Institute of Agricultural Economics
Romanian Academy

Romanian Association of Rural and Agri-Food Economy
"Virgil Madgearu"

Research Institute for Agriculture Economy and Rural Development
Academy of Agricultural and Forestry Sciences

XXI Conference

European Rural Development Network

Food systems transition for sustainable rural development

Book of Abstract

23–25 September 2025
Casa Academiei Române, Calea 13 Septembrie, 13
Bucharest, Romania

Institute of Agricultural Economics
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XXI Conference

European Rural Development Network

"Food systems transition for sustainable rural development"

Bucharest 2025

European Rural Development Network

Book of abstracts, 2025

Editors:

European Rural Development Network

Institute of Agricultural Economics – Romanian Academy

Romanian Association of Rural and Agri-Food Economy “Virgil Madgearu”

Research Institute for Agriculture Economy and Rural Development – Academy of Agricultural and Forestry Sciences

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Content

Welcome letters

European Rural Development Network

Warsaw, 15th September 2025

Dear Colleagues!

This year our conference is focused on food systems transition for sustainable rural development. As sustainable food systems approach becomes a vital priority in our countries, in the European Union and globally, it is time to discuss the ideas for the wide partnerships jointly developing research pathways, joint activities, good communication and support to the public policy.

A significant contribution to this issue has been recently offered by a Horizon Europe project FOODPathS – Co-creating the prototype 'Sustainable FOOD Systems Partnership'. We are therefore taking the opportunity presented by the very advanced work of this project to discuss the implications of this approach for future rural development, the shape of the agri-food sector, but also in our research and its relevance for public policy-making in our countries.

The FoodPathS project showed the importance of changing of mindsets to accelerate the transition to Sustainable Food Systems. This approach encompasses many components such as the innovative, effective and inclusive governance model and Modus operandi for the European Partnership, Strategic Research & Innovation Agenda (SRIA) supporting Food2030, promoting European Hub of local FS Labs, models of cooperation between universities and other research and education institutions, and the network of local and global players with a toolkit for co-benefits and trade-off's. This provides opportunities for discussion around a new research space for rural and agricultural researchers in central, eastern and southern European countries, scientists working for the benefit of nature and society. The ERDN is the perfect space for our joint efforts towards a new, sustainable economy.

I consider it a great honour and proof of trust that the Institute of Agricultural Economics - Romanian Academy with it distinguished partners - Romanian Association of Rural and Agri-Food Economy "Virgil Madgearu" and Research Institute for Agriculture Economy and Rural Development – Academy of Agricultural and Forestry Sciences – decided to co-organize with us this year's ERDN conference. The Institute of Agricultural Economics - Romanian Academy and Romanian Association of Rural and Agri-Food Economy "Virgil Madgearu" already hosted an ERDN conference in 2013 when our discussions were concentrated on EU transformations under CAP 2007-2013 and rural development perspectives in the future programming period 2014-2020. It also shows a great long-term cooperation and mutual support which is the basis of the ERDN community and, I hope, an incentive to join us by new partners!

Wishing all of us a successful conference!

Dr hab. Paweł Chmieliński
Associate professor

President of the Board
European Rural Development Network

ROMANIAN ACADEMY

NATIONAL INSTITUTE OF ECONOMIC RESERACH
"COSTIN C. KIRIȚESCU"
INSTITUTE OF AGRICULTURAL ECONOMICS

Dear Participants and Guests of the 21st Conference of the European Rural Development Network, "Food systems transition for sustainable rural development"

Food system implies a holistic approach of entities that contain the entire range of actors involved in the production, processing, distribution and consumption of food products from agriculture, fisheries, forestry, as well as of actors from the adjacent economic and societal areas involved. Studying the food problem through this integrative vision (i.e. food system) offers the perspective of complex approaches in this rather fluid historical period, characterized by demographic problems, changing consumption patterns, urbanization, economic crises, climate change and even depletion of resources in some areas (e.g. water).

The ultimate goal of the food system approach is to ensure food and nutritional security, reduce poverty and ensure the sustainability of environmental resources, in the context of requirements related to economic, social and environmental sustainability.

The study of food security is one of the main scientific research areas of the Romanian Institute of Agricultural Economics, which has been part in many important international and national research projects and reports in recent years. The food problem remains an ever-present one in Romania, given the frustrations known to the population during the communist period, the poverty of some categories of the population and the issues generated by the domestic agri-food system itself.

Therefore, addressing these subjects at the 21st Conference of the Rural Development Network is a beneficial action area that will bring forward many new approaches, exchanges of experience and new perspectives in addressing the dynamics of the agricultural system.

I wish the researchers participating in this conference a fruitful scientific debate, enabling the development of scientific relations and future collaborations.

Director of the Institute of Agricultural Economics

Dr. Cecilia Alexandri

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Telefon:021/313.60.87; Fax: 021/313.60.96; E-mail: office@iceadr.ro; Web: www.iceadr.ro

Dear participants and distinguished guests,

The revolution of agri-food systems is the focus of Europe's agenda to develop a sustainable, resilient and inclusive future. It is not simply a response to pressing global issues such as climate change, loss of resources and food insecurity, but also an opportunity to render rural communities more resilient, stimulate innovation and construct a fair and competitive agri-food economy. This change must occur through a systematic process, connecting science, policy and practice, encouraging cooperation at all levels of society and government.

It is a big honor that the 21st European Network for Rural Development Conference will take place in Bucharest, on 23-25 September 2025. This year's theme, "Transitioning Food Systems for Sustainable Rural Development", invites us to think, share and generate new concepts about the future of European agriculture and rural areas.

The presentations, the debates and the exchange of ideas that will take place at the conference will certainly enrich our perspective and stimulate valuable contributions to the transformation of food systems and to the sustainable development of rural communities.

Welcome to Bucharest and I trust you will have a successful and challenging conference!

PhD eng. CS II Vili DRAGOMIR

Director of Research Institute for Agriculture Economy and Rural Development

ASOCIATIA ROMÂNĂ
DE ECONOMIE RURALĂ ȘI AGROALIMENTARĂ
"VIRGIL MADGEARU"

Dear friends,

We are pleased to facilitate the XXIst ERDN conference, which we hope will provide each participant with the satisfaction of being part of a diverse community, united by an open attitude and meaningful discussions on current hot topics, as well as inspiration for future reflection, research, and collaborations.

In a world where new challenges become the daily norm, the rural areas are called upon to become an attractive, friendly, and harmonious environment where people can find their way to well-being. At the same time, food systems, whose roots and lifeblood come mainly from the rural spaces (at least in the current stage of technological development), must return to their fundamental role of providing people with quality, healthy, sufficient, accessible, and available food, produced through sustainable and resilient processes.

We are confident that each of you will find, during the three days of our event, at least one idea to resonate with, a challenge to delve deeper into your research, and a reason to return to future ERDN conferences and also in Romania.

Warmly,

Dr. Monica Mihaela TUDOR

President of the Romanian Association of Rural and Agri-Food Economy "Virgil Madgearu"

Calea 13 Septembrie, 13, sector 5, București, România
www.arera.ro

About the conference

Institute of Agricultural Economics – Romanian Academy
Romanian Association of Rural and Agri-Food Economy "Virgil Madgearu"
Research Institute for Agriculture Economy and Rural Development – Academy of Agricultural and Forestry Sciences
& European Rural Development Network
invite to the

XXI European Rural Development Network Conference

"Food systems transition for sustainable rural development"

23-25 September 2025
Bucharest, Romania

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Conference Programme

Institute of Agricultural Economics- Romanian Academy

Romanian Association of Rural and Agri-Food Economy "Virgil Madgearu"

Research Institute for Agriculture Economy and Rural Development – Academy of Agricultural and Forestry Sciences

& European Rural Development Network

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Conference Agenda

Day 1 of the Conference: – Tuesday, 23 September 2025

Venue: Casa Academiei Romane / Calea 13 Septembrie, 13, Bucharest, West wing, P2.
Access: through Calea 13 Septembrie, 13 (https://maps.app.goo.gl/asTTDAiYebzncvGK7)
through Calea Rahovei 176 (https://maps.app.goo.gl/FwYCd5uyeMXoFhcAA)

9:30-10:00	Registration to the conference
10:00-10:20	Welcome speeches ***Monica Mihaela Tudor***, Romanian Academy - Institute of Agricultural Economics, Romania ***Pawel Chmieliński***, President of the ERDN, Institute of Rural and Agricultural Development Polish Academy of Sciences, Poland ***Cecilia Alexandri***, director of Institute of Agricultural Economics - Romanian Academy, Romania ***Vili Dragomir***, director of Research Institute for Agriculture Economy and Rural Development, Romania

