

30 November 2023

BioRural Workshop
Day 3 – Cross-cutting themes

Circular Bioeconomy in Practice

Mateja Dermastia, CEO, Anteja ECG



Leading by Purpose Sustainability

Meets the needs of the present without jeopardize future generation

Extraction and waste – A global problem with a devastating impact

Food loss and waste



2.1 Billion Tons/y

From agricultural production and processing to distribution and consumption

Fresh water loss



304 million Olympic pools

Agriculture is a major user of water, accounting for around 70% of global freshwater withdrawals

CO2 Footprint equivalent

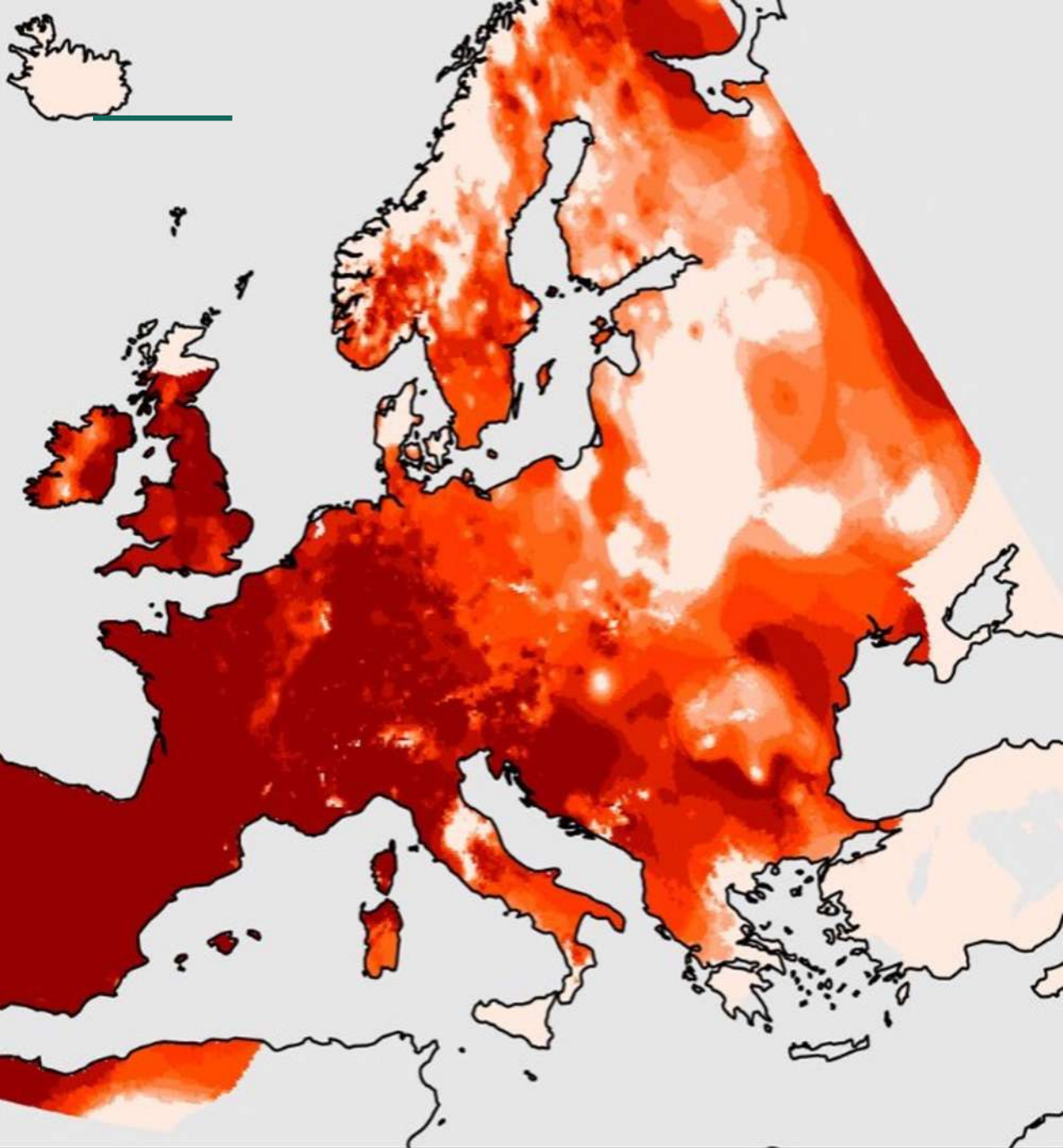


75% of all car emissions

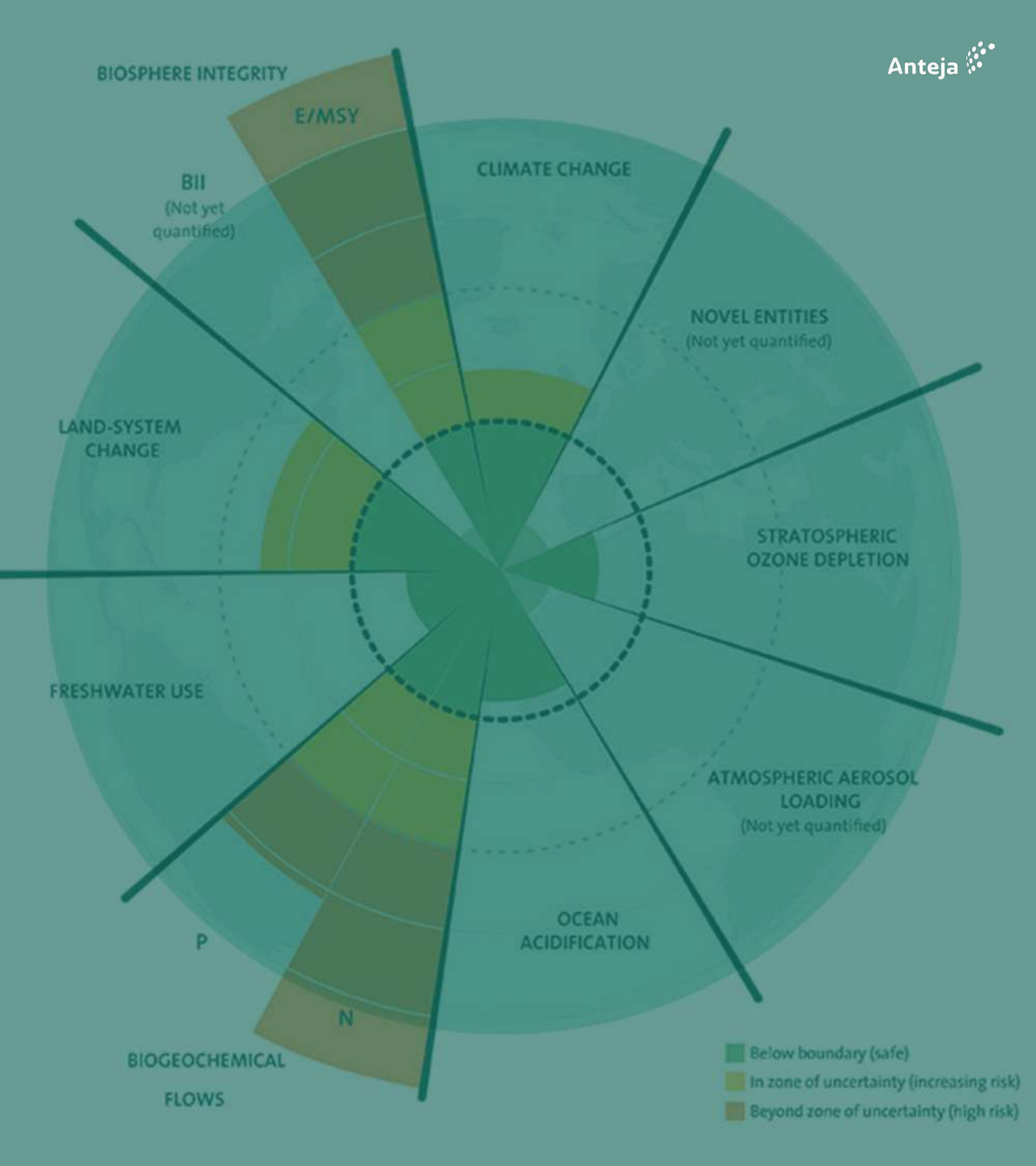
in USA & Europe

90%

