January 2025 and will be continuously refined through FZJ's participation in the Kick-Off Meeting of BioFairNet on 17. January 2025 and insights gained during the proposed bi-monthly Jour Fixe meetings under BIO2REG Tasks 6.3⁴ and 7.3⁵. These interactions will help clarify common goals, mutual benefits, and key areas of alignment, ensuring effective collaboration and targeted support for BioFairNet's objectives and activities.

3 Technical and logistical support framework

3.1 Support modalities

BIO2REG offers a flexible and responsive set of support modalities to assist BioFairNet in addressing challenges and advancing its regional bioeconomy transitions and support their demonstration activities in their pilot regions. Central to this support are the bi-monthly Jour Fixe mentoring sessions, starting approximately from early 2025, where tailored mentoring and guidance are provided to address operative challenges in the BioFairNet regions. These 90-minute sessions offer an individualised space for discussing region-specific needs and exploring actionable solutions. Depending on emerging needs, external experts may also be invited to contribute to Jour Fixe sessions, providing specialized knowledge and insights. Beyond these regular exchanges, deeper mentoring services are embedded in other BIO2REG tasks, such as the interregional exchange mentoring activities (see Chapter 3.4) and Task 2.3 capacity-building sessions during the interregional network events (see Chapter 3.3). These mentoring formats provide BioFairNet stakeholders with targeted guidance.

The thematic priorities of the Jour Fixe meetings will be jointly defined between BIO2REG and BioFairNet, drawing on both the needs and focus areas of BioFairNet as well as relevant results

² Euopean Employment Services 2025, Labour Market Information: Greece. URL: https://eures.europa.eu/living-and-working/labour-market-information/labour-market-information-greece_en#north-aegean-%CE%B2%CF%8C%CF%81%CE%B5%CE%B9%CE%BF-%CE%B1%CE%B1%CE%B1%CE%B1%CE%BF.

³ Eurostat 2025, Economy at regional level. URL: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Economy_at_regional_level.

⁴ Task 6.3: Setting up technical and logistical support for HORIZON-CL6-2024-CircBio-01-7 [October 2024 – June 2025]

⁵ Task 7.3: Managing support for HORIZON-CL6-2024-CircBio-01-7 [July 2025 – December 2026]

and tools from BIO2REG (see below). For example, during an initial introductory meeting on 29. November 2024 and the Kick-Off Meeting on 17. January 2025, BioFairNet expressed interest in exploring BIO2REG's regionalization concept to identify synergies and shared perspectives on regionality and the understanding of a regionalized bioeconomy. Furthermore, they expressed interest into further exchanging on BIO2REG's Multi-Criteria Assessment and case studies on systemic transformation projects in regions such as an in-depth discussion of the safflower project in the Rhenish mining region. To ensure flexibility and responsiveness, BIO2REG proposes defining the thematic focus at the end of each Jour Fixe meeting, allowing for adaptation based on emerging challenges, progress, and mutual priorities. The scheduling of these meetings will be set up between BIO2REG and BioFairNet coordination after the BioFairNet project start in January 2025.

3.2 BIO2REG results and tools

The tools and results presented in this chapter offer opportunities for supporting BioFairNet regions in their transition towards circular bioeconomy model regions. During the bi-monthly Jour Fixe meetings (90 minutes every 2 months), the BioFairNet project can explore these tools further, with the option to receive mentoring and guidance on how to effectively apply them within their specific regional contexts of their pilot regions. An overview of publicly available BIO2REG results can be accessed on the BIO2REG website for further insights and resources: https://bio2reg.eu/services-for-regions/.

Results/tools	Description	Support for regional bioeconomy transition	Availability
Deliverable 1.1: Regionalization concept for circular and systemic bioeconomy model regions	Conceptual framework serving as a blueprint for adapting and implementing circular and systemic bioeconomy practices by integrating key sectors and system dimension aligned to regions' unique characteristics, needs, and strengths.	Helps regions design bioeconomy strategies and action plans, engage stakeholders, and integrate circular economy principles for sustainable regional development in the whole regional bioeconomy system.	December 2024 Link
Deliverable 1.3: Stakeholder guide to apply the Multi-Criteria Assessment (MCA) tool	A guide for regional stakeholders on implementing the MCA to assess bioeconomy potential across diverse regional contexts and GHG-intensive economies.	Supports regions in identifying strengths and gaps across sectors, industries, and crosssectoral integration, enabling data-driven bioeconomy transition.	June 2025
Deliverable 1.4: Guides for regional stakeholders on transition measures in bioeconomy model regions	Practical guides based on best practices, outlining transition measures tailored to regional specificities such as economic frameworks, governance, and stakeholder structures on the regional level.	Helps regions implement circular bio-based value chains, enhance research infrastructure, and address social sustainability, education, and funding for circular bioeconomy transitions.	June 2025 for BIO2REG network members
Deliverable 2.2: Database of user-friendly tools for regional cooperation	A collection of evaluated IT tools designed to facilitate regional cooperation and collaboration towards	Enables regions to identify and use suitable available digital tools for regional stakeholder engagement	June 2025

