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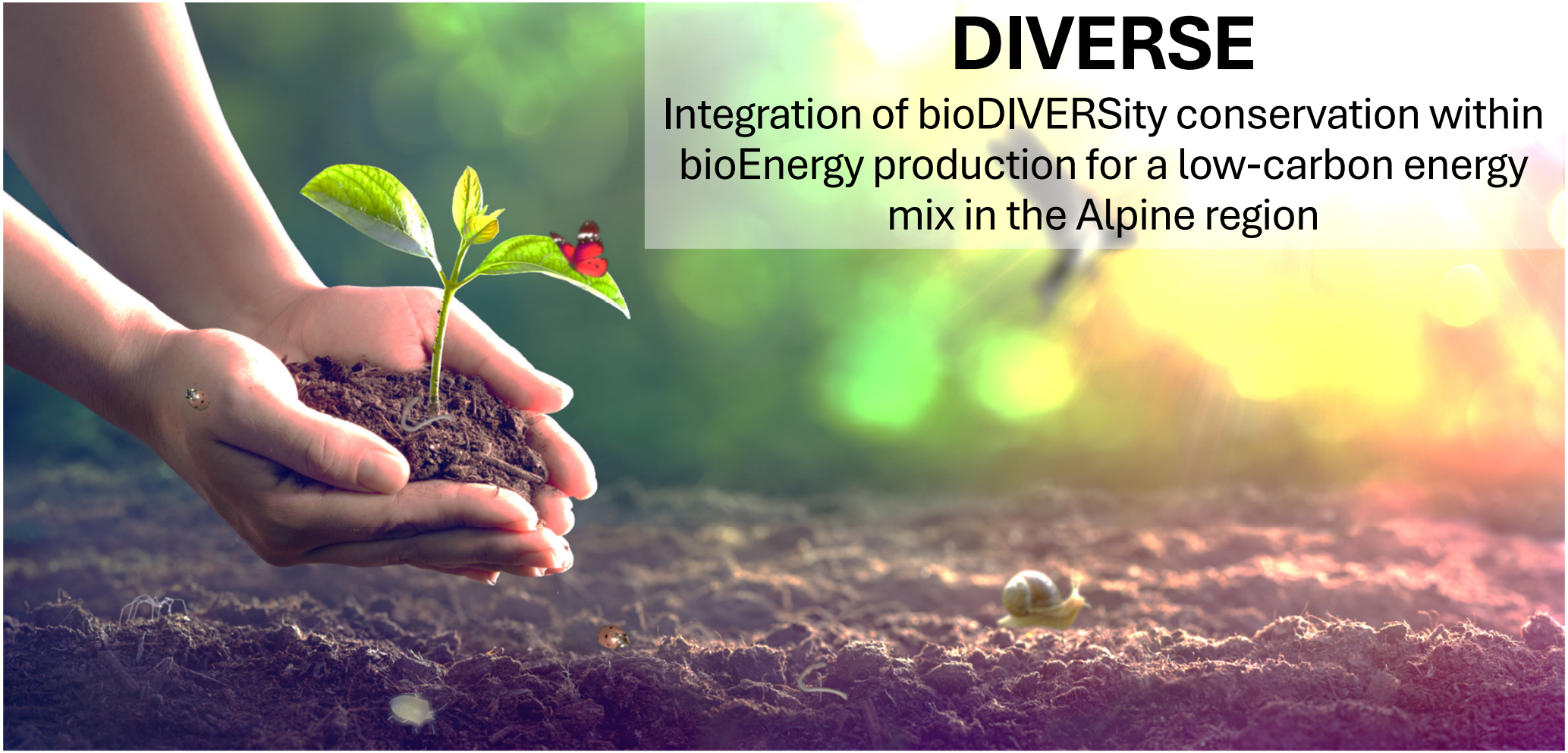
DIVERSE



DIVERSE

Integration of bioDIVERSity conservation within bioEnergy production for a low-carbon energy mix in the Alpine region

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DIVERSE

Re-think bio-energy in the Alpine region

DIVERSE – *Integration of bioDIVERSity conservation within bioEnergy production for a low-carbon energy mix in the Alpine region* – is an Alpine Space INTERREG project, beginning in **September 2024**. It involves **12 partners** from **5 different countries** coordinated by **RSE - Research on Energy System.** DIVERSE is focused on **enhancing energy diversification by integrating biomass with sustainability and biodiversity criteria.** The project adopts an open dialogue approach to foster a holistic perspective, starting from the availability of local energy sources and extending to their final uses, ensuring sustainable value creation.