of biomass used in the EU is newly extracted¹ every year, while biomass extraction contributes half of all GHG emissions & 80% of biodiversity loss²!



reference period: 1991-2020. Data source: E-OBS. Credit: C3S





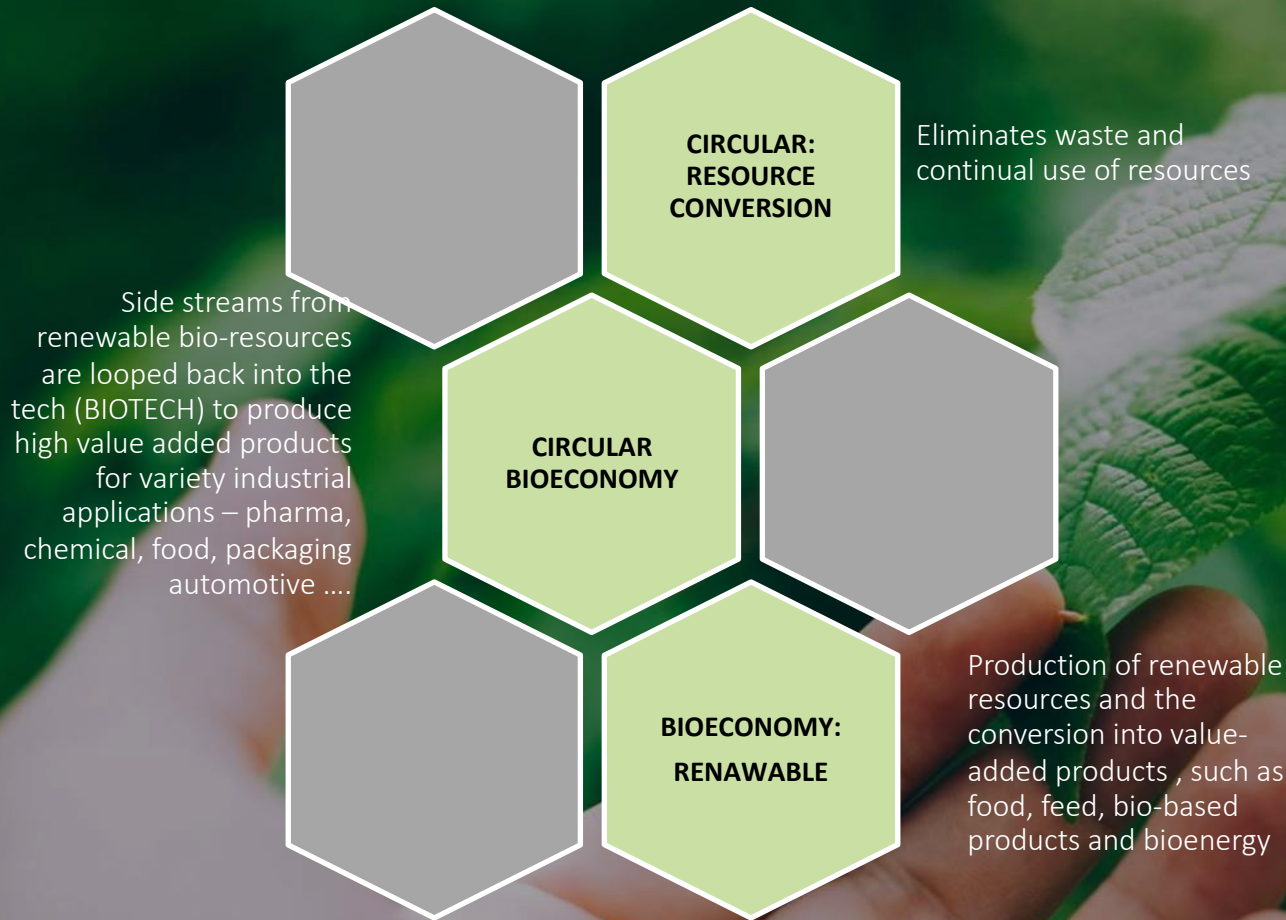
Plastics Circularity 2019 – 2023
Sierra Leone and Ivory coast
Focus on Plastics value chains and
Tourism