10:20-11:00	Plenary session Recent developments in food consumption in Romania – in the context of concerns regarding the actual economic evolution *Cecilia Alexandri[1], Bianca Pauna[2], Corina Saman[1],* [1] Institute of Agricultural Economics, [2] Centre for Macroeconomic Modelling - NIER, Romania Building tomorrow's Sustainable Food Systems together: the FOODPathS' way *Paweł Chmieliński,* President of the ERDN, Institute of Rural and Agricultural Development Polish Academy of Sciences (IRWiR PAN), Poland *Hugo de Vries,* National Research Institute for Agriculture, Food and Environment, INRAE, France
11:00-11:30	Coffee break and launch of the FoodPathS exhibition
11:30-13:00	Session I – Food Chair: Zbigniew Floriańczyk, European Rural Development Network, Institute of Agricultural and Food Economics – National Research Institute, Poland Culinary Tourism: A Pathway to Sustainable Rural Development and Food Systems Transition *Živilė Gedminaitė-Raudonė,* Lithuanian Centre for Social Sciences, Institute of Economics and Rural Development, Lithuania Local Food Prices Medium-term Developments in Romania *Mihaela-Nona Chilian, Marioara Iordan,* Institute for Economic Forecasting, Bucharest, Romania A systems approach to food security - issues around information and the management of risk *Denis Fischbacher-Smith, Katarzyna Zawalińska,* University of Glasgow, UK and the Polish Academy of Sciences, Polish Academy of Sciences, Poland Multi-actor rural innovation ecosystems for transforming agri-food value chains *Alina Butu, Steliana Rodino, Marian Butu,* National Institute of Research and Development for Biological Sciences, Bucharest, Romania; Institute of Research for Agriculture Economy and Rural Development, Bucharest, Romania; Vytautas Magnus University, Kaunas, Lithuania The Rural Impact of Food Retailers' Sustainability Activities in Türkiye *Gülçin Koç, Peyman Uysal, Ali Koc,* Department of Economics, Antalya Bilim University; Department of Economics, Akdeniz University, Türkiye Sustainable Food System Governance: Multi-Level Coordination in Moldova's Rural Development Policy *Eugenia Lucasenco,* National Institute for Economic Research, Academy of Economic Studies of Moldova, Moldova
13.00-14.30	Lunch

14.30-16.00	**Session II - Rural development** **Chair: Monica Mihaela Tudor**, Romanian Academy - Institute of Agricultural Economics, Romania **Lessons for food systems transitions from a just climate transition in Northern Ireland** *Jonny Hanson,* Queen's University Belfast, Northern Ireland **Unlocking rural potential through entrepreneurial education and innovation: initial insights from the ENGINE project mapping of inspiring initiatives and stakeholder engagement in the Province of Foggia (Italy)** *Juliana Bagetti, Fiore Mariantonietta, La Sala Piermichele, di Matteo Assunta, Colantuono Fedele,* Department of Economics, University of Foggia, Italy, Rete Fattorie Sociali (Social Farms Network), Italy **Harvesting Land, Exporting Energy: A Context-Sensitive Social Impact Assessment Framework for Latvia's** *Weronika Felcis,* University of Latvia, Latvia **Digital Transformation for Sustainable Rural Development: Bridging the Urban-Rural Divide** *Krzysztof Janc,* University of Wroclaw, Poland **Independent but lonely. The Empowerment of Polish Women Farmers** *Ruta Śpiewak, Klaudia Kryńska,* Polish Academy of Sciences, Institute of Rural and Agricultural Development, Poland
16.00-16.30	**Coffee break**
16.30-19.00	**Poster session** **Chair: Camelia Gavrilescu**, Romanian Academy-Institute of Agricultural Economics, Romania **How to improve agri-rural policy design? Key tools overview** *Zbigniew Floriańczyk*[1,3]*, Barbara Wieliczko*[1,2]*, Bogdan Buks*[1,3]*,* [1] European Rural Development Network; [2] Institute of Rural and Agricultural Development, Polish Academy of Sciences; [3] Institute of Agricultural and Food Economics – National Research Institute, Poland **Short supply chains as a component of food system transformation – the environmental impact of transport** *Norbert Chamier-Gliszczyński, Agnieszka Kurdyś-Kujawska,* Koszalin University of Technology, Poland **The Soybean Value Chain: A Sustainable Solution for Circular Agriculture and Sustainable Development** *Tatiana Iatisin,* National Institute of Economic Research -Academy of Economic Studies of Moldova, Moldova **The Implications of Climate Change on the Livestock Sector in the Context of the Transitioning to Sustainable Food Systems** *Diana Maria Ilie,* Research Institute for Agriculture Economy and Rural Development, Romania

	SOILSCAPE Soil Orchestras. The Living Labs methodology in SOILSCAPE project *Katarzyna Gizińska,* European Rural Development Network, Poland Agricultural Land Price Dynamics in Europe: Convergence, Divergence, and Policy Impacts Across EU Member States *Marcin Gospodarowicz[1,2], Adam Wasilewski[1,3],* [1] European Rural Development Network, [2] Warsaw School of Economics, [3] Institute of Agricultural and Food Economics—National Research Institute, Poland Elaboration and Implementation of Rural Development Actions in the Frame of the HE Project RURACTIVE *Klaus Wagner,* Federal Institute of Agricultural Economics, Rural and Mountain Research, Austria Facilitating transition to a resilient and sustainable future of rural areas through Living Labs. The example of the Austrian Living Lab Nockregion-Oberkärnten in the Frame of the HE Project RUSTIK *Ingrid Machold,* Federal Institute of Agricultural Economics, Rural and Mountain Research, Austria Biomass use value chain in Centru Region, Romania *Carmen Beatrice Păuna, Raluca-Ioana Iorgulescu, Boglarka Vajda, Gabriela Bilevsky,* Institute for Economic Forecasting, Romanian Academy, Bucharest, Romania Romanian Fruits and vegetable sector transition towards are more sustainable rural area *Cornelia Alboiu,* Institute of Agricultural Economics, Romanian Academy, Romania Pro-ecological practices in agricultural production *Zofia Koloszko-Chomentowska, Leszek Sieczko,* Bialystok University of Technology, Warsaw University of Life Sciences, Poland The impact of greenhouse gases on wheat production in the South-Muntenia region and directions for a sustainable agricultural transition *Ancuta Marin,* Research Institute for Agriculture Economy and Rural Development – ICEADR, Romania Comparative assessment of economic risk level in meat production *Rodica Chetroiu,* Research Institute for Agriculture Economy and Rural Development, Romania Considerations regarding purchasing trends for agri-food products from local producers - review of the specialized literature *Andreea Daniela Giucă,* Research Institute for Agriculture Economy and Rural Development – ICEADR, Romania Analysis of trade flows and soy consumption at the national level *Alexandra Marina Manolache,* Research Institute for Agriculture Economy and Rural Development - ICEADR Shaping short food supply chains – an aspect of sustainable rural development

	Agnieszka Kurdyś-Kujawska, Norbert Chamier-Gliszczyński, Koszalin University of Technology, Poland Network of Interest (NoI): A Tool for Social Inclusion in Rural Areas *Agnieszka Kurdyś-Kujawska,* Koszalin University of Technology, Poland Key Factors in the Transformation of Regional Food Systems in Poland: A Stakeholder Perspective *Agnieszka Kurdyś-Kujawska,* Koszalin University of Technology, Poland The local producers in the short agrifood supply chains – a participatory vision *Mihai Alexandru Chițea[1], Ioan Sebastian Brumă[2], Marioara Rusu[1], Meda Gâlea[3], Diana Elena Creangă[4], Lorena Florentina Chițea[1],* [1] Institute of Agricultural Economics, Bucharest, Romania; [2] Romanian Academy-Iași Branch; [3] Romanian Academy-Iași Branch; [4] Rural Development Research Platform, Lețcani, Iași county, Romania The Evolution and Challenges of the Vegetable Market in Romania within the European Context: An Analysis of the Horticultural Sector's Performance (2015–2024) *Rozi Liliana Berevoianu,* Research Institute for Agriculture Economy and Rural Development, Romania Dynamics of the wine sector in Romania – trends and challenges *Petruta Turek – Rahoveanu,* Research Institute for Agriculture Economy and Rural Development, Romania Green Energy Transition in Agriculture vs. Climate and Economic Resilience: Selected Dilemmas. The Case Study from the Łódź Region in Poland *Michał Soliwoda[1], Agnieszka Kurdyś-Kujawska[2], Jacek Kulawik[3],* [1] University of Lodz, Faculty of Economics and Sociology, Department of Corporate Finance, Poland; [2] Koszalin University of Technology, Faculty of Economic Science, Department of Finance, Poland; [3] Department of Finance and Risk Management, Institute of Agricultural and Food Economics-National Research Institute, Poland Evolutions of the agrifood consumption in the Romanian rural area - developments and trends in the post-accession period *Sorinel Ionel Bucur,* Institute of Agricultural Economics, INCE, Romanian Academy, Romania iSUSTlab – Inclusive Strategies for Sustainable Food Systems: Action Research in Organic and Peri-Urban Districts *Elena Claire Ricci*, Department of Management, Università degli Studi di Verona, Italy Efficient and resilient mixed farming and agroforestry – challenges and perspectives *Camelia Gavrilescu, Monica-Mihaela Tudor, Jacqueline Leonte, Mihai Chițea, Dan-Marius Voicilaș,* Institute of Agricultural Economics, Romanian Academy, Romania

	Bio-based products – A multi-approach analysis from the perspective of food pillars *Ruxandra-Eugenia Pop,* Research Institute for Agriculture Economy and Rural Development, Romania **Regional Inclusive Biobased Entrepreneurship Solutions (RIBES)** *Marcin Adamski,* European Rural Development Network, Institute of Agricultural and Food Economics – National Research Institute, Poland **The Romanian Food System in Transition to Sustainability** *Ana Ursu,* Research Institute for Agriculture Economy and Rural Development – ICEADR, Romania **Kyiv Region (Ukraine) as a Living Space of the "LandShift" Project** *Mariia Zavodiana,* Land Management Institute of the National Academy of Agrarian Sciences of Ukraine, Ukraine **Connecting Advisors Toward a European Network for Consumer-Producer Chains** *Fedele Colantuono, Juliana Carina Bagetti, Mariantonietta Fiore, Gianluigi De Pascale,* University of Foggia, Italy
19.00	**Dinner at conference venue**

