GRANULAR

KNOWLEDGE TRANSFER ACCELERATOR

Advancing Climate Neutrality in EU Rural Areas

HIGHLIGHTS REPORT

30 January 2026

Introduction

On 30 January 2026, the European Association for Innovation in Local Development (AEIDL) organised the GRANULAR webinar on "Advancing Climate Neutrality in EU Rural Areas," as part of the GRANULAR Knowledge Transfer Accelerator (KTA). The session brought together a diverse audience of over 75 participants, representing public authorities, civil society, and rural communities.

Serafin Pazos Vidal from AEIDL opened the session, emphasising that achieving the European Union's 2050 climate neutrality goals is a **collective effort** that cannot be achieved by focusing on urban centres alone. He noted that rural regions are home to a significant portion of the EU population and possess most of its **natural resources, food systems, and biodiversity**. Despite this importance, a persistent "**implicit urban bias**" can be observed in current climate monitoring and policy frameworks, often caused by the fact that gathering data is traditionally easier in urban settings than in rural ones.

Consequently, the webinar was designed to move the conversation **from ambition to implementation**, providing tools to measure, monitor, and translate climate neutrality into concrete local action.

ORGANISER: aeidl

30 JANUARY 2026

ONLINE

77 PARTICIPANTS
(research & education, public authorities, NGOs, civil society, EU institutions, rural communities, etc.)

PRESENTATIONS AND RECORDINGS **HERE**.

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UK Research and Innovation

Europe's path to climate neutrality: an overview

Sarah O'Brien

Directore-General for Climate Action (DG CLIMA), European Commission

Sarah O'Brien, from the European Commission's Directorate-General for Climate Action (DG CLIMA), presented the EU's strategic pathway toward achieving climate neutrality by 2050. She explored the challenges and opportunities of implementing climate policy across various rural and urban contexts, specifically examining the Emissions Trading System (ETS) and the Social Climate Fund.

Ms. O'Brien began her presentation by summarising the impacts of climate change on communities. When looking at issues like drought and water scarcity, these impact both urban and rural areas. However, they disproportionately affect rural communities, where the agricultural sector faces increased risks. Additionally, remote communities are frequently more vulnerable to extreme heat and weather events (such as fires, floods, and extreme storms) due to their geographic isolation and demographic profiles.

Climate neutrality targets in the EU

The European Climate Law establishes binding targets for the EU to reduce net greenhouse gas (GHG) emissions by at least 55% by 2030 compared to 1990 levels, with the ultimate goal of reaching net-zero emissions by 2050. This legal commitment is supported by critical interim milestones, including the already legally binding 55% reduction target for 2030 and the proposed 90% reduction target for 2040, which is currently undergoing inter-institutional negotiations to become law.

The 2040 target includes the provision to use up to 5% of high-quality international credits to meet the goal. This framework provides necessary certainty for investors and businesses, driving forward the EU's clean transition, industrial competitiveness, and energy independence.

Figure 1. EU targets to achieve net zero emissions by 2050

The EU's progress has been steady; by 2023, emissions had already decreased by 37% compared to 1990 levels. In 2024 (the most recent year covered in the State of the Climate report) emissions fell by 8% compared to the previous year, marking one of the largest annual declines in recent years. Projections indicate that the EU is firmly on track to achieve the 2030 target, and current policy settings are expected to contribute significantly toward the 2040 goal.

The **commitment to the** European Green Deal was further reinforced by the 2025 Clean Industrial Deal, which recognises decarbonisation as a primary driver of growth. This deal aims to:

- Maintain momentum on Green Deal goals, specifically decarbonisation and the 2040 target.
- Lower energy prices for consumers and industry.
- Support industrial competitiveness, including the upcoming Industrial Accelerator Act proposal.
- Secure the future of European manufacturing and create quality jobs.

This strategy focuses on transitioning energy-intensive sectors and the clean-tech industry toward climate neutrality while ensuring long-term economic resilience.