Over the course of three years,, the project will develop an **Open Dialogue Toolkit** to guide transnational cooperation. This will include the establishment of a **pilot project centered on two key Alpine bioenergy and residue-based value chains**, facilitated through the **activation of Focus Lab**s in partner regions. As a result, project partners will collaborate to update energy plans, management practices, and bioenergy business models, incorporating nature conservation concepts through a bottom-up approach.

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Interreg Alpine Space Programme & DIVERSE's general infos

The Interreg Alpine Space Programme co-finances and supports cooperation projects, tackling common challenges, in particular the transition to a carbon neutral and climate resilient territory, and improve the quality of life of the 80 million inhabitants of the Alpine region.

- **Project ID and acronym**: ASP0500481 – DIVERSE
- **Project name**: Integration of biodiversity conservation within bioEnergy production for a low-carbon energy mix in the Alpine region.
- **Programme priority**: P2 - Carbon neutral and resource sensitive Alpine region
- **Specific objective:** SO 2.1 - Promoting energy efficiency and reducing greenhouse gas emissions
- **Project start date**: 01/09/2024
- **Project end date**: 28/02/2027
- **Project duration**: 30 months
- **Project budget:** 2.809.781,50 €
- **ERDF:** 2.107.336,12 €

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DIVERSE's Partnership

- **LP1: RSE - Research on the Energy System (Italy):** focuses or energy sources and systems in a decarbonized economy. In DIVERSE they will identify scenarios for sustainable bioenergy production using urban forest and tree residues.
- **PP2: PIEDMONT REGION (Italy):** promotes energy transition in the this Notrth-eastern region. During DIVERSE, they will develop multi-level tools to address environmental and biodiversity impacts of forest biomass use.
- **PP3: AVISP - Venetian agency for innovation in the primary sector - Veneto Agricoltura (Italy):** supports Veneto Region in agricultural, forestry, and agrifood policies. In the project, they will explore ways to enhance soil biodiversity and promote circularity in the agricultural and biogas value chain.
- **PP4: LGCA - Lombardy Green Chemistry Association (Italy):** Promotes sustainable biomass use, biorefinery processes, and bio-based products. In the project, they look for regional pathways for the valorization of residues from the agri-food value chain.
- **PP5: JZ KPLB - Javni zavod Krajinski park Ljubljansko barje (Slovenia):** manages the Ljubljansko barje Nature Park & Natura 2000 site, focusing on habitat protection & restoration. They're going to produce sustainable bioenergy, through agricultural/nature conservation residues from Park management practices.
- **PP6: RRA-LUR - Regional Development Agency of the Ljubljana Urban Region (Slovenia) :** RRA LUR supports the sustainable development of 25 municipalities of central Slovenia, which is going to build a bioenergy network up during the project.
- **PP7: COFOR - Regional Union of the Communes forestières Auvergne-Rhône-Alpes (France):** COFOR is an association of 800 forest communities of the Auvergne-Rhône-Alpes region, which is looking for a sustainable & biodiversity - compatible local use of forest residues.
- **PP8: 4ER - 4ward Energy Research Ltd. (Austria):** 4ER has a wide expertise in the field of renewable energy systems with a special focus on Energy Communities (ECs). They will support LEA and Uni.Graz in the setup of the Focus Lab in Styria.
- **PP9: TZE - Landshut University of Applied Sciences (Austria) – WP1 Leader:** TZE works on solutions and concepts for the energy transition. During DIVERSE, in support to Ruhrstoff municipalities & farmers, they will define strategies for the integration of biodiversity protection concepts.
- **PP10: ITALCAM - Italian-German Chamber of Commerce (Germany):** ITALCAM promotes sustainable business development. It will support TZE in setting up the Focus Lab in Bavaria.
- **PP11: LEA GmbH - Local Energy Agency (Germany):** LEA is an energy agency and advisory centre. They will support 4ER and Uni.Graz in setting up the Focus Lab in Styria.
- **PP12: Uni. Graz - University of Graz (Austria):** Institute of Biology at Uni. Graz is specialised in plant community ecology, biostatistics and biodiversity science. In Styria they will support the identification of effective management of forest biodiversity maintenance in Graz metro area.