Day 2 of the Conference: – Wednesday, 24 September 2025

9.30-11.00	**PARALLEL SESSIONS**
	Session III - Agri-food **Chair: Marcin Gospodarowicz**, European Rural Development Network, Warsaw School of Economics, Poland **From Data to Decisions: GRANULAR Indicators for Food System Transition** *Aleksandra Pawłowska,* European Rural Development Network; Institute of Rural and Agricultural Development, Polish Academy of Sciences, Poland **Knowledge valorization approaches in bioeconomy research for rural sustainability** *Marian Butu[1,2], Vili Dragomir[2], Steliana Rodino[1,2], Alina Butu[1],* [1] National Institute of Research and Development for Biological Sciences, Romania; [2] Institute of Research for Agriculture Economy and Rural Development, Romania; [3] Vytautas Magnus University, Kaunas, Lithuania **A framework for evaluating the social, economic and environmental performance of a circular production system** *Steliana Rodino,* National Institute of Research and Development for Biological Sciences, Romania; Institute of Research for Agriculture Economy and Rural Development, Romania

	The Impact of Financial Instruments on Livestock Farming in Kosovo: An Empirical Assessment of Productivity, Technological Adoption, and Agricultural Sustainability *Ekrem Gjokaj[1], Fjolla Gashi[2], Albana Jupe[2],* [1] Public International Business College Mitrovica, [2] Agricultural University of Tirana, Department of Finance, Tirana, Albania **Bioeconomy in Romania-Possible national strategy** *Dan-Marius Voicilas, Monica-Mihaela Tudor, Lucian Luca, Camelia-Anisoara Gavrilescu,* Institute of Agricultural Economics, Romanian Academy, Romania **Agricultural Land Market Dynamics and Their Economic Implications for Sustainable Development in Poland** *Marcin Gospodarowicz[1,2], Adam Wasilewski[1,3],* [1] European Rural Development Network, [2] Warsaw School of Economics, [3] Institute of Agricultural and Food Economics—National Research Institute, Poland --- **Session IV – RuralBioUp – Part I** **Chair: Carmen Beatrice Păuna**, Institute for Economic Forecasting, Romanian Academy, Romania **Biomass use value chain; Case study in Centru Region, Romania** *Carmen Beatrice Păuna, Raluca-Ioana Iorgulescu, Boglarka Vajda, Gabriela Bilevsky,* Institute for Economic Forecasting, Romanian Academy, Romania **The Role of Networks in Advancing Small-Scale Rural Bioeconomy Solutions: Insights from BioRural and thERBN** *Boglárka Vajda[1,2], Lajos Vajda[1],* [1]Asociatia Green Energy; Green Energy Biomass Cluster, Romania, [2]The Bucharest University of Economic Studies, Faculty of International Business and Economics, Romania **Co-Creating Rural Bioeconomy Pathways: Stakeholder Engagement and Roadmapping in CEE2ACT** *Mária -Magdolna Gáspár[1], Boglárka Vajda[2,3], Lajos Vajda[1,2],* [1]Asociatia Asimcov, Agrofood Regional Cluster, Romania, [2]Asociatia Green Energy, Green Energy Biomass Cluster, Romania, [3]The Bucharest University of Economic Studies, Faculty of International Business and Economics, Romania **Advancing Bioeconomic Transformation through Innovation in Romania** *Steliana Rodino[1,2], Alina Butu[2],* [1]Research Institute for Agriculture Economy and Rural Development ICEADR, [2]National Institute of Research and Development for Biological Sciences, Romania **Circular Bio-Based Nanocomposites for Additive Manufacturing of Intelligent Functional Materials** *Alina Butu[1,2,3], Steliana Rodino[1,4], Izabela Cristina Stancu[2], Marian Butu[1,4], Vili Dragomir[4],* [1]National Institute of Research and Development for

	Biological Sciences, Romania, [2]National University of Science and Technology Politechnica of Bucharest, Romania, [3]Vytautas Magnus University, Lithuania, [4]The Research Institute for Agricultural Economics and Rural Development, Romania
11.00-11.30	Coffee break
11.30-13.00	PARALLEL SESSIONS
	Session V - Rural Chair: Klaus Wagner, Federal Institute of Agricultural Economics, Rural and Mountain Research, Austria Strengthening rural development through macro-regional cooperation in the BIOEAST framework *Steliana Rodino[1,2], Alina Butu[1], Marian Butu[1,2]* [1] National Institute of Research and Development for Biological Sciences, Bucharest, Romania; [2] Institute of Research for Agriculture Economy and Rural Development, Bucharest, Romania Smart Village Labs for Social Inclusion: Enhancing Rural Governance through the INSPIRE Project *Adam Wasilewski,* European Rural Development Network, Institute of Agricultural and Food Economics – National Research Institute, Poland Modelling and analysing internal migrations in Poland: the diverse opportunities and paths for the rural areas *Jarosław Stańczak[1], Jan W. Owsiński[1], Przemysław Śleszyński[2], Rafał Wiśniewski[2],* [1] Systems Research Institute, Polish Academy of Sciences; [2] Institute of Geography and Spatial Organization, Polish Academy of Sciences, Poland Path of structural convergence of cee non-euro countries' rurality *Monica Mihaela Tudor,* Romanian Academy - Institute of Agricultural Economics, Romania Evaluating the Impact of Support for Rural development on Agri-Food Sector and Regional Development: Evidence from Lithuania *Genovaitė Beniulienė , Živilė Gedminaitė-Raudonė,* Lithuanian Centre for Social Sciences, Institute of Economics and Rural Development, Lithuania Strengthening Moldova's rural development through smallholders' integration in sustainable agricultural practices *Alexandru Ceban,* National Institute for Economic Research, Academy of Economic Studies of Moldova, Moldova --- Session VI – RuralBioUp – Part II Chair: Carmen Beatrice Păuna, Institute for Economic Forecasting, Romanian Academy, Romania Bioeconomy, a new stage of economic development

	John M. Polimeni[1], Raluca-Ioana Iorgulescu[2], [1]Albany College of Pharmacy and Health Sciences, United States of America, [2]Institute for Economic Forecasting, Romanian Academy, Bucharest, Romania **A transnational approach for a sustainable rural development in the Danube region: PLAN C project** Christina Leucuta, Romanian Cluster Association-CLUSTERO, Romania **Perspectives and Trends of SMART Farming in the South-East Region of Romania** *Carmen Cătălina Rusu[1], Luigi Renato Mistodie[1], Costică Voicu[2], Paul Preda Voicu[2]*, [1]Dunarea de Jos" University of Galati, Faculty of Engineering, Department of Manufacturing Engineering, Romania, [2]Association for Sustainable Development and Innovation in the South-East Region, Galati, Romania **Ecosystem services and various ways to assess them in a possible framework of national sustainable development** *Marioara Iordan, Mihaela-Nona Chilian*, Institute for Economic Forecasting, Romanian Academy, Romania **Integrating Fungal-Based Bioprocesses into Lignocellulosic Biorefineries** *Marina Tišma*, Josip Juraj Strossmayer University of Osijek, Croatia
13.00-14.00	Lunch
14.30-18.00	**Study visits**
20:00	**Dinner** Romanian style - Caru' cu Bere Restorant: Stavropoleos street, 5, Bucharest, 030081 (https://maps.app.goo.gl/ekRA3mQRFZJRANoo8)

Day 3 of the Conference: – Thursday, 25 September 2025

10.00-11.00	**ERDN Talk – Communication in science** **Creative communication for research** *Jonny Hanson,* Queen's University Belfast, Northern Ireland Today's audiences have short attention spans. Yet in an age of increasing mis/disinformation, and falling trust in experts and institutions, effectively communicating robust research findings to policymakers, students and the general public has never been more important. In this workshop, environmental social scientist and storyteller Dr Jonny Hanson explores how to disseminate research creatively for popular audiences. Drawing on his experience of communicating research findings via books, broadcasting, film, social media and live events, Jonny discusses some key principles and tools, including the importance of simplicity and emotion for effective messaging.

11.00-11.30	Coffee break
11.30-13.45	**Session VI – Agricultural and rural issues** **Chair: Živilė Gedminaitė-Raudonė**, LithuanianCenter for Social Sciences, Institute of Economics and Rural Development **Environmental governance in the soy supply chain: effects of the new EU regulation on Brazilian amazon territories** *Valdemar João Wesz Junior,* Federal University for Latin American Integration (UNILA), Brazil **Beekeeping in Latvia: A Path to Small Farm Resilience** *Aija Zobena, Renars Felcis,* University of Latvia, Latvia **Re-Place - Reframing non-metropolitan left behind places through mobility and alternative development** *Alexandra Deliu, Monica Serban, Mdalina Manea,* Research Institute for Quality of Life, Romanian Academy, Romania **Challenges and risk management strategies as viewed by small mixed farmers in Romania – case study Iaşi county** *Camelia Gavrilescu[1]; Krisztina-Melinda Dobay[2]; Daniela Matei[2]*, [1] Institute of Agricultural Economics, Romanian Academy, Bucharest; [2] "Gheorghe Zane" Institute for Economic and Social Research, Romanian Academy, Iaşi Branch, Romania **BIOEAST Initiative-Lessons learned** *Dan-Marius Voicilas, Ion Certan, Camelia Gavrilescu,* Institute of Agricultural Economics, Romanian Academy, Bucharest, Romania **Factors affecting adoption of agriculture 4.0 technologies: the case of small-scale producers in the coffee value chain in Mindanao, Philippines** *Larry Digal,* Program Leader Agri-aqua Value Chain Laboratory, School of Management University of the Philippines, Philippines **Agricultural and rural proofing – why do we need them?** *Barbara Wieliczko[1,2], Zbigniew Floriańczyk[1,3],* [1] European Rural Development Network; [2] Institute of Rural and Agricultural Development, Polish Academy of Sciences; [3] Institute of Agricultural and Food Economics – National Research Institute, Poland **The moderating role of the "make-believe system" in positioning touristic rural destinations** *Catalin Munteanu,* Institute of Agricultural Economics, Romanian Academy, Bucharest, Romania **BBioNets: Connecting Stakeholders, Sharing Knowledge, Building Sustainable Bioeconomy Pathways** *Magdalena Borzęcka,* Institution: Institute of Soil Science and Plant Cultivation – State Research Institute, Poland
13.45-14.00	Closing
14.00-15.30	Lunch