Source: Freepik

Challenges and opportunities for the green transition

Achieving these climate goals presents both significant challenges and unique opportunities. As Ms. O'Brien pointed out, it is essential to ensure that "*the transition is not done **to** or **for** rural communities, but **with** [them].*" The central challenge remains ensuring that the shift is socially fair, allowing all groups to participate in and benefit from the process.

To meet its ambitious targets, the EU is implementing the **Emissions Trading System 2 (ETS2)**. Starting January 2028, this system will introduce a cap-and-trade mechanism for fuel supplies in the building and road transport sectors. By setting an absolute limit on greenhouse gas emissions that decreases over time, the ETS2 creates a price signal designed to incentivise decarbonisation.

Beyond addressing sectors that currently account for 36% of total EU emissions, the ETS2 aims to:

- Reduce dependence on imported fossil fuels.
- Secure co-benefits such as lower energy bills, improved air quality, and reduced congestion.
- Generate revenue to be reinvested into supporting citizens throughout the transition.

A portion of the revenue from the ETS2 will be directed into the **Social Climate Fund (SCF)**, which will provide €86 billion between 2026 and 2032 to **ensure the transition is socially equitable**. The SCF specifically targets vulnerable households, micro-enterprises, and transport users.

The distribution of these funds follows a progressive redistributive model that considers **socioeconomic and territorial dimensions**. This includes accounting for the proportion of the population at risk of poverty in rural areas, as well as indicators for energy poverty (such as households in arrears on energy bills) and transport poverty metrics. By using these diverse indicators, the fund is allocated to address the specific needs of each Member State.

The SCF is designed to provide tangible support, including **energy investments** (efficiency upgrades, renewable energy, and clean heating and cooling systems) and **zero- and low-emission transport**, including the expansion and improvement of public transport networks. In addition, the fund includes an optional provision for limited, targeted, and temporary direct income support to assist those most affected by rising costs during the transition.

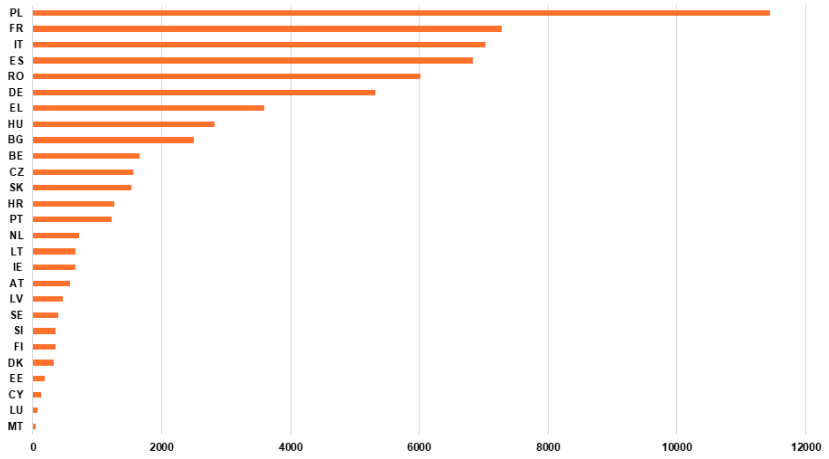

Figure 2. Total SCF allocation per Member State (in EUR million, current prices), DG CLIMA, European Commission

Rural dimension of the Social Climate fund

In the building sector, measures must be adapted to account for the different heating systems used in rural versus urban areas. However, it is in the transport dimension where the rural context is especially critical. Ms. O'Brien identified **transport poverty as a significant challenge** that is often more pronounced outside urban centers, where public transport options remain limited.

Member States are encouraged to include measures in their National Social Climate Plans that specifically benefit rural areas, such as **grants for electric vehicles, the development of charging infrastructure, and the implementation of on-demand transport services**.

For instance, Sweden's approved Social Climate Plan focuses exclusively on rural or low-density areas by offering premiums to help low-income households purchase or lease electric vehicles. Furthermore, the SCF provides Member States the flexibility to offer temporary direct income support to households facing higher energy bills as they transition toward cleaner energy and transport solutions.