Results/tools	Description	Support for regional bioeconomy transition	Availability
	circular and systemic bioeconomy transitions.	and streamlined cooperation.	
Deliverable 5.1: Best practice guide for mobilising regional stakeholders	A guide consolidating key performance indicators for effective stakeholder mobilization, communication, dissemination, and exploitation beyond the project's lifetime.	Supports regions in engaging stakeholders, ensuring long-term impact, and sustaining bioeconomy initiatives through targeted communication and outreach strategies.	December 2026
Deliverables 6.5 and 7.3: Impact assessment reports (baseline and final)	Comprehensive evaluations assessing the baseline and final impact of regions participating in the BIO2REG interventions, including feedback loops with stakeholders to identify region-specific results.	The baseline Report (D6.5) identifies regions' initial conditions and key transition measures, while the final report (D7.3) evaluates regions' progress through BIO2REG interventions and provides recommendations for network regions on how to continue their transition paths.	Baseline: June 2025 Final: October 2026

3.3 Integration into the BIO2REG network and network events

The BIO2REG network connects regions and regional stakeholders, experts, policymakers, and bioeconomy practitioners to foster knowledge exchange, capacity building, and the transition towards circular bioeconomy model regions. It acts as a dynamic space for regions to share best practices, learn from one another, and collectively address challenges to develop practical circular bioeconomy strategies and action plans that integrate circular economy principles into regional contexts across diverse sectors. The BIO2REG network concept will be developed between January and June 2025⁶, focusing on defining its structures, services, member roles, and thematic directions of events to ensure effective collaboration, knowledge exchange, and targeted support for regions transitioning towards bioeconomy model regions.

Key network activities and events:

• Regional network events: Five region-specific events will be organized in selected BIO2REG regions (Spain, Czech Republic, Greece, Germany, Sweden) between March and May 2025. These events aim to engage regional stakeholders, address region-specific challenges and opportunities, and co-create actionable transition pathways towards circular bioeconomy model regions. BioFairNet partners are encouraged to participate, if they are proficient in the respective event languages. Additionally, BIO2REG can support and consult BioFairNet in setting up the concepts for stakeholder events in their pilot regions to assess regional bioeconomy conditions, identify the most promising action fields, and tailor transition strategies to regional needs.

⁶ Task 2.1: Designing a BIO2REG network concept [January 2025 – June 2025]

• Interregional knowledge-sharing events: Two interregional network events will be held alongside the BIO2REG second annual meeting (early 2026) and final project meeting (late 2026). These events will provide opportunities for cross-regional learning, sharing best practices, and targeted mentoring sessions to strengthen regional bioeconomy transition. BioFairNet partners are invited to organize their annual meetings back-to-back with these events, creating synergies for joint dissemination and exploitation activities. This collaboration can maximize visibility, improve impact, and ensure broader replication of BIO2REG and BioFairNet results across other regions.

3.4 Participation in the BIO2REG interregional exchange

The BIO2REG interregional exchange fosters collaboration between two regions through peer-to-peer learning, on-site visits, and cross-stakeholder dialogue. This exchange approach builds on transition alliances between bioeconomy model regions in different maturity stages (emerging, developing and mature), enabling the transfer of best practices and successful structures. Guided by BIO2REG mentoring and tailored support, regional stakeholders will be capacitated to better design and implement bioeconomy solutions and structures adapted to their specific regional contexts and regional bioeconomy systems. The call for regions to participate in the interregional exchange is planned for around October 2025, with the exchange activities expected to take place approximately between April and July 2026.

The 2-3 BioFairNet regions have the opportunity to participate in this exchange (up to 3 stakeholders of each region can receive a travel budget of up to 900€), benefit from tailored mentoring sessions, apply BIO2REG tools, and develop region-specific transition roadmaps through collaborative learning and targeted capacity-building activities with another region. These mentoring sessions, held in three focused online meetings per transition alliance, will guide regions through agenda-setting, system integration, and actionable implementation approaches, ensuring continuous support throughout the exchange process as well as follow-up feedback on the transition roadmap and a prioritisation of activities. Participating regions of the exchange are also invited to share their experiences and lessons learnt in a webinar.