Project event: – Friday, 26 September 2025

10.00-11.30 *(9.00-10.30 CET)*	**Building Synergies for Rural Social Inclusion: Clustering Horizon Projects under the INSPIRE project:** "Supporting the inclusion, wellbeing, and growth of rural areas through multi-actor Smart Villages labs for enhanced governance frameworks". Session is open to ALL representatives of Horizon Europe and other EU-funded projects working on topics such as: • rural social inclusion, • digital and inclusive service provision, • Smart Villages, • social economy and innovation, • sustainable territorial development. We are meeting to **discuss shared goals** and thematic priorities of our projects, **align project activities** and timelines, establish and strengthen **networks and partnerships**, and **increase policy impact** and visibility. *See the leaflet accompanying this book for details!*
11.30	**End of the conference**

Abstracts

List of abstracts
(alphabetically by author)

Cecilia Alexandri

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Recent developments in food consumption in Romania – in the context of concerns regarding the actual economic evolution

This article analyses the recent developments in the food consumption of population in Romania, in the current period of crisis after the Covid-19 pandemic, in the context of sharp increases in the prices of staple foods and stagnating/declining real incomes among the population. This article investigates household consumption in 2011 and 2021, to see if there is evidence of changes in household demands of food. We estimated demand functions for 8 groups of commodities, estimating expenditure and cross-price elasticities. Our finding suggests that Romanian households still view meat as an important dietary requirement, and since its demand is one of the most elastic, the intake will further increase. The quantity and expenditure share of vegetables decreased in the interval. The expenditure elasticity shows that urban households value vegetable consumption more than rural ones. The demand for fruits is elastic, in some cases more so than the one for meat, so it is likely that the fruits demand will continue to grow. As a general conclusion, the evolution of consumption in different product categories reflects the existence of unsaturated demand, alongside the need to improve the quality of nutrition by increasing the consumption of animal protein and food products considered superior (meat, fruit, vegetables).

Key words: food consumption, food diversity.

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Unlocking rural potential through entrepreneurial education and innovation: initial insights from the ENGINE project mapping of inspiring initiatives and stakeholder engagement in the Province of Foggia (Italy)

Higher education institutions (HEIs) are considered crucial hubs for innovation and entrepreneurship, playing a key role in regional economic and social development (Popescu et al., 2020; Salomaa, 2019; Sonetti et al., 2016). In rural contexts, HEIs can significantly contribute to enhancing competitiveness and building local skills (Kusio and Fiore, 2022). However, long-term impact requires collaborative partnerships with diverse local stakeholders (Li et al., 2019). Therefore, HEIs can foster rural development by tailoring entrepreneurship and innovation curricula to train future rural leaders who can address local challenges and

opportunities (Żmija et al., 2025). Various stakeholders (e.g., inhabitants, entrepreneurs, farmers, local action groups, local authorities) can provide valuable insights about local resources, the specific development potential of each area, as well as human capital critical to driving the rural revitalisation (Żmija et al., 2025).

Rural territories are known for experiencing pronounced depopulation, accompanied by shortage of skilled workers possessing technical knowledge relevant to local businesses, along with persistently low wage levels (Kusio and Fiore, 2022; Tocco et al., 2024). Entrepreneurship education has long been regarded as a potential means of mitigating this process due to its ability to develop transversal skills, which enable individuals to access a wider range of employment opportunities, stimulate creativity, promote an entrepreneurial mindset, and facilitate the building of networks (Galvão et al., 2020; Ribeiro et al., 2025). Evidence suggests that rural alumni exhibit higher entrepreneurial propensity than their urban peers (Yu and Artz, 2019). In rural zones, entrepreneurship is often linked to innovation that extends beyond technological advancements in agriculture, encompassing novel solutions addressing community needs, social inclusion and the sustainable use of local resources (Gamito et al., 2021; Madureira and Torre, 2019; Yin et al., 2022).

To this light, the Erasmus+ project "ENGINE" (ENtrepreneurial rural Growth through exchanging of Good practices wIthIn Network Education) aims to create educational programmes that address the actual socio-economic development needs of rural areas, by examining different European territories: the Province of Foggia (Italy), Alto Minho (Portugal), Małopolska (Poland) and Münsterland (Germany). Among European rural landscapes involved in the project, the Province of Foggia in southern Italy illustrates struggles and strengths of rural development. Located in the northern part of the Apulia region, it consists of three main areas: Daunian Mountains, Gargano and Tavoliere delle Puglie, each with unique geography and cultural profiles, although sharing socio-economic difficulties. The territory faces significant demographic decline (-0.6% in 2022), with unemployment rates reaching 18% among individuals aged 15 to 64 and a concerning 34.9% NEET (not in education, employment or training) rate among youth aged 15 to 29, the highest in Apulia (ISTAT, 2024).

This study focuses on the Province of Foggia, where still there is substantial potential to better integrate the province's well-established higher education system and research capabilities with its rich natural and cultural heritage towards sustainable development. Landscapes spanning from the sea to mountains and plains, along with the rich biodiversity of Gargano National Park, also create potential for innovation and growth. Though the ENGINE project implementation, twenty-two inspiring initiatives were identified in the Province of Foggia as case studies and best practices that support the development of an educational tool (EDUPACK) for university curricula. These social, environmental and business-oriented activities leverage Foggia's unique local potential (Fiore et al., 2025). Research conducted to date has produced early outputs, including a practical guide for diagnosing the developmental potential of rural areas in terms of entrepreneurship and innovation (Borges et al., 2025). ENGINE's main objective is EDUPACK, designed to address rural entrepreneurship and innovation needs by equipping students with competencies necessary for the next generation of rural leaders (Engine, 2025). This territorial mapping represents a key step toward that goal, contributing to reveal and analyse main elements and factors influencing the potentials of rural development and stakeholders' position in the Province of Foggia.

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Evaluating the Impact of Support for Rural development on Agri-Food Sector and Regional Development: Evidence from Lithuania

As food systems face increasing pressure to become more sustainable and resilient, public investment in food processing, primary agricultural production, and rural innovation becomes a critical driver of local economic transformation. This study evaluates the impact of public support provided through Lithuania's 2014–2020 Rural Development Programme (RDP) on the transformation of rural regions and local agri-food systems. It focuses on support measures targeting agriculture, food processing, and value chain development and investigates how such investments influence regional cohesion and sustainability.

The assessment applies the GRANULAR rural proofing methodology, a structured tool developed within the EU Horizon framework to evaluate policies through a rural lens, and European Commission long-term vision for EU's rural areas. The analysis incorporates maps the effects of selected RDP measures across the four pillars of the Long-Term Vision for Rural Areas: Stronger, Resilient, Connected, and Prosperous rural areas.

Using regional socio-economic data, administrative reports, and structured stakeholder input, the study identifies both direct and indirect effects on local employment, business development, environmental outcomes, and institutional capacity. By integrating spatially differentiated impacts across rural typologies, the study highlights territorial disparities and offers insights for more place-sensitive policy design.

Preliminary insights suggest that RDP support may have contributed to increased productivity and infrastructure development in certain areas. However, the distribution of benefits and the influence of local administrative capacity require further investigation. The study aims to generate evidence-based observations and offer preliminary recommendations for enhancing rural policy instruments, while emphasizing the value of rural proofing tools in better aligning policies with local needs.

Key words: food systems, sustainable rural development, GRANULAR methodology, Rural Development Programme, agri-food policy, regional impact, Lithuania, rural transformation.

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BBioNets: Connecting Stakeholders, Sharing Knowledge, Building Sustainable Bioeconomy Pathways

The transition toward a sustainable and circular bioeconomy requires tools and platforms that effectively connect diverse stakeholders, facilitate knowledge exchange, and support the uptake of bio-based innovations. Rural areas, in particular, face challenges related to limited access to information, technological barriers, and fragmented networks, which hinder the adoption of small-scale bio-based solutions. The BBioNets platform has been developed to address these challenges by serving as a digital and collaborative environment dedicated to strengthening rural bioeconomy ecosystems. The main objective of BBioNets is to promote the uptake, replication, and scaling of small-scale bio-based solutions in Europe by offering user-friendly tools, structured knowledge resources, and networking opportunities. The platform targets a broad spectrum of stakeholders, including farmers, producer organizations, rural communities, technology providers, policymakers, and researchers. By combining technical guidance with participatory engagement, BBioNets aims to enhance innovation capacity in rural regions while ensuring environmental sustainability and socio-economic resilience.

BBioNets integrates several key functionalities:
Knowledge repository – providing access to catalogues of bio-based technologies, and best practices.
Decision-support tools – enabling users to match locally available biomass resources with suitable technological and organizational solutions.
Networking and collaboration spaces – fostering dialogue and cooperation among multi-actor partnerships across regions.
Capacity-building resources – including guidelines, training materials, and demonstrations to improve stakeholder skills and awareness.
Good practice sharing mechanisms – facilitating cross-regional learning, replication of successful initiatives, and transfer of innovation into practice.