Target groups

- **State Ministries**: to ensure alignment & contribution to national strategies/policies
- **Regional authorities** responsible for energy & environmental policies/strategies
- **Municipalities** implementing both energy transition & nature protection measures
- **University & research centres** dealing with bioenergy & biodiversity topics
- **Local Chambers of Commerce and associations**;
- **Regional/local agencies** supporting the implementation of ECs, and dealing with energy production & emissions;
- **Grid operators** of district heating, electricity (ECs) or gas grids
- **SME Actors** of bioenergy supply chains
- **ECs & associations** dealing with bioenergy promotion, enhancement and biodiversity protection
- **Citizens' associations** of DIVERSE regions, involved in nature conservation initiative
- **Enterprises** of bioenergy value-chains
- **European organizations** dealing with bioenergy & biodiversity topics,

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Project's Objectives

To accelerate the **transition to a low-carbon energy source mix** in the Alpine areas where **forest, agricultural & agri-food residues** are available, by strengthening the role that **sustainable bioenergy** can play in energy sufficiency & net-zero emissions. It will advance the **energy diversification approach** through the **integration of biomass coupled with biodiversity protection** criteria and support energy actors in the valorisation of sustainable & **biodiversity-positive bioenergy pathways**.

The project will provide a broader overview of Alpine area's biomass resources, weaknesses for usage and sustainable value creation. Based on the sustainability criteria specified by the Renewable Energy Directive (REDII/III) for agriculture residues & forest biomass, DIVERSE PPs will identify and adopt sustainability & biodiversity indicators to setup a transnational pilot, leading to the definition of **shared Alpine Trajectories**. This solution will guide the valorisation of life-sustaining bioenergy pathways in the Alpine area and beyond. The project aims to address **policy integration, agro-ecology, forestry, residues management practices, and the creation of circular business models** for bioenergy value-chains & Alpine ECs.

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Project Workflow & main outputs

WP	DESCRIPTION	OUTPUT
Setup of **Focus Labs** in PPs' regions.	**Assessment of key bioenergy value-chains** (residual biomass from agriculture/agri-food & forestry), looking at feedstock flows, LCA, ecosystem impacts. Drawing on REDIII provisions, PPs will define **sustainability and biodiversity criteria** and a **capacity building protocol** for bioenergy & environment/biodiversity sectors.	development of the **DIVERSE Open Dialogue Toolkit**.
Setup of a **transnational pilot** on the 2 selected Alpine bioenergy value-chains.	PPs will test the Open Dialogue Toolkit in 7 areas through the Focus Labs to define & implement key actions to **integrate environmental & biodiversity protection criteria** into residue-based bioenergy pathways. PPs will review and validate pilot results, feeding **the draft of the Alpine Trajectories**, i.e. a set of multilevel actions for the valorisation of sustainable and biodiversity-positive bioenergy routes.	**DIVERSE pilot**: a path towards sustainable & biodiversity-positive bioenergy routes in the Alpine Space
Elaboration of **policy recommendation** & **Alpine Trajectories** (AT)	PPs will work on **project outputs uptake** through ad-hoc execution plans and will identify followers among their TGs for outputs adoption. A final conference will be organized with EUSALP AGs, EU authorities & bioenergy/biodiversity associations to roll-out project achievements	**Alpine Trajectories** for sustainable & biodiversity-positive energy routes

Thank you!

Contacts

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