VIDEO <https://rb.gy/3mibmt>

Administered by
THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

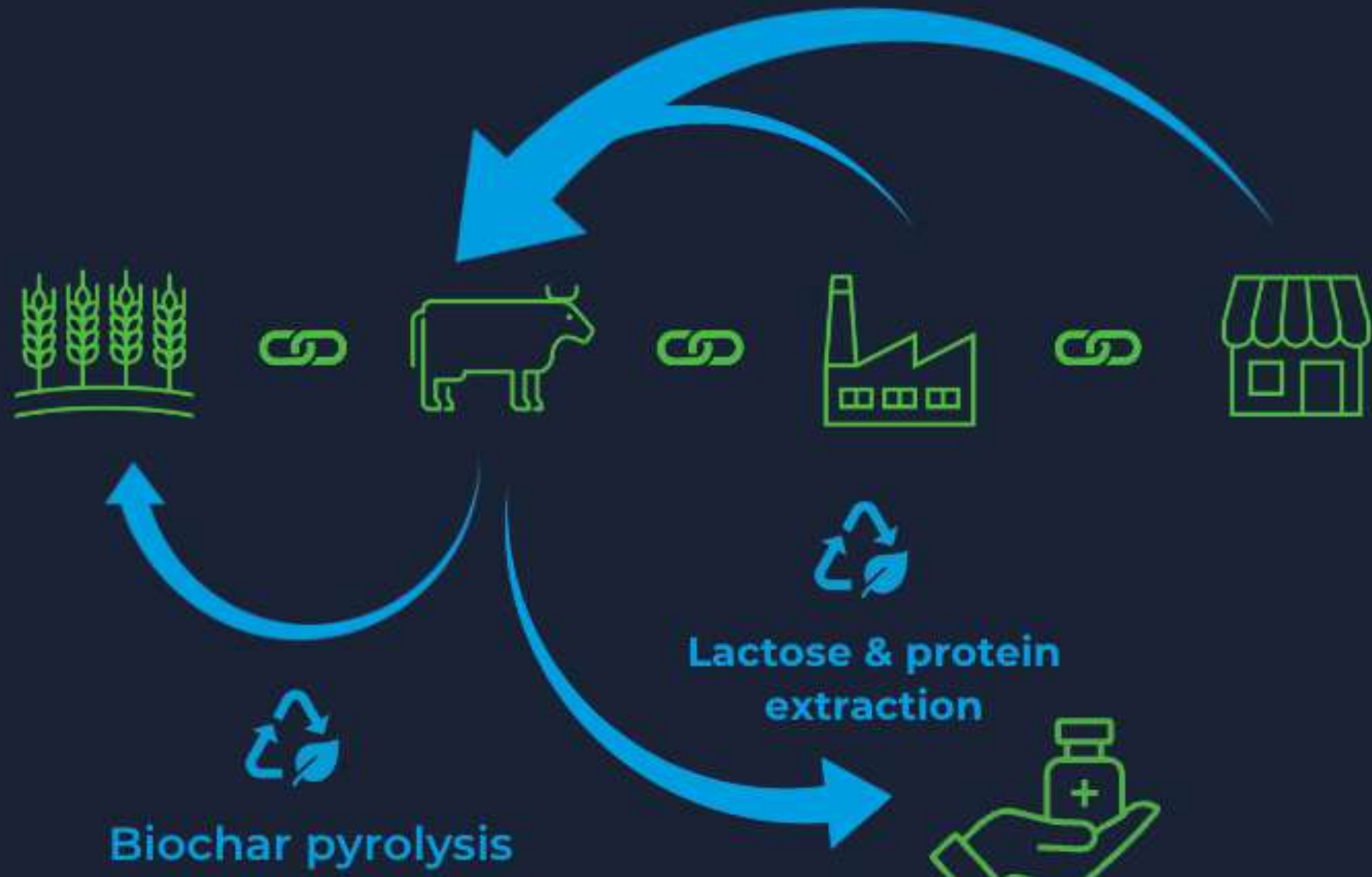
PROBLUE

Circular Bioeconomy



Is economy that drives economic growth while minimizing its impact on the environment.

Alternative protein production



Circular Bioeconomy Business

Reduce

Energy, waste, water,
resources

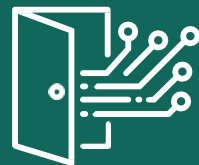
New Products

High value addiotn
products for exsiting
markets

New Opportunitites

Cretae value from
residuals /waste for
companies in
profitable way

Reducing dependency on virgin materials, use of advanced technologies, creates new income streams, profits and jobs