By overcoming knowledge and communication barriers, BBioNets enhances the ability of rural stakeholders to participate in the bioeconomy. The platform acts as a catalyst for multi-actor collaboration, encouraging the co-creation of sustainable business models and the diffusion of innovations across Europe. Moreover, its modular design ensures replicability in diverse regional contexts, thus providing long-term added value for the European Green Deal and the objectives of the Common Agricultural Policy.

The BBioNets platform represents a novel instrument for strengthening rural bioeconomy ecosystems through digitalization, knowledge sharing, and stakeholder collaboration. By combining technical tools, educational resources, and networking opportunities, it contributes to the creation of resilient, inclusive, and environmentally sustainable rural economies. Its emphasis on replication potential and participatory approaches ensures that the benefits of the bioeconomy are widely accessible, ultimately supporting Europe’s transition toward circular and sustainable systems.

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Knowledge valorization approaches in bioeconomy research for rural sustainability

Strengthening the role of research in shaping sustainable rural futures requires more than generating scientific knowledge - it demands ensuring that this knowledge is actively translated into practice. The Horizon Europe project BEAMING supports this goal by enhancing institutional capacities for knowledge valorization (KV) in bioeconomy research, particularly within universities and research centers in Widening countries. This presentation explores how BEAMING facilitates the integration of KV strategies into the governance of research-performing organizations, with a focus on rural development. The project advances a systemic approach involving institutional self-assessment, peer learning with experienced EU partners, and the co-creation of tailored Knowledge Valorization Action Plans. By bridging science, policy, and practice, BEAMING fosters the uptake of research outputs that address the needs of rural communities - such as innovations in sustainable agriculture, biobased products, and circular value chains. Through tools like living labs, open innovation formats, and participatory foresight, the project empowers regional actors to become active contributors to knowledge ecosystems. In parallel, the establishment of a Knowledge Valorisation Community of Practice enables continuous exchange among researchers, policymakers, and local stakeholders. BEAMING's experience highlights that embedding KV in bioeconomy research can increase societal impact, reduce territorial innovation gaps, and support the implementation of the EU Bioeconomy Strategy and Green Deal objectives in rural areas.

Key words: Transdisciplinary Knowledge Valorization, Sustainable Rural Transformation, Participatory Innovation Models, Bioeconomy Policy Integration, Science–Society–Policy Interfaces.

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Multi-actor rural innovation ecosystems for transforming agri-food value chains

The transition toward sustainable and resilient agri-food systems requires inclusive innovation models that respond to the specific needs of rural areas while fostering collaboration across sectors and disciplines. The Multi-Actor Approach (MAA) offers a robust framework for co-

creating impactful solutions by engaging all relevant actors - farmers, researchers, businesses, civil society, and policymakers - through participatory and iterative processes. This presentation highlights how rural innovation ecosystems rooted in MAA can serve as drivers of systemic change. Central to this approach are seven defining characteristics: (1) addressing real-life problems and needs; (2) ensuring the involvement of a diverse and balanced set of actors; (3) fostering co-creation through continuous interaction; (4) supporting equitable power relations; (5) encouraging mutual learning and trust-building; (6) enabling shared responsibility for outcomes; and (7) integrating diverse forms of knowledge, from scientific to local and experiential. Examples from Central and Eastern Europe, including multi-actor platforms developed under the BIOEAST Initiative and projects such as BOOST4BIOEAST, demonstrate the effectiveness of embedding MAA principles into rural innovation frameworks. These ecosystems create spaces where research, policy, and practice intersect - generating locally adapted, scalable innovations for agri-food transformation. Embedding the MAA in national and regional strategies empowers rural areas to play a more strategic role in advancing the European Green Deal, the Farm to Fork Strategy, and the transition to a sustainable bioeconomy.

Key words: Multi-Actor Approach (MAA), Rural Innovation Ecosystems, Agri-food Systems Transformation, Co-creation and Knowledge Integration, Participatory Governance.

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Strengthening Moldova's rural development through smallholders' integration in sustainable agricultural practices

Small farmers play an important role in the Republic of Moldova's agricultural sector. Their contribution to the rural development, as well adoption of sustainable agricultural practices is hindered by a series of important barriers. Thus, the paper aims to explore the capacity of smallholders' integration into sustainable agricultural systems, in order to contribute to the increase of the economic and environmental resilience, as well as social equity in rural areas. The paper is based on an analysis of statistical indicators on the recent evolutions in Moldovan smallholders' activity and documental analysis of national policies and institutional frameworks. The findings highlight that there are still present obstacles in alignment of rural development policies to EU requirements, mainly related to land fragmentation, limited access to finance and knowledge gaps. At the same time, small farmers can be observed as potential implementers of sustainable practices in order to increase the added value of production and subsequently, their income. The paper argues for a comprehensive approach on the need of targeted investment to empower smallholders as drivers of rural sustainability. It concludes by proposing a set of recommendations aiming at fostering inclusive rural development through smallholder-centred food system transformation in the Republic of Moldova.

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BIOEAST Initiative-Lessons learned

The goals of this paper are to present the Bioeast Initiative and its role for the development of the bioeconomy strategies in CEE countries. It is analysed the mission of the Initiative since it was established. The history of the Initiative shows the main steps that were done for the construction of the present European network and the national strategies for bioeconomy.

For this analysis, there were use official documents elaborated at EU level by its institutions, documents from Bioeast Initiative, also national documents from a few selected countries for exemplification. The research, which is based on text analysis, comparisons and forecast, offers a broad view on the role of the Bioeast Initiative at EU level, on the development of the bioeconomy strategies in EU and especially in CEE countries. For better image, we highlight the main characteristics and challenges of the countries from this region.

The nowadays results of the Initiative shaw the benefits of the efforts done for the construction of the national strategies. They are diverse and can be the winning keys to solving all the problems we face today. A few examples of the projects developed at EU level by Bioeast Initiative also will help to understand the importance of the Initiative.

Key words: Bioeast Initiative, Strategy, Bioconomy.

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Building tomorrow's Sustainable Food Systems together: the FOODPathS' way

Planetary and societal challenges are exerting increasing pressure on food systems at local, regional, national, European, and global scales, raising concerns about the long-term availability of food and the sustainability of current practices.

Providing nutritious and safe food while reducing negative environmental impact and ensuring food security has become a crucial challenge for our future. Interactions between all actors are necessary to address these challenges, overcoming the barriers that may arise due to their different perspectives and interests.

Addressing these challenges requires collective, systemic action rather than isolated individual efforts. In response, the Food System's Strategic Working Group of the Standing Committee on Agricultural Research (SCAR SWG FS), in collaboration with the Directorate-General for Research and Innovation (DG RTD) of the European Commission, initiated the development of a narrative, template, and Strategic Research and Innovation Agenda (SRIA) for a prospective EU-wide Partnership on Sustainable Food Systems (P-SFS).

FOODPathS tends to design an ideal Partnership, thanks to the collective intelligent input of public, private, philanthropic, academic, civil society stakeholders, active at local to global scales.

We discuss the essential elements of a "ideal" partnership, including its governance model, modus operandi, co-funding mechanisms, strategic research and innovation agenda with connections to policy and education, best practices of co-creation cases, essential networks and infrastructures, communication strategies, etc.

The results not only provide insights into the ways in which food systems governance can be applied to this example, but also provide universal implications for food systems research in the context of public policy planning based on multi-stakeholder engagement, proposing approaches and tools to better understand the complexity of the approach.

Alexandra Deliu, Monica Serban, Mdalina Manea

Research Institute for Quality of Life, Romanian Academy, Romania

Re-Place - Reframing non-metropolitan left behind places through mobility and alternative development

Re-Place (Re-Place - Reframing non-metropolitan left behind places through mobility and alternative development) is a 4-year Horizon Europe project that started in March 2023 and will end in February 2027. The consortium that implements the project is led by IGOT-UL (Institute of Geography and Spatial Planning, University of Lisbon in Portugal) and includes institutions/teams from six European countries: Portugal (IGOT-UL - Institute of Geography and Spatial Planning and SPI - Sociedade Portuguesa de Inovação), Germany (UNIBA - Institute of Geography, University of Bamberg), Italy (UNIROMA1 - European, American and Intercultural Studies, Sapienza University of Rome), Latvia (UNILV - Faculty of Geography and Earth Sciences, University of Latvia), Romania (ICCV – Research Institute for Quality of Life, Romanian Academy) and Spain (ULPGC - Research Institute of Text Analysis and Applications, University of Las Palmas de Gran Canaria).

The project focuses on the alternative development of non-metropolitan, left behind areas (LBAs) and on investigating the narratives about LBAs, especially in the post-pandemic context. Particular attention is given to mobility and immobility as strategies for dealing with peripherality, and to their connection with development and left-behindness. Both quantitative and qualitative methodologies are used: in each of the six countries represented in the project, an online representative survey was conducted, and a local human development index (LHDI) was calculated at LAU level. With the help of LHDI, a total of 12 case study areas were selected (two in each country), in which qualitative research was started in June 2023 (interviews with local stakeholders, to reach an understanding of the complex local realities in the LBAs, including the (im)mobility drivers and their relation with spatial, economic, social and cultural transformations). The data collection continues this year with interviews conducted in households in LBAs, aiming to identify the strategies to cope with peripherality and extensively investigate the mobility trajectories in the areas, their impacts as well as reasons for immobility.

The project also has an important participative component, stressing the centrality of the voices of people in the LBAs, and is rooted in visual methodologies as resources for inclusion and overcoming the ‘epistemic privilege’. In this framework, the project sets out to co-create place-based policies to enhance mobility benefits and alternative local development strategies through village labs. It also aims to develop a policy toolbox and to reframe existing narratives on LBAs reinforcing a sense of place for residents and newcomers using co-production and visual methodologies.