Ultimately, rurality remains a key factor in the vulnerability of households and transport users regarding the impacts of the ETS2 and the overall cost of the transition.

GRANULAR Climate Neutrality Framework for rural areas

Tristan Berchoux

Meditarrean Agronomic Institute of Montpellier (IAMM) & GRANULAR Coordinator

Tristan Berchoux, GRANULAR coordinator from the Mediterranean Agronomic Institute of Montpellier, presented a conceptual and operational framework tailored to measure and monitor climate neutrality in EU rural areas, developed in the framework of the project.

He started his presentation by highlighting the **strategic shift of rural areas from being passive recipients of policy to becoming active protagonists** in climate action. This work, rooted in sustainability science and climate modelling, is specifically designed to fit within the European Green Deal and the Long-Term Vision for Rural Areas, which emphasises the inherent resilience of these territories.

Dr. Berchoux highlighted that while rural areas face specific challenges such as demographic decline and economic dependence on traditional sectors, they also possess unique opportunities for carbon sequestration and sustainable agriculture that are vital for the EU's 2050 net-zero goal. His presentation focused on the newly developed GRANULAR conceptual and operational framework tailored to measure and monitor climate neutrality at the local level. This tool was created to address a significant "*urban bias*" in existing monitoring systems, which often fail to account for rural complexities like mobility gaps or the specificities of small-scale farming. By providing a standardised and locally sensitive method, the framework empowers local authorities with the evidence-based data necessary to track progress and refine their climate strategies. The framework is structured around **six critical domains: energy, mobility, agri-food, buildings, waste, and industry**. These domains were identified through an extensive review of academic literature and policy documents to ensure they represent the primary drivers of emissions and resilience in rural settlements.

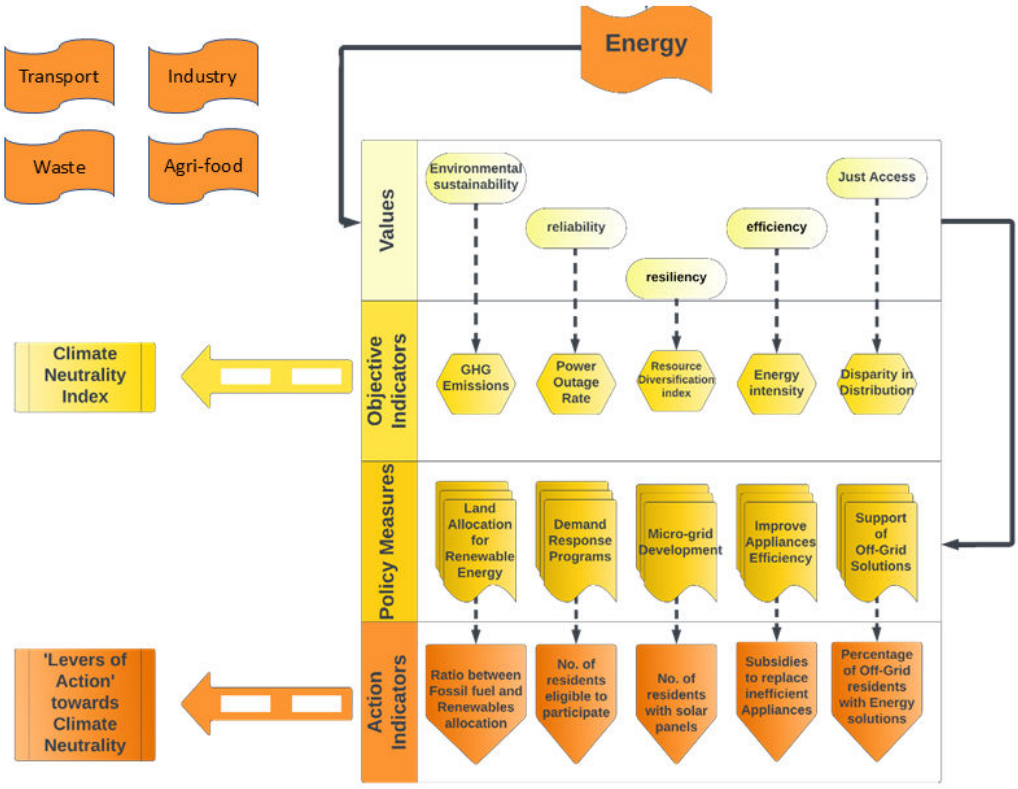

Figure 3. Climate neutrality framework for rural settlements, GRANULAR climate neutrality framework, 2025

