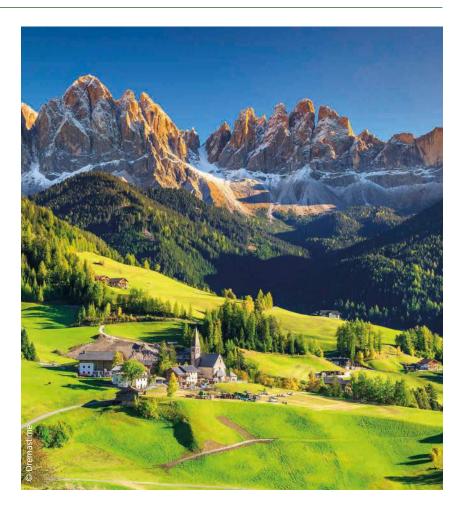# DIVERSE NEWS

## FROM THE INTERREG ALPINE SPACE PROJECT

**NOVEMBER 2025 ISSUE No. 2** Integration of bioDIVERSity conservation within bioEnergy production

## Welcome to the 2nd Newsletter

**Cristina Cavicchioli - Lead Partner / RSE - Ricerca sul Sistema Energetico, Italy**

After an exciting first year, DI-VERSE is moving forward! In this issue, discover how Alpine regions are shaping sustainable bioenergy value chains, explore our Open Dialogue Toolkit and the new "How-to" Capacity Building Manual, and get a preview of the upcoming Focus Labs. The journey continues after our inspiring Partner Meeting in Legnaro (PD) on 20–21 May 2025, where we started shaping the next project phase, focused on the implementation of the Focus Labs.


© Dremastime


© Dremastime

## Analysis of key regional bioenergy value chains in Alpine territories

Cristina Cavicchioli / RSE - Ricerca sui Sistemi Energetici, Italy

This study explores how Alpine regions can strengthen the **sustainability of their bioenergy systems by integrating biodiversity into every stage of the value chain**.

Combining top-down and bottom-up perspectives, this analysis maps biomass flows from forests and agri-food sectors, defines shared indicators for biodiversity and sustainability, and identifies local solutions for governance, management, and market innovation. The analysis also highlights how regional cooperation and stakeholder dialogue can turn bioenergy into a real driver of the green transition across the Alps.

# The DIVERSE Open Dialogue Toolkit

Anna Zeindl / TZE - Landshut University of Applied Sciences, Technological Centre for Energy, Germany

**A key objective of DIVERSE is to support bioenergy and biodiversity stakeholders in identifying solutions that enhance the sustainability of regional bioenergy value chains. The Open Dialogue Toolkit serves as a guideline to foster this development, including scientific methodologies tested in the pilot regions.**

The **DIVERSE Open Dialogue Toolkit** is a structured guideline designed to support a sustainable engagement of stakeholders, encourage open exchange and strengthen network-building within the pilot regions, to guide relevant actors to co-develop practical concepts that enhance sustainability and biodiversity within bioenergy production.
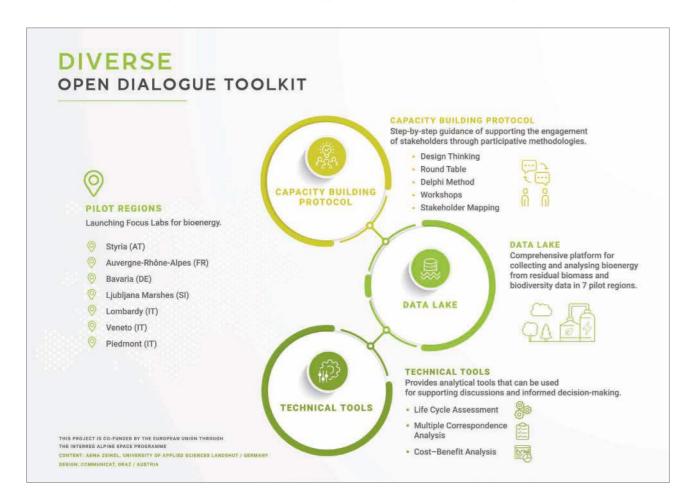
The Toolkit is structured in three main components. The first one, the Data Lake, serves as a scientific foundation and enables a shared understanding of regional challenges and needs. It complies and analyses information from existing databas-es, scientific literature and a survey, conducted among stakeholders in seven pilot regions. The second component, the Capacity Building Protocol, provides a detailed framework for stakeholder involvement. It starts with the identification of a core group of actors, acting as multipliers for the project`s objectives and helping improve participation over time.

This process is supported by participatory methodologies, such as Design Thinking, Round tables or Workshops, tested and evaluated in the pilot regions. The third component includes technical tools that can be used to support evidence-based decision making. Instruments like Life-Cycle Assessment, Multi-Criteria Analysis or Cost-Benefit Analysis help a structured discussion and provide transparency around potential impacts. While their use is optional, they significantly strengthen the quality of the dialogue and outcomes.

These components are combined to enable lasting improvements in the integration of biodiversity concepts into regional bioenergy value chains, with effects that extend beyond the project's duration. The collaborative approach is designed to be transferable and encourages uptake into other Alpine Regions.