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Program Leader Agri-aqua Value Chain Laboratory

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Factors affecting adoption of agriculture 4.0 technologies: the case of small-scale producers in the coffee value chain in Mindanao, Philippines

The increasing importance of digital technologies cannot be ignored particularly during the pandemic where vulnerability of value chains involving small scale producers has been exposed. This paper examines the factors that affect adoption of digital or agriculture 4.0 (A4.0) technologies of small-scale producers particularly farmers, micro, small and medium enterprises (MSMEs) in the coffee value chain. A logit model was used to determine the factors that affect this adoption. For farmers, results suggest the importance of awareness campaigns and trainings. Female coffee farmers show more appreciation of these technologies as they usually attend trainings on digital technologies while their husbands prioritize farm work. Results also showed that the likelihood of investment increases for less experienced farmers particularly those who participated in e-commerce trainings. For MSMEs, results revealed that enterprises in urban locations where digital infrastructure facilities are more developed show higher likelihood in investing on A4.0 technologies. Results also showed that the probability of investment varies in the three Mindanao regions examined. Regions with better internet access and presence of technology providers increased the probability of investment. The participation of large buyers sourcing from small scale producers has also accelerated the use of digital technologies. These findings reinforced the importance of capacity building, infrastructure support and the role of technology providers and large buyers in enhancing the use of digital technologies. to benefit farmers and MSMEs in value chains. It is suggested to examine effective mechanisms to balance public and private investments to promote A4.0 adoption among small scale producers.

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The Impact of Financial Instruments on Livestock Farming in Kosovo: An Empirical Assessment of Productivity, Technological Adoption, and Agricultural Sustainability

This study aims to assess the impact of financial instruments on the development of livestock farms in Kosovo, with particular emphasis on productivity, technology adoption, and agricultural sustainability. An empirical approach is employed, based on the collection and analysis of primary and secondary data, in order to empirically test the proposed hypotheses and address the research objectives.

Data were collected in 2024 from 138 dairy farms located across several municipalities of Kosovo, including Pristina, Lipjan, Shtime, Drenas, Skenderaj, and Podujeva. Primary data were obtained through structured interviews with farmers, while secondary data were used for the literature review and to compare findings with existing research. The independent variables comprise sources of financing (bank loans, non-bank loans, remittances, grants, subsidies, and owner's equity), while the dependent variables capture farm development, measured through indicators of productivity (sales, income, and yield production) and sustainability (planning, technology, and employment).

Cross-tabulation analysis was conducted using SPSS, supplemented with graphical visualizations to illustrate key patterns and relationships. The empirical evidence demonstrates that access to financial instruments exerts a significant and positive influence on the enhancement of productivity parameters. With respect to farm sustainability, the results indicate a moderate effect in strengthening planning and management capacities, as well as fostering employment generation, whereas the effect on technology adoption remains statistically neutral.

This research contributes valuable empirical evidence to the literature on agricultural finance, offering practical insights for policymakers and financial institutions. The findings suggest that access to financial instruments, facilitated by the efficient allocation and utilization of resources, appears to contribute to the modernization and structural transformation of the livestock sector in Kosovo.

Key words: productivity, technology adoption, agricultural sustainability, financial instruments.

Weronika Felcis

University of Latvia

Harvesting Land, Exporting Energy: A Context-Sensitive Social Impact Assessment Framework for Latvia's Renewable Energy Conflicts

The rapid expansion of industrial-scale solar and wind energy in rural Latvia highlights critical tensions between green energy transitions and rural livelihoods resilience. Despite being framed as a climate-smart pathway, these projects—driven largely by foreign investment and prioritizing energy export—undermine agricultural land uses, displace local knowledge systems, and fracture community identities.

To address these gaps, I have developed a context-sensitive Social Impact Assessment (SIA) framework, the CLEAR TRACK approach, integrating international standards (IFC Performance Standards, OECD Guidelines, IAIA principles) with place-based practices such as local observations and community interviews. My methodology centers on social risk assessment, ensuring rural voices are heard even in contexts where SIA is not formally mandated for renewable energy.

Concrete examples, including the 10,000-signature protest against the Dobele wind park, underscore the public discontent with current practices. Recent solar park development guidelines have proven inadequate for social safeguarding: large-scale parks can be built within 300 meters of private homes, disregarding human impacts. My findings reveal a dilemma for rural private landowners—weighing quick lease payments against the long-term erosion of farming livelihoods and land stewardship roles. Meanwhile, municipal leaders, balancing local criticism with developer pressures, struggle to safeguard community agency and agricultural identities.

These challenges highlight the urgent need for transparent, consistent, and participatory policy frameworks that prioritize community well-being alongside environmental goals. I argue that social impact dimensions are essential to ensure that renewable energy transitions align with food system resilience, rural social-ecological systems, and the creation of stronger, connected, and prosperous rural areas by 2040.

In line with the Food 2030 agenda and the EU Mission "A Soil Deal for Europe," I see this Latvian example as a valuable entry point to inform and advocate for inclusive, community-driven policies that can safeguard rural livelihoods under growing pressures: climate risk, depopulation, youth disengagement from agriculture, and intensifying inequalities from large-scale mechanization.

I believe these insights offer practical and policy-relevant lessons for rural regions across Europe, where similar trade-offs between food systems, renewable energy, and rural futures are emerging. My approach provides a concrete pathway for integrating energy justice, social safeguards, and community-driven rural resilience into the broader transition towards sustainable, healthy, and inclusive food systems envisioned by European policies.

Key words: rural livelihoods resilience, social impact assessment (SIA), renewable energy transitions, food systems and land use conflicts, inclusive policy frameworks.

Denis Fischbacher-Smith[1], Katarzyna Zawalińska[2]

[1] University of Glasgow, UK and the Polish Academy of Sciences, [2] Polish Academy of Sciences

A systems approach to food security - issues around information and the management of risk

The issue of food production and consumption often uses a systems descriptor but does not always reflect the academic work in the systems field. Of particular importance are the actors that make the system function, the transformations that occur within the system, and the role of emergent conditions in generation unforeseen or unconsidered vulnerabilities. Whilst there is considerable discussion of risk as an important factor in food security, the presence of human actors within the system ensures that conventional calculative practices to determine risk (as measurable uncertainty) will be effective. Issues around extended supply chains and just-in-time distribution processes have the potential to generate single points of failure across the food system landscape and the potential for human actors to expose vulnerabilities in such a distributed network are considerable. The presentation explores the nature of food security through a resilience lens and one that is heavily influenced by a systems approach rather than the 'bounce-back' (recovery) approach that is typified by business continuity. In particular, it has a focus on the challenges associated with changing the world views of key actors within the system in response to new policy initiatives around food security and vulnerabilities. In so doing, it considers the issues of information transfers within the food system and the processes by which information is attenuated (where the ambiguities associated with that information are removed) and the impact that his can have on transformations within the production/consumption process. It highlights issues around the management of knowledge and expertise within that context and the challenges facing consensus building around food security and associated vulnerabilities within the sector.

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Challenges and risk management strategies as viewed by small mixed farmers in Romania – case study IAŞI county

The latest developments in European agriculture emphasize a various range of risks that farmers are facing, i.e. economic, social, institutional, environmental. The Romanian farms are less developed as compared to those in other EU states, hence their higher risk exposure. The Romanian farming system is dominated by small-scale farms; the last Farm Structure Survey (2023) shows that two thirds of the farms are mixed (utilized agricultural area and livestock), and 90% of the farms are less than 5 ha UAA. Despite this prevalence, there are few studies regarding the challenges the small farms are facing, and the risk management strategies applied for overcoming them.

Data have been collected through face-to-face interviews with farmers. The sample was stratified in order to ensure representativeness in terms of geographical distribution, landforms (plain, hill) and climate conditions in the case study area (Iaşi county). The research questions the study is aiming to answer are: (i) what is the farmers' perception of the future challenges in agriculture? (ii) what are the risk management strategies they intend to adopt to cope with the perceived challenges, and (iii) what are the main socio-demographic characteristics of the farmers adopting different strategies to face the perceived challenges?

In the respondents' opinion, the biggest challenges in the next two decades will be economic, more precisely development of the farm business, and selling their products. Farmers perceived drought affecting crops and livestock (due to diminished available feed) as the main environmental challenge. Almost equally important, the lack of workforce was seen as the main social challenge. The most important strategy considered by the farmers is to increase the size of the farm (by renting or buying land or buying livestock), followed closely by the need to apply technological and managerial changes. It also appears to be correlated positively with young age of farmers and education level.

The answers can contribute to design targeted policy measures aimed at increasing farm profitability and development, as well as viability and sustainability of the small mixed farming system.

Key words: small mixed farms, perceived challenges, risk management, socio-demographic characteristics.

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Culinary Tourism: A Pathway to Sustainable Rural Development and Food Systems Transition

Culinary tourism is increasingly recognized as a key solution for transitioning food systems toward sustainable rural development. EU policies emphasize the importance of culinary tourism in promoting rural development and sustainability by attracting visitors to rural areas, thus supporting local economies, especially in regions affected by agricultural decline. By encouraging the preservation of traditional food practices, recipes, and production methods, culinary tourism helps safeguard Europe's cultural heritage.

EU initiatives further encourage the development of local food systems by fostering short supply chains, sustainability, and high-quality food production, all of which contribute to a more resilient food system. Moreover, culinary tourism stimulates job creation across various sectors, including food production, gastronomy, hospitality, and tourism services, fostering overall employment growth. These activities align with the EU's broader sustainability goals, contributing to environmental and climate objectives through sustainable food and tourism practices.