Within each domain, the framework evaluates progress through four core values: **environmental sustainability, resilience, efficiency, and access**. To ensure the tool remains practical for local decision-makers, the project team reduced an initial pool of over **150 indicators down to a single representative metric for each value**. This distillation process ensures that the tool is both robust and easy to use for settlements with fewer than 10,000 residents. One of the most significant technical achievements is the framework's ability to overcome the scarcity of reliable, harmonised data at the rural scale. To achieve this, the project employs advanced **downscaling methods** to generate data at the Local Administrative Unit (LAU) level. Specifically, the framework utilises the **IPAT method**, which calculates environmental impacts by multiplying population size by "affluence" (income per capita), allowing for high-resolution metrics even where primary local data is difficult to process.

The framework is intentionally **modular and customisable**, allowing local stakeholders to adjust the weighting of different indicators to reflect their specific territorial challenges. For the purpose of providing a broader European analysis, the project utilised a "Google Trends" weighting method, which uses search volume data to approximate societal priorities across different regions. This analysis revealed that **energy and agri-food** are currently viewed as the highest priorities by the public at the local scale. Interestingly, transport often appears as a lower priority in these local searches, which Dr. Berchoux attributed to the fact that major infrastructure and subsidy decisions (such as those for electric vehicles) are typically made at the national or regional level rather than the local level.

