



# BioFairNet

*Bioeconomy and Circular Economy Fair Network - Digitally fair and accessible network for reducing GHG activities with circular and bio-economy models*

## Horizon Europe

THE NEXT EU RESEARCH & INNOVATION PROGRAMME (2021 – 2027)



### The Problem

Circular Economy (CE) is increasingly recognized as a catalyst for transitioning to a genuinely sustainable economic system, and as such, it must be integrated as a core component of societal functioning. This integration necessitates that both future research and practical CE endeavors fully consider and align with the diverse needs and expectations of all societal members, adopting a value-driven, normative framework rather than one solely focused on profit. Therefore, it should be implemented in a sustainable manner and not creating a form of greenwashing. To this end, space and information are needed to enhance the development of the CE and Bio-economy (BE) sectors, ensuring natural resources are used and managed sustainably and circularly and prevent and remove pollution while unlocking the full potential and benefits of the CE and BE.



### BioFairNet Overall Objectives

- Identify and assess European Union carbon-intensive hotspots, focusing on industries like coal mining and intensive agriculture, and mapping their value chains;
- Develop and implement a digital product that combines advanced biotechnologies, digital tools, and socio-economic strategies for sustainable transitions; and
- Ensure social justice and economic viability in these transitions, promoting fair and inclusive practices.

### The Project

BioFairNet is a digital cooperative network dedicated to transitioning industries that heavily rely on greenhouse gas (GHG)-intensive practices into sustainable, circular economy leaders. Through collaboration, innovation, and stakeholder engagement, BioFairNet promotes sustainable transformation in key sectors such as agriculture and mining.

### The Approach

BioFairNet aims to close the gap between social differences and divides present in the targeted socio-economic spaces, which are the agricultural and mining sectors additionally taking into consideration the digital divide. To do so, the project based on the cores of the bio-circular economy, tries to integrate technological innovation with social justice, to change the economy more ecologically and sustainably.

By creating a digital cooperative network, BioFairNet facilitates the transition towards sustainability by identifying critical hotspots and optimizing value chains. The project emphasizes stakeholder engagement, co-creation, and the development of digital tools to support sustainable transformation in key industries such as agriculture and mining. Through a targeted approach, BioFairNet maps out current industry challenges and envisions sustainable alternatives by integrating renewable resources, circular economy principles, and green technologies. The project operates in pilot regions including Lesvos (Greece), Réunion Island, Nova Scotia and Quebec (Canada), and Kenya, where it develops and tests tailored solutions to address local challenges. By fostering collaboration and leveraging innovative transition tools, BioFairNet aims to reduce environmental impact, drive industry-wide change, and establish a lasting digital network to support sustainable practices beyond the project's duration.

The overall BioFairNet approach is based on the following Key Focus Areas:

- Digital Platform:** Maps, informs, transfers knowledge on sustainable solutions, and facilitates collaboration among stakeholders for ecological transition.
- Stakeholder Engagement:** Encourages co-creation, validation, and collaboration.
- Sectoral Focus:** Targets agriculture and mining for sustainable transformation.
- Transition Tools:** Develops web-based solutions to support industry adaptation.



### Expected Impacts

- Enhanced collaboration in bio-circular economy networks.
- Reduction of GHG emissions in agriculture and mining.
- Digital tools for stakeholders to drive sustainable transformation.
- Empowered regions leading in circular economy transitions.

### The Project Partners



**CERTH**  
CENTRE FOR  
RESEARCH & TECHNOLOGY  
HELLAS



UNIVERSITY  
OF COLOGNE

**UR** | UNIVERSITÉ  
DE LA RÉUNION



UNIVERSITÄT  
BAYREUTH

**satec\_**



UNIVERSITÀ  
DI TRENTO  
Dipartimento di  
Economia e Management



**UnitelmaSapienza**  
Università degli Studi di Roma



Università  
degli Studi  
di Ferrara



ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΙΓΑΙΟΥ

### Contact:

Dr. Georgios Banias

Research Director

g.banias@certh.gr | +30 2311 257650



**CERTH**

CENTRE FOR  
RESEARCH & TECHNOLOGY  
HELLAS



Institute for Bio-economy & Agri-technology

iBO | CERTH

6<sup>th</sup> km CharilaouThermi Rd.

57001 | Thermi | Thessaloniki | Greece

www.ibo.certh.gr | www.certh.gr