Stadt ● Berlin ● Hamburg ● Darmstadt ● München ● Zürich ● Dachau ● Essen ● Esslingen ● Evry ● Freising ● Graz ● Jülich ● Leuna ● Stuttgart ● Vienna ● Wien ● Milano ● Milano ● Milano

Technologies in TRL+7

High Value Existing End Markets Examples

Plant-based meat market:

24.9% CAGR by 2030,
Market size USD 15.7
bn by 2027

Global insect protein market

26.5% CAGR by 2027
Market size: 1.4 bn EUR by
2027.

Sustainable packaging Automotive

Source InnoBioVC Alpine Space 2023

Challenges

01



Stagnation

Circular Bioeconomy remains in academic papers and R&D projects

02



Funding Limitations

Funding schemes are not support projects beyond TRL+7

03



Investment trend

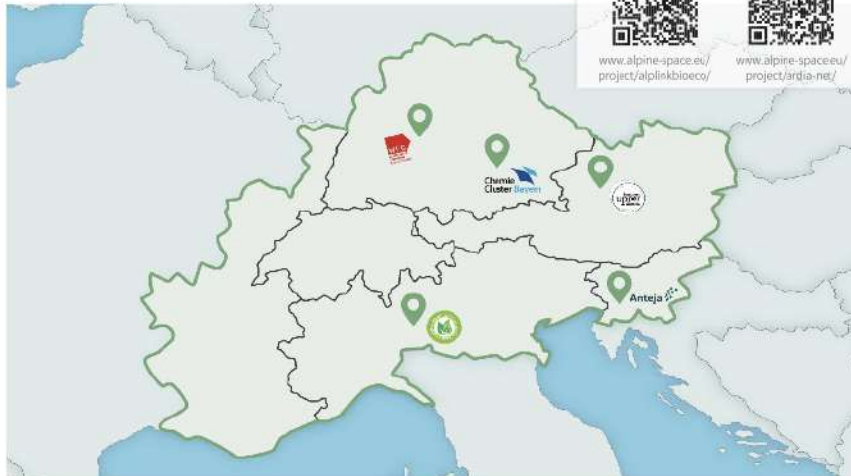
Technologies developed in Europe are deploying outside Europe