This approach will be illustrated by research results from the Interreg Baltic Sea Region project BASCIL – Innovative Solutions for the Rural Food Production Sector to Diversify into Sustainable Culinary Tourism Services. Twelve regions from the Baltic Sea Region (BSR) have participated in the research, aiming to integrate the conventional small-scale food production with culinary tourism services and thus reach the end-customers directly and to get the highest value from selling the products using the shortest value chain. Participatory approaches, the Business Model Canvas, and monitoring and evaluation methods were applied in this research, spanning from January 2023 to December 2024. Research focused on integrating culinary tourism services into their existing business practices, thereby enhancing the sustainability and competitiveness of rural areas.

Key words: culinary tourism, food systems, sustainable rural development, EU policies, short supply chains, rural SMEs.

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Agricultural Land Market Dynamics and Their Economic Implications for Sustainable Development in Poland

The article analyzes Poland's agricultural land market (2009–2023) and explores how regional prosperity, farm structure, policy and spatial linkages shape Polish farmland prices, addressing the gap in post-transition studies that join panel and spatial econometrics with institutional land-governance detail. It hypothesizes that regional prosperity lifts prices, agricultural intensity and market turnover temper them, and prices diffuse through spatial spillovers shaped by policy shifts from sales to leasing and by intra-family transfers. Using NUTS-2 administrative/statistical data, it combines fixed-effects panel regressions with spatial models (SAR/SEM/SDM) and reviews public-land and non-market circulation. Results confirm the hypotheses: wealthier regions bid up values; agricultural specialization, soil quality and higher turnover coincide with lower valuations; strong spillovers link neighboring regions; governance changes protect farmland but reduce mobility and entry. The study concludes that region-specific, performance-oriented land policy is needed to balance protection, access for young farmers and sustainability.

Key words: agricultural land prices; sustainable development; spatial econometrics; land governance; family farming.

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Lessons for food systems transitions from a just climate transition in Northern Ireland

Just transitions, that involve ordered and equitable transformations to net-zero emission economies and societies, are critical for ensuring climate change mitigation and adaptation approaches have broad public support. Yet, drawing on Eloi's (2021) welfare-growth-transition trilemma, trade-offs and tensions between societal groups and priorities in relation to just transitions are commonplace. Furthermore, the lessons from just transitions for the parallel agricultural transition have received limited attention to date. This paper considers these implications in the context of Northern Ireland in several ways. Firstly, it draws on qualitative perspectives from a policy roundtable with 20 key climate stakeholders in Northern Ireland in November 2024. Secondly, it adds quantitative data from the Northern Ireland Life and Times survey 2024, on the attitudes of 1199 adult residents of Northern Ireland to climate change and

addressing it. Thirdly, it briefly compares similar just transitions in the Republic of Ireland and Scotland for similarities and differences with the Northern Ireland context. Finally, the paper concludes by drawing several key lessons from a just climate transition in Northern Ireland that are relevant for food systems transitions, including: the impact of post-conflict contexts; the limitations imposed by limited devolution; the significance of cross-party political will; the role of cultural opposition and scepticism; and the impact of special interest group lobbying.

Key words: Northern Ireland, Ireland, just transition, climate change, food systems.

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Local Food Prices Medium-term Developments in Romania

Food prices and their impact on overall inflation has been of concern for both researchers and government authorities for decades. While the dynamics and impact of world and national food prices on inflation were much more approached in the economic literature, those of regional and/or local food prices are less researched, though significant advances were noticed more recently. In this respect, the paper presents a brief, but detailed, analysis of dynamics and developments of local food prices in Romania over a longer time span. Alignment with overall inflation trends is noticed, but also significant heterogeneity at county/local level and by product group as well, which might provide good insights when designing, building and managing food systems at sub-national levels in a sustainable manner.

Key words: food prices, food inflation, sustainability of food systems, Romanian counties.

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Digital Transformation for Sustainable Rural Development: Bridging the Urban-Rural Divide

Rural regions across Europe continue to face significant challenges, including depopulation, economic restructuring, and limited access to services and opportunities. As the European Union prioritizes sustainable and resilient rural transformation, digital technologies are increasingly recognized as key drivers for positive change. This paper explores the role of digitalization in supporting the sustainable development of rural areas, with a particular focus on how digital tools and connectivity can bridge the urban-rural divide and empower local communities.

Based on survey data collected from both rural development institutions and rural residents, the study assesses perceptions of digital technologies as enablers of social, economic, and institutional transformation. Institutional representatives largely report that digitalization has contributed to narrowing disparities with urban areas by improving access to public services, enhancing information flows, and building digital skills. These advances are seen as crucial for fostering innovation, supporting local entrepreneurship, and strengthening the capacity of rural institutions.

Rural residents, while acknowledging progress, offer a more nuanced perspective—highlighting persistent gaps in digital infrastructure and service accessibility. Their responses underscore the need for inclusive digital strategies that address the specific needs and constraints of diverse rural populations.

The paper discusses the implications of these findings for rural policy and practice, emphasizing the importance of equitable digital access, targeted capacity-building, and participatory governance. By leveraging digital technologies, rural areas can become more resilient, innovative, and attractive places to live and work.

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The Rural Impact of Food Retailers' Sustainability Activities in Türkiye

As observed worldwide, food retailing has radically evolved and restructured into highly concentrated chain supermarkets in Türkiye since the late 1980s and early 1990s. In fact, the first-four food retail chains (CR4) have captured 77% of fast-moving goods retail sales in 2021. As a forward integration, agricultural cooperative-owned food retail chains (AgriCoop Retailers) have also emerged to overcome the monopoly power of concentrated retailers against agricultural producers and alleviate the food inflation burden on consumers by acting as a short food supply chain since food inflation has oscillated above headline inflation since the early 2000s. In addition, AgriCoop Retailers has created value-added operations in rural areas with the aim of supporting the well-being of the rural population.

Fierce competition among retailers, including AgriCoop Retailers, along with regulations mandating the release of sustainability reports, has compelled retail firms to implement social responsibility activities that impact rural communities and areas.

All food retailers, except for multinational ones, are still at the very initial stage of releasing sustainability reports that correspond to the United Nations Sustainable Development Goals (SDG), which include corporate social responsibility (CSR) operations.

This study evaluates the restructuring of food retailing for the last two decades in Türkiye and analyses sustainability reports of three domestic, two multinational (consisting of Metro Gross Market and CarrefourSA) and one AgriCoop retailer with respect to the rural impact of sustainability operations. The study concludes with lessons learnt and synthesised facts for rural development policy and regulations to support sustainable food system transitions.

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Sustainable Food System Governance: Multi-Level Coordination in Moldova's Rural Development Policy

The transition process to a sustainable food system in the Republic of Moldova needs an integrated governance approach, able to evaluate some connections and dependencies between agriculture, environment, sustainable development, as well as rural livelihoods. The paper aims to present the increasing role of multi-level governance in promotion of transforming sustainable food system. The focus is placed on the capacity of the rural development policy to integrate local, national and international actors and stakeholders. Based on examination of most recent rural policy developments, institutional mapping, and analysis of different case studies, the paper will explore the coordination mechanisms between government agencies, local authorities, producer associations, and international partners. As a result of the carried-out analysis, findings present that even if the Republic of Moldova adopted a coherent rural development policy sustained by a public support program, the effectiveness of its

implementation is conditioned by institutional fragmentation, limited local capacity, and weak cross-sectoral coordination. The paper highlights the need for improved vertical and horizontal policy integration, enhanced participation of rural communities in the decision-making process, and necessity for monitoring instruments. Through the identification of gaps and opportunities in rural governance, the paper proposes some recommendations for strengthening the multi-level coordination as a critical prerequisite for food systems transformation and inclusive rural development in the Republic of Moldova.

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The moderating role of the "make-believe system" in positioning touristic rural destinations

In the competitive landscape of rural tourism, destination positioning strategies have become essential to attract and retain visitors. This study investigates the moderating role of the "make –believe system" in the positioning of rural areas in Romania. We conceptualized the "make-believe system" as a comprehensive framework of symbolic narratives, immersive storytelling and experiential design mechanisms that are able to stimulate visitors' imagination and emotional engagement. The study is designed on theories from cultural geography, destination branding and narrative psychology. Using an experimental design based on storytelling about three important rural touristic attractions in Romania, the study explores how the aforementioned symbolic systems influence tourist perceptions, motivations and behavioral intentions. Results indicate that a strong and coherent "make-believe system" significantly enhances the effectiveness of positioning strategies used for rural destinations. In particular, when potential tourists are engaged into locally rooted myths, legends and stories, they report higher levels of emotional resonance alongside an intrinsic motivation to visit the destination. The moderating effect was strongest for destinations with deeply enrooted local traditions reflected in holistic experiences. In contrast, destinations that lack a narrative coherence or are positioned only on functional attributes, struggle to differentiate themselves or to establish relevance as a valid touristic destination.

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From Data to Decisions: GRANULAR Indicators for Food System Transition

Delivering sustainable transitions in rural food systems requires place-based evidence that captures rural diversity. GRANULAR (Giving Rural Actors Novel data and Re-Usable tools to Lead public Action in Rural areas) addresses this by generating new datasets, tools and methods to better understand rural areas and support policy design. The project is anchored in the Rural (Diversity) Compass, an analytical lens for characterising rural functionality and differentiation, and it co-creates solutions with stakeholders through Multi-Actor Labs operating across pilot territories in Europe.

On the data side, GRANULAR screens and benchmarks rural data sources and methods, combining remote sensing, crowd-sourced, mobile-phone and web-scraped data with official statistics to derive indicators relevant for rural communities – such as resilience, well-being and attractiveness. Methodological guidance includes a publicly available Rural Proofing framework that links policy questions to context-sensitive metrics and validation steps in Living/Replication Labs.