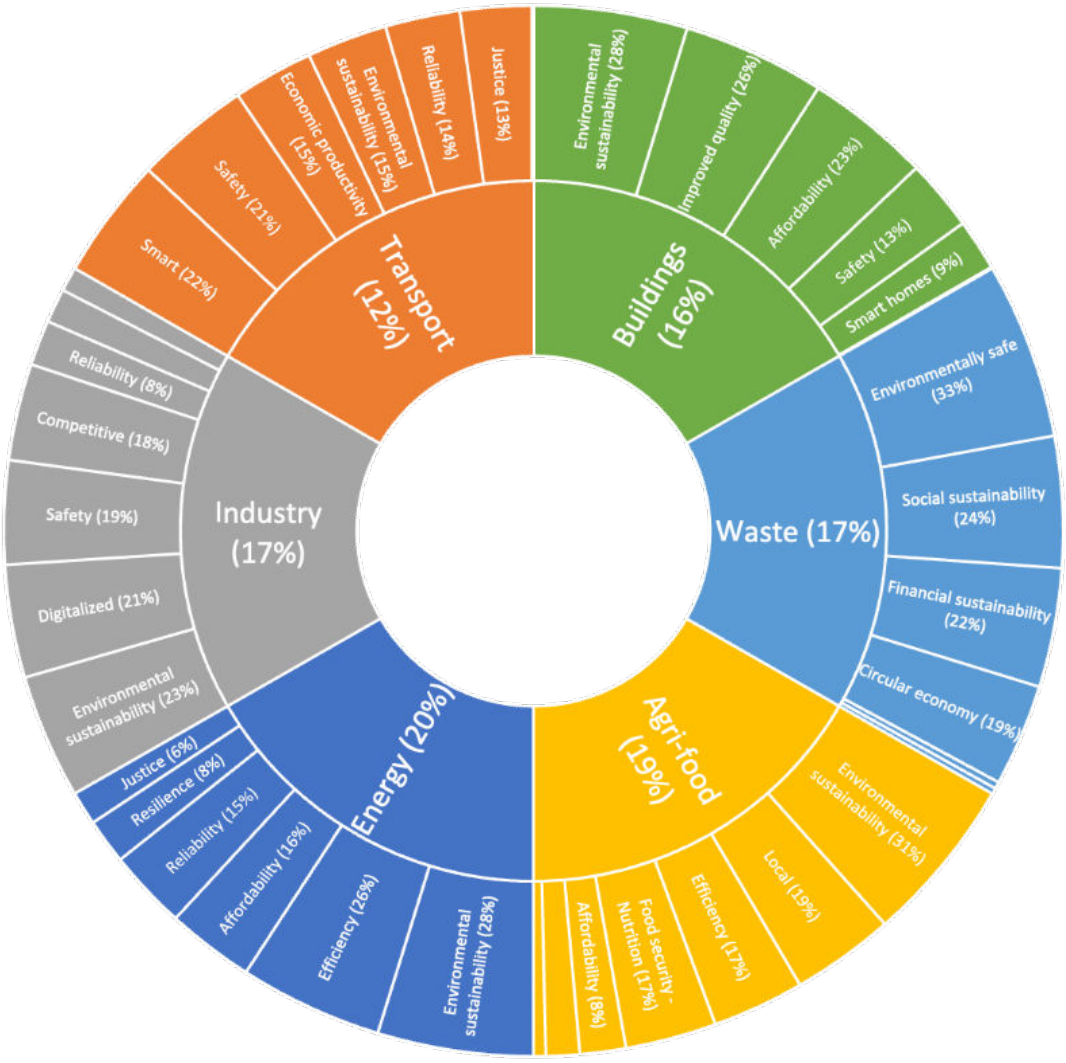

Figure 4. Composite Indicator Weights – Google Trends, GRANULAR climate neutrality framework, 2025

The presentation also delved into the analysis of **trade-offs and correlations** within the framework's data. Dr. Berchoux noted a strong positive association between the **reliability and affordability of energy systems** within a municipality, suggesting that improvements in one often support the other. Conversely, the data indicated a negative association between efficiency in the energy sector and environmental sustainability, highlighting complex challenges that local authorities must navigate when choosing between immediate operational gains and long-term climate goals. By aggregating this data at the national level, the project can model different policy scenarios (such as prioritising environmental sustainability over affordability) to show how various strategic decisions might change the performance rankings of different EU countries.

In addition to monitoring tools, the framework incorporates a comprehensive **policy toolbox** designed specifically for small rural settlements. By filtering databases from the European Environmental Agency and the Covenant of Mayors, the project categorised existing actionable measures into regulatory, procurement, informational, and operational types. A critical finding from this review is a **notable mismatch between relevant climate goals and actual implementation**. While rural areas have clear environmental needs, the current local policy portfolios rely **heavily on informational and operational instruments**, while more transformative **financial and regulatory planning tools remain underutilised**. Dr. Berchoux concluded his presentation by pointing out how essential aspects of rural resilience, such as **water quality and climate adaptation, are currently largely absent from many local policy portfolios**, representing a significant gap that the GRANULAR framework aims to fill for a more resilient, climate-neutral future.