INNOVATION EXPRESS FOR CIRCULAR BIOECONOMY VALUE CHAINS

SUPPORT BY THE EUROPEAN UNION
THROUGH THE INTERREG ALPINE SPACE PROGRAMME: € 390.547

Circular bioeconomy value chain (CB-VC) development becomes more prevailing but is more challenging to support due to their cross-regional nature. **INNOBIOVC** aims to roll-out two solutions developed by previous Interreg projects, that facilitate the development of cross-regional circular bioeconomy value chains:

The **Innovation Express Call Scheme (IECS)**, developed by ARDIA-NET, is a widely acknowledged solution to facilitate cross-border cooperation by synchronizing existing regional funding schemes. The **Value Chain Generator (VCG.AI)**, developed by AlpLinkBioEco is a hands-on tool that helps to find partners along CB-VCs. The **sustainable assessment tool (SAT)** will be included and allows to measure sustainability gains of circular products to foster transnational cooperation by stimulating more public and private investments in CB-VC development.



InnoBloVC

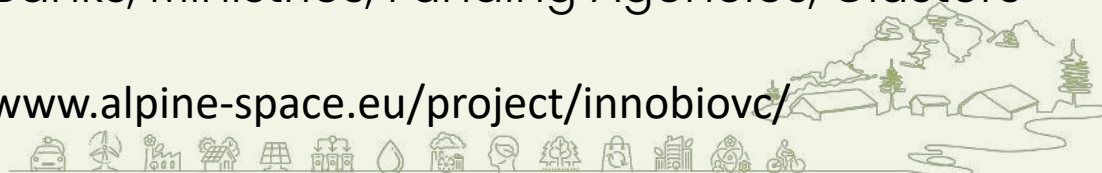
Innovation Express 2024 fosters cross-border cooperation among exiting regional funding schemes in the Alpine Space and beyond

Focus on high-TRL (>7) value chains to penetrate fast-growing, high-value markets of bio-based products

Integrate VCG.AI and Sustainability Assessment Tool (SAT) measuring the circular bio-based value chain and scalability by assessing the environmental, social and economic

Engage Banks, Ministries, Funding Agencies, Clusters

<https://www.alpine-space.eu/project/innobiovc/>





Anteja is a sustainability consultancy specialising in designing and implementing innovative strategies and circular business models. Our forward-looking approach brings more efficient use of natural resources, environmental concerns & social dimensions into developing policies, strategies and business models.

Our services: Anteja develops innovative solutions to accelerate the transition to sustainable practices and circular resource-use models on a global scale. We help companies and their value chains develop circular strategies and sustainable business models to solve their sustainability challenges. We research technological possibilities to enable companies and their value chains state-of-the-art sustainable solutions.

Our projects:



CIRCULAR VALUE CHAINS

Circular bioeconomy transition planning for agri-food, forestry and wood, textile & green chemistry value chains in European Macro regions – Alpine Space and Danube

Plastics circularities in environment that plastics jeopardize life and well being of communities



PROMOTING & FINANCING THE ADOPTION OF SUSTAINABLE & CIRCULAR BUSINESS MODELS

Interreg & Horizon projects

Developing policies, strategies, business models and industry engagement to drive the adoption of sustainable & circular practices



SUSTAINABILITY AND CIRCULAR TRANSITION SDG and ESG

FOR WBG, IFC, GIZ, EC

Strategic plans for the circular transformation, value chain analyses and prioritize transitioning from fossil-based to sustainable bio-based materials, sustainable solutions and regulatory and institutional frameworks.



+20
years of
experience

+40
countries we have
worked in

+100
successfully
completed projects

Advanced digital capabilities redefine excellence in our work



Gathering & analyzing material flows data and defining optimal circular solutions.
Creating Biolinks with the right partners for viable circular value chains



Supply chain traceability and transparency solution using blockchain to ensure end-to-end traceability, promote trust, and optimise processes among trading partners in agriculture & food supply chains that crossing regions

Get in Touch:

Mateja Dermastia@anteja-ecg.co