## DIVERSE OPEN DIALOGUE TOOLKIT

**CAPACITY BUILDING PROTOCOL**
Step-by-step guidance of supporting the engagement of stakeholders through participative methodologies.

- Design Thinking
- Round Table
- Delphi Method
- Workshops
- Stakeholder Mapping

**PILOT REGIONS**
Launching Focus Labs for bioenergy.

- Styria (AT)
- Auvergne-Rhône-Alpes (FR)
- Bavaria (DE)
- Ljubljana Marshes (SI)
- Lombardy (IT)
- Veneto (IT)
- Piedmont (IT)

**DATA LAKE**
Comprehensive platform for collecting and analysing bioenergy from residual biomass and biodiversity data in 7 pilot regions.

**TECHNICAL TOOLS**
Provides analytical tools that can be used for supporting discussions and informed decision-making.

- Life Cycle Assessment
- Multiple Correspondence Analysis
- Cost-Benefit Analysis

THIS PROJECT IS CO-FUNDED BY THE EUROPEAN UNION THROUGH THE INTERREG ALPINE SPACE PROGRAMME
CONTENT: ANNA ZEINDL, UNIVERSITY OF APPLIED SCIENCES LANDSHUT / GERMANY
DESIGN: COMMUNICAT, GRAZ / AUSTRIA

# Bridging Bioenergy and Biodiversity

Clarisse Marechal / COFOR - Regional Union of the Communes forestières Auvergne, France

The **Capacity Building Protocol** presents a structured methodology designed to foster open dialogue between biodiversity and bioenergy stakeholders.

**The protocol follows three steps:**

**First**, engage stakeholders by presenting tools like plot maps, sustainability diagnostics, and investment briefs. Transparency, traceability, and inclusive communication are central to building trust and aligning interests. The involvement of a "core negotiation group" ensures continuity and coordination across actors with diverse motivations.

**Second,** support change using robust assessment methods (Life Cycle Assessment - LCA, Multiple Correspondance Analysis - MCA, Cost Benefit Analysis - CBA, Balanced Scorecard - BSC) to evaluate bioenergy value chains, identify sustainability gaps, and co-develop realistic, biodiversity-friendly solutions. These tools allow partners to translate complex data into actionable insights, while adapting to local economic and environmental contexts.

**Third,** communicate results through policy briefs, infographics, videos, and best practice sharing to ensure broad visibility and encourage adoption elsewhere.

This approach raises awareness, fosters long-term commitment, and demonstrates that sustainable bioenergy can be both economically viable and ecologically responsible. It also lays the foundation for future replication across regions.


© Adobe Stock

# Pilot Implementation plan: organization of the future Focus Labs

Cristina Cavicchioli / RSE - Ricerca sui Sistemi Enegertici, Italy

The Pilot Implementation Plan defines how DIVERSE partners will test the Open Dialogue Toolkit. **This study explores how Alpine regions can strengthen the sustainability of their bioenergy systems by integrating biodiversity into every stage of the value chain.**

Combining top-down and bottom-up approaches, the analysis maps biomass flows from forests and agri-food sectors, identifying both shared challenges and region-specific opportunities in the shift toward renewable and biodiversity-positive energy models.

Through the investigation of feedstock availability, policy frameworks, and ecosystem impacts, the study provides a comprehensive picture of how forestry and agricultural residues can be transformed into strategic resources for low-carbon development. The analysis defines a set of common indicators for sustainability and biodiversity, enabling comparable assessments across regions and supporting decision-makers in aligning energy planning with environmental protection goals.

A key outcome of this work is the recognition that sustainable bioenergy cannot be achieved through technology alone: governance, stakeholder participation, and adaptive management are equally essential. By linking data, field experience, and participatory dialogue, DIVERSE encourages regions to develop coherent strategies that integrate energy efficiency, biodiversity conservation, and local value creation.

The findings form the foundation for the DIVERSE Open Dialogue Toolkit, which will guide partners and stakeholders in testing innovative approaches through the Focus Labs. Ultimately, the analysis paves the way for future bioenergy pathways that are both competitive and respectful of the Alpine ecosystems and communities they serve.


© Dreamstime

Picture: DIVERSE

# DIVERSE's Next Steps: Testing of Open Dialogue Toolkit, Definition of Alpine Trajectories

**Cristina Cavicchioli / RSE - Research on Energy System, Italy**

The coming months will focus on testing the Open Dialogue Toolkit within the seven Focus Labs, turning planning into real-world action. The DIVERRSE partners will apply participatory methods to refine indicators, engage communities, and collect first evidence of biodiversity-positive energy solutions. In parallel, the consortium will define the Alpine Trajectories, the shared roadmap linking bioenergy and biodiversity across the Alps. Stay tuned for results and stories in our next DIVERSE Newsletter!

# General Contact & Further Information

### Lead partner of DIVERSE project

RSE - Research on the Energy System
Contact person: Cristina Cavicchioli
E-Mail: Cristina.cavicchioli@rse-web.it
www.rse-web.it

### Find more information about the project on:

**www.alpine-space.eu/project/diverse**

THE **NEXT DIVERSE NEWSLETTER** WILL BE AVAILABLE IN **MARCH 2026!**

## DIVERSE Project Partners





Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor Interreg Alpine Space can be held responsible for them.