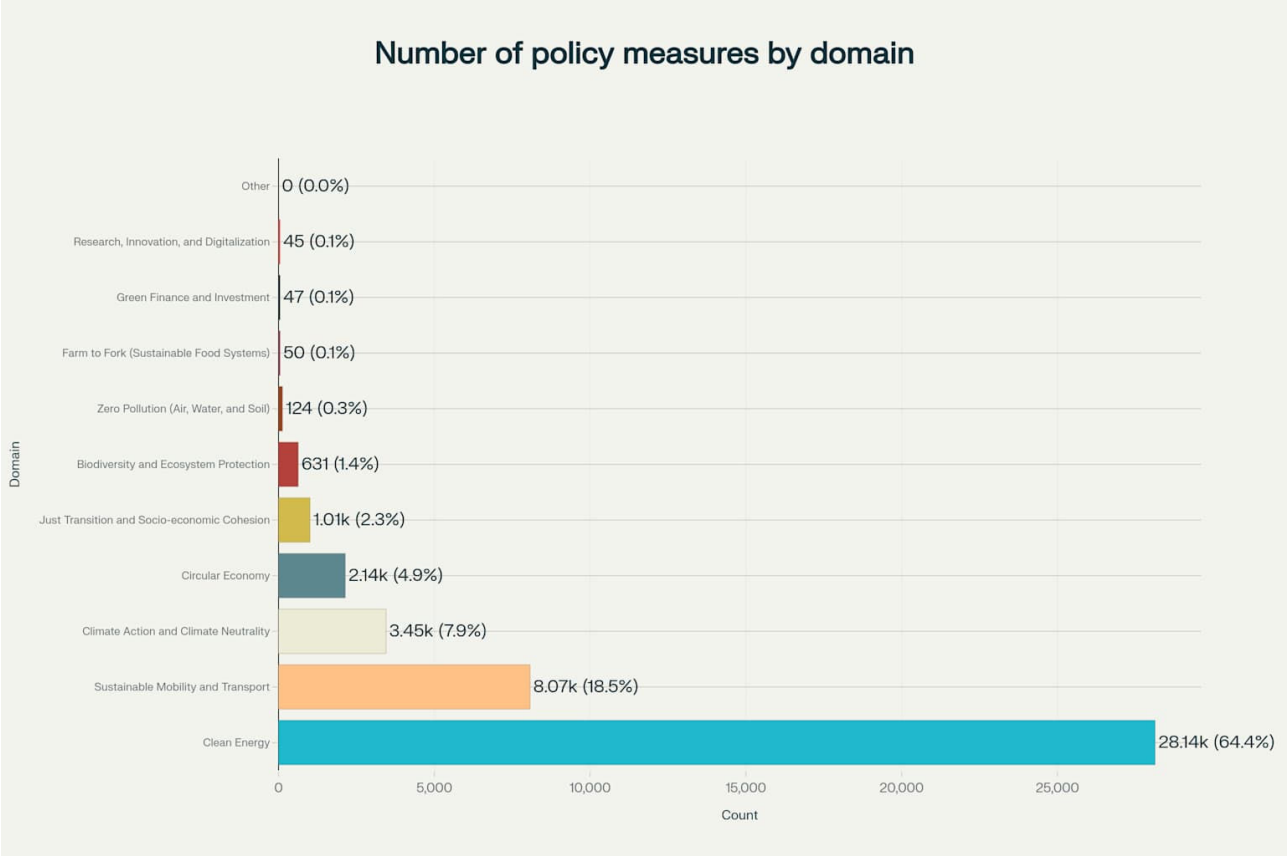

Figure 5. Number of local policy measures by domain, GRANULAR climate neutrality framework, 2025

Innovations for sustainable rural communities

The second part of the event featured contributions from two European projects, STORCITO and ICONIC project. Both projects, which started in May 2025, are funded under the Horizon Europe call Innovating for climate-neutral rural communities by 2050, and aim to build on the results of the GRANULAR project related to climate neutrality. ater quality and climate adaptation, are currently largely absent from many local policy portfolios, representing a significant gap that the GRANULAR framework aims to fill for a more resilient, climate-neutral future.

Fernando Veiga

University of Vigo & STORCITO Project Coordinator

Fernando Veiga López from the University of Vigo presented STORCITO, a new Horizon Europe project that aims to **support the just and green transition of rural areas** by adapting solutions often designed with an "urban bias" to rural realities.

Dr. Veiga López explained that STORCITO's overall ambition is to contribute to a **sustainable, balanced, equitable and inclusive development of rural areas** by providing solutions that are both technically robust and socially feasible across diverse European contexts. To achieve that, the consortium was built to cover different **bioclimatic areas**, enabling testing and adaptation in multiple rural realities.

He highlighted three specific focus areas of the project; each linked to a concrete rural challenge:

1) Wildfire prevention and forest management: Responding to the high exposure of territories such as **Galicia** and **Greece**, STORCITO is developing a **high-resolution wildfire risk digital tool**, with an ambition to move beyond regional or municipal scales and provide risk information at a much finer granularity (down to "meters") so that local actors can identify where prevention efforts should be concentrated.