3.5 Joint communication and dissemination

BIO2REG actively fosters visibility and knowledge exchange through joint communication and dissemination activities with its partner initiatives. As of January 2025, BIO2REG has established 12 partnerships and alliances, reflecting a strong collaborative network across Europe and Associated Countries.

Our communication efforts are supported by an engaged LinkedIn channel with 523 followers and a growing network of regions and regional stakeholders. BioFairNet is warmly invited to join BIO2REG as a partner initiative, enabling joint outreach campaigns and shared dissemination of results. Through BIO2REG's established channels, BioFairNet outcomes can reach a broad audience and facilitating knowledge transfer across regions.

4 Timeline

The timeline in Figure 2 provides an overview of proposed key activities and collaborative interactions planned between BIO2REG and BioFairNet for the period 2025–2026. It outlines the bi-monthly Jour Fixe meetings, the operative phase of the BIO2REG network, regional and interregional network events, as well as the delivery of significant results and tools for regions to supporting the transition towards bioeconomy model regions.

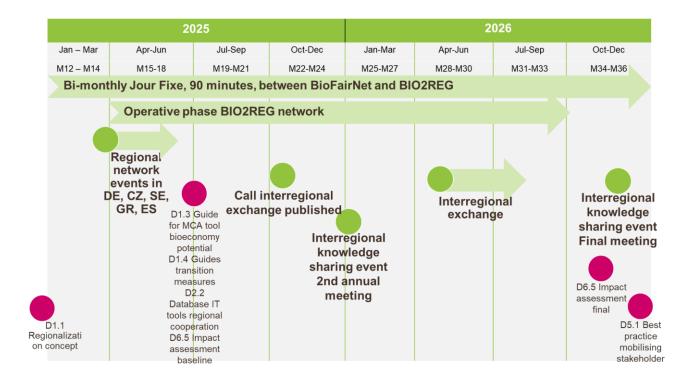


Figure 2 Timeline proposed key activities and collaborative interactions between BIO2REG and BioFairNet

5 Conclusions and next steps

This deliverable presents a proposed support framework from BIO2REG to BioFairNet, aiming to support the transition demonstration of greenhouse gas-intensive regions towards circular bioeconomy model regions. The timeline of activities for 2025–2026 provides a structured overview of proposed interactions, serving as a foundation for alignment and collaboration. It is important to emphasise that the proposals outlined in this Deliverable are suggestions based on current insights and planning assumptions. The BIO2REG team warmly invites feedback from BioFairNet to further refine these plans and ensure they are tailored to BioFairNet's specific needs, priorities, and regional contexts.

As a first step of collaboration, the coordinator of BIO2REG participated at the Kick-off Meeting of BioFairNet on 17 January 2025. The initial Jour Fixe meeting (schedule to be set by BioFairNet and BIO2REG coordination after the Kick-off meeting) will serve as a starting point for collaboration, focusing on aligning thematic priorities and exploring key intersections between BIO2REG and BioFairNet goals. A central element of the meeting will be the presentation and discussion of the BIO2REG regionalization concept (Deliverable 1.1) to identify synergies and shared perspectives on regionality and a regionalized bioeconomy, followed by meetings on the Multi-Criteria Assessment approach and case studies (see also Chapter 3.1).

In preparation for tailored support, the following key questions—first raised on 20 November 2024—will guide the initial discussions:

- What are the unique bioeconomy conditions and challenges faced by La Réunion island and Lesvos - as part of the NUTS II region Voreio Agaio - in transitioning to bioeconomy model regions?
- Which input could BioFairNet partners outside the European Union (Canada, Kenya) and the Continental Europe Territory (Université de La Réunion) provide to enrich the bioeconomy paradigm within the European Union as well as enhance the BIO2REG's bioeconomy model region concept?

- What kind of new bioeconomy structures generating green growth on the regional level in your pilots are envisioned within BioFairNet beyond the digital cooperative network to support the transition?
- Could you provide a brief overview of your demonstration activities (Lesvos: PV-assisted hydropyrolysis technologies to produce hydrochar and biochar; Réunion Island: anaerobic digestion to produce hydrogen and methane)? We are interested in e.g. the specific types and sources of biomass used in these processes, targeted end-use applications of the produced materials, the expected production volumes, and any technological optimizations or challenges encountered in scaling up these solutions.
- How is the multi-actor approach implemented (involving a wide diversity of bioeconomy actors) in the regions beyond co-creation workshops?
- What are your general wishes and expectations towards the collaboration with BIO2REG?
- What specific needs or challenges would you like us to particularly address in our support?