The tool aims to integrate broader sets of variables than those typically used in existing systems, combining weather with vegetation, human factors, and wildfire history. Beyond mapping, the project is also testing whether this risk information can be operationalised through a nature-based intervention: using **GPS collars and virtual fencing** to guide grazing animals to priority forest areas, helping clear fuel loads and support prevention.

2) The second case study explores whether **CCUS (carbon capture, usage and storage)** could be considered a viable option in rural areas – not only technically, but also socially. Dr. Veiga López presented early interview findings suggesting **mixed acceptance**, strongly shaped by levels of awareness and information. A consistent insight was that respondents tend to prefer **local, small-scale solutions** and are reluctant to see large industrial facilities close to residential areas. STORCITO plans to expand this evidence base and translate the findings into outputs that can inform local decision-making.

3) Finally, Dr. Veiga López introduced **work on** rural mobility, centred on adapting an existing on-demand transport concept (originally developed for urban conditions) to rural settings. The project is currently assessing needs and testing how rural communities perceive such solutions, recognising that successful deployment depends on addressing concrete everyday constraints rather than assuming urban service models will automatically transfer.

He closed by noting that beyond the pilots, STORCITO is also developing standards, policy recommendations and replication-oriented guidelines, with the intention of supporting uptake across Europe.

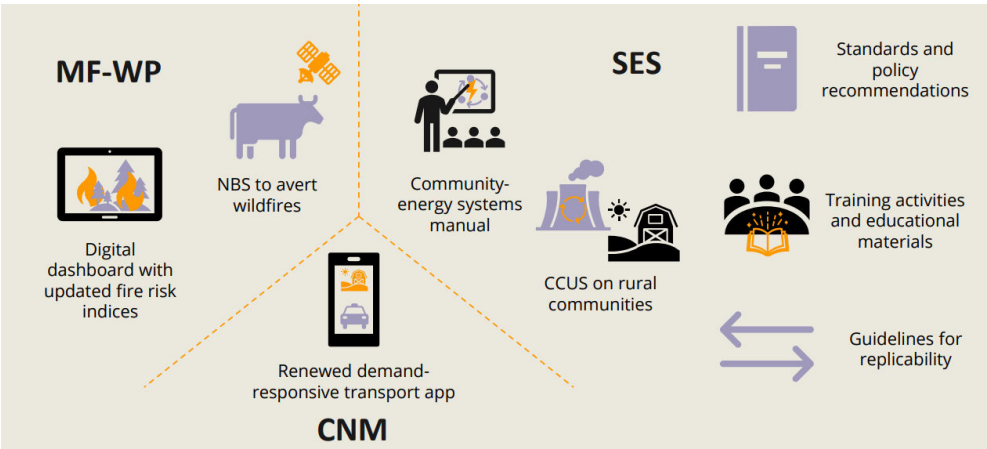

Figure 6. STORCITO project focus

Pedro Martínez

Research to Market (R2M), representing ICONIC Project

Pedro Martínez, from R2M Solutions (Spain), introduced the ICONIC project as a forward-looking initiative designed to strengthen **energy independence, climate neutrality and sustainable development** in rural island communities.

Mr Martínez outlined ICONIC's approach through **three interconnected pillars:**

- Achieving **energy independence** through local renewable resources.
- Implementing **circular economy principles** to maximise resource efficiency.
- Combining **social and technological innovation** tailored to rural realities.

He stressed that ICONIC is designed to deliver **practical and replicable models**, rather than remaining a theoretical exercise. Mr Martínez explained that many rural islands face amplified structural challenges as geographical isolation, limited economic opportunities, and dependence on costly external energy imports. At the same time, their isolation makes them powerful "**living labs**" for testing self-sufficient transition models that can later inform broader rural policy and practice.

ICONIC is deploying real-world pilots in three island territories: La Graciosa (Canary Islands, Spain), Inis Mór (Ireland) and Berchidda (Sardinia, Italy). The pilots are adapted to local priorities and resources, such as **biogas production from livestock waste** in Ireland and **water desalination needs** in La Graciosa, illustrating the project's integrated logic across energy, water and waste systems.

The project is built on a mix of technological and social innovations. On the **technical side**, ICONIC includes deployment of renewable energy systems (e.g., solar photovoltaic and biogas), development of rural smart grids and local energy markets, smart water management (including desalination), off-grid biogas systems converting local waste into energy, and sustainable mobility solutions suited to small and isolated communities. On the **social side**, ICONIC promotes governance and engagement mechanisms such as local working groups, multi-actor climate assemblies, and **energy communities**, framed as "vectors of transformation" capable of building local ownership and long-term sustainability.

Figure 7. ICONIC's pilot cases

Group discussion: Accelerating rural climate action

Moderated by Serafin Pazos-Vidal (AEIDL)

The concluding part of the webinar featured a moderated discussion led by **Serafin Pazos-Vidal (AEIDL)**, bringing together reflections from the speakers and questions from participants on how EU climate instruments and local implementation can better address rural realities. The exchange connected EU-level funding and regulatory frameworks with concrete rural transition pathways, particularly on transport poverty, governance, and community engagement.

A participant opened the public interaction with a question to **Sarah O'Brien (DG CLIMA, European Commission)** on the **Social Climate Fund**. While allocation formulas consider populations at risk of poverty in rural areas, he asked whether there are mechanisms to ensure funds are effectively transferred to rural territories, or whether it is ultimately up to Member States.

In response, **Sarah O'Brien** clarified that Member States design **Social Climate Plans**, which are then assessed and approved by the Commission. While the regulation does not earmark funding specifically for rural areas, it requires that benefits reach **vulnerable households, transport users, and micro-enterprises**. She noted that several draft plans operationalise vulnerability criteria in ways that effectively prioritise rural or low-density contexts, particularly for transport measures. As an example, she referenced **Sweden's approved plan**, which focuses on rural/low-density areas and includes an electric vehicle premium targeted to eligible households in those territories.

The discussion then shifted from funding to **replication and local governance**. Serafin Pazos-Vidal underlined that scaling climate-neutral solutions should not rely only on "more EU money", but also on **governance approaches** that enable replication through national and local systems from the outset. In this context, he invited speakers to reflect on what could accelerate implementation in practice.

Fernando Veiga López (University of Vigo) emphasised that STORCITO is working "from week one" with local rural communities, arguing that early engagement and co-ownership are essential to ensure solutions are accepted, adapted and sustained. **Pedro Martínez (ICONIC, representing R2M Solutions)** highlighted **energy communities** as a key accelerator for rural (and island) climate neutrality, pointing to their potential to unlock funding, build economic sustainability, and drive renewable energy production through locally owned initiatives.

Conclusion

Merveille Ntabuhashe

European Association for Innovation in Local Development (AEIDL)

In conclusion, this webinar offered different perspectives on how tools, In conclusion, the webinar brought together a range of insights on how **rural areas can move toward** climate neutrality through a combination of practical innovation, enabling governance and supportive policy frameworks. Across the presentations and the exchanges, speakers repeatedly returned to the idea that rural transition pathways must be **tailored to territorial realities** – where lower population density, longer distances, specific risk profiles and limited service availability shape what is workable and fair.

Rather than presenting climate neutrality as a single-track technological shift, the session highlighted it as a p**ackage of interlinked changes:** better local decision-support, integrated solutions across sectors (energy, mobility, land management), and sustained engagement with rural communities to ensure legitimacy and long-term uptake.

At the same time, the webinar emphasised that rural climate action can be accelerated when communities are not only consulted, but positioned as **co-designers and co-owners** of solutions, supported by governance models that keep benefits local and strengthen trust.

As **Merveille Ntabuhashe (AEIDL)** highlighted in her closing remarks, this event is part of the GRANULAR Knowledge Transfer Accelerator (KTA), which seeks to connect researchers, practitioners and policy actors around actionable rural transition strategies. Stakeholders are encouraged to stay engaged with the KTA community to continue exchanging lessons and co-developing solutions for climate-neutral rural futures.