These assets are being made accessible through the open GRANULAR Digital Platform, an online interface to explore datasets and indicators at multiple territorial levels for local actors and decision-makers. The presentation will showcase how this project pipeline (Compass → data/methods → rural-proofed indicators → platform) helps translate evidence into action for rural food system transitions.

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Advancing Bioeconomic Transformation through Innovation in Romania

The transition toward sustainable and resilient rural territories in Central and Eastern Europe (CEE) necessitates enhanced policy coordination, institutional capacity, and knowledge integration. The BIOEAST Initiative responds to these needs by offering a macro-regional governance platform focused on the development of circular and sustainable bioeconomies tailored to the specific challenges of 11 CEE countries. Within this context, the BOOST4BIOEAST project, funded under Horizon Europe, provides operational support for implementing the BIOEAST vision by facilitating structured stakeholder engagement, policy alignment, and transnational knowledge exchange. A core element of this strategy is the activation of national BIOEAST HUBs, which serve as interface structures linking research, innovation, and policymaking with societal needs. This presentation focuses on the role of BIOEAST HUB Romania as a national coordination and knowledge valorization platform. The HUB acts as a catalyst for cross-sectoral dialogue and collaborative planning, engaging ministries, academia, industry, and civil society in the co-design of Romania's bioeconomy

strategy. It contributes to the formulation of a national action plan aligned with the BIOEAST Strategic Research and Innovation Agenda (SRIA) and the broader goals of the European Green Deal and Common Agricultural Policy. BIOEAST HUB Romania demonstrates that advancing evidence-based policymaking and improving institutional coordination - both nationally and across macro-regional networks - can effectively support inclusive, innovation-led rural development throughout the European Union.

Key words: BIOEAST HUB Romania; Macro-regional cooperation; Rural policy; Sustainable bioeconomy transition.

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Modelling and analysing internal migrations in Poland: the diverse opportunities and paths for the rural areas

The paper presents an excerpt from a project, devoted to modelling and analysis of internal migration flows in Poland at the municipality level (some 2 500 units). The basic model verified makes migration dependent upon unemployment. This general dependence is positively verified, and the associated spatial images, corresponding to the consecutive years for two decades (2003-2022) are presented and analysed.

Of primary importance and interest is the highly diversified situation and fate of the individual municipalities, especially the rural ones, where farming plays often the essential or even dominating role. Against the spatial images obtained on the basis of model errors the axis, stretching between the suburban areas and the peripheral rural municipalities, is identified. Additional study, in which separate models are identified for the groups of municipalities, in this case – five groups – shows that despite the obvious existence of the axis mentioned the situation is more complex, with definite classes of rural municipalities featuring diverse migration-unemployment characteristics.

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Independent but lonely. The Empowerment of Polish Women Farmers

Our presentation aims to examine the empowerment of Polish women farmers through the lens of agency, using a modified version of the Women's Empowerment in Agriculture Index

(WEAI) tailored to the Polish context. While formal legal equality between men and women exists in Poland, deep-seated structural and cultural inequalities persist in agriculture and rural society. Drawing on a 2024 survey of 524 self-identified female farmers, we explore the material and immaterial resources available to them, their decision-making power, and their perceptions of gender-based discrimination.

Our findings reveal a complex picture. Respondents report relatively high self-efficacy and significant involvement in on-farm decision-making, reflecting growing autonomy in individual domains. However, very few experience a sustainable work-life balance, and collective agency remains notably low. Membership in agricultural organisations and public participation is limited, suggesting persistent institutional barriers and a lack of inclusive structures.

We argue that while Polish female farmers are gradually redefining traditional gender roles within the household and farm, they remain largely excluded from wider institutional processes. We interpret this through the lens of "familial-centric individualism": a form of empowerment that is personal and domestic but constrained in the public and collective spheres. These findings challenge the dominant narratives of rural women as passive or peripheral actors, highlighting their strategic yet under-recognised role in agricultural sustainability and rural development.

Our adaptation of the WEAI methodology for a European context offers new insights into gendered power dynamics in agriculture. It raises questions about how policy can better support inclusive rural transformation.

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Path of structural convergence of cee NON-EURO countries' rurality

After EU accession, Romania, as other NMS countries outside the euro zone, was characterized by narrowing the economic gap compared to the EU countries. The process of increasing the national economic convergence is accelerated in Romania and Poland where the Gross Domestic Product / inhabitant, as a percentage of the EU-27 average, has increased by more than 25%. The increase of the economic convergence of the predominantly rural regions of the CEE countries has a slower rhythm compared with the less-rural areas, which leads to the deepening of the territorial disparities within the non-euro countries.

The evolution of GDP / inhabitant of the predominantly rural regions is determined by the process of structural adjustment of the regional development path, both from the perspective of the contribution of the economic sectors to the formation of the GVA and to the employment.

The Krugman specialization index was used to assess the degree of structural convergence of rural economies in CEE countries with the euro area. From the perspective of the contribution of the economic sectors to the formation of GVA, the Romanian rural area registers a structural convergence index higher than 70% from Euro zone, larger than that registered in countries such as Poland and Hungary. On the other hand, Romania has the rural regions with the lowest level of occupational convergence. It seems that the restructuring process does not have enough economic springs (investments in non-agricultural sectors to generate jobs) to contribute to an upward of the occupational mobility (transfer of labour from agriculture to secondary and tertiary sectors) of the active rural population.

Key words: economic convergence, structural convergence, rural, Romania.

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Bioeconomy in Romania-Possible national strategy

Main aim of the research is to initiate and enrich bioeconomy related approaches in Romanian governance processes and to inspire the process of creating the national bioeconomy strategy covering key bio-based sectors related to EU Green Deal.

There were identified the main strengths and opportunities, also weaknesses and threats of the bioeconomy in Romania, in order to facilitate the elaboration of the national bioeconomy strategy and identification of the best niches for development.

The methodology used was based on desk research, focus groups and on-line surveys. In this frame, multiple interactions with multi-actors representing quadruple helix (industry, academia, government, and civil society) were conducted. The main steps conducted during this process consisted of investigation of SWOT factors, then attributing importance to criteria, pairwise comparisons, definition of agents-actors, determined most powerful facilitators and obstacles, formulating strategies, policy coherence analysis, and conclusions with recommendations and strategic actions.

For the research done, we used the official documents of the EC and other European institutions with attributions in the field of bioeconomy, national documents from Romania (political documents, strategies, action plans, regional and national initiatives), but also results and documents of the Bioeast Initiative and BioeastsUp project. To achieve the proposed objectives, a literature review, a text analysis of the studies and documents in this field, as well as comparisons between the analysed states were performed.

Based on the findings, there were elaborated conclusions with recommendations and strategic actions, useful for policy-makers in their activity, for the construction of the national bioeconomy strategy.

Key words: Bioeconomy, Strategy, Romania.

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Smart Village Labs for Social Inclusion: Enhancing Rural Governance through the INSPIRE Project

The Horizon Europe project INSPIRE (101136592) supports the inclusive, sustainable development of rural areas by promoting social well-being and access to services through Smart Village Labs (SVLs). These SVLs are participatory physical and digital spaces fostering social innovation and entrepreneurship tailored to the needs of vulnerable rural populations. The project operates in seven pilot territories across Europe, including the Lubelskie region of Poland, aiming to understand and reduce rural exclusion by enhancing governance frameworks.

INSPIRE delivers novel tools such as a territorial typology of rural exclusion, an EU-wide Services and Social Economy Atlas, and a Rural Social Inclusion Policy Dashboard. It co-develops social economy solutions in collaboration with local actors, promoting user-driven innovation and building capacity through MOOCs and mentoring. This paper presents key insights from the implementation of SVLs and the early outcomes of participatory governance

processes. It contributes to debates on rural social innovation, transformative governance, and the role of civil society in delivering inclusive services.

The findings align with the ERDN 2025 themes on food systems transformation and rural resilience and offer practical recommendations for advancing social inclusion through place-based, participatory strategies.

Key words: social inclusion, Smart Village Labs, participatory governance, rural innovation, Horizon Europe, INSPIRE, social entrepreneurship, EU rural policy.

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Environmental governance in the soy supply chain: effects of the new EU regulation on Brazilian amazon territories

Agri-food systems are under increasing pressure to adopt more sustainable practices in the context of the global climate crisis, particularly when they are major drivers of native vegetation loss. In response to the significant "implementation deficit" that continues to hinder sustainability efforts in agricultural commodity chains, environmental governance initiatives have expanded through the creation and enforcement of new regulatory instruments. One notable example is the recent regulation introduced by the European Union, which prohibits the import of certain agri-food products originating from deforested areas. In Brazil - the global leader in soy production and exports - this regulation is expected to have far-reaching effects, particularly on the soy sector. This research aims to analyze the European Union's new regulatory framework and its implications for Brazilian soy exports. Using a combination of methodological tools, the study investigates the dynamics and strategies adopted by soy producers in specific territories of the Brazilian Amazon to comply with, circumvent, or adapt to these new requirements. The focus on the Amazon occurs for two main reasons: it is currently the main frontier of soy expansion in Brazil and plays a critical role in global climate mitigation efforts.

Key words: Sustainable food system; Agricultural frontier; Environment; Trade.

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Agricultural and rural proofing – why do we need them?

With the increasing climate changes impact on socio-economic activities and policies aimed at reducing GHG emissions there is a growing number of complex regulations enacted. The regulatory impact assessment (RIA) was widely introduced at the beginning of the 21st century. Yet, the practice of verifying the potential impact of the planned regulations and policies seems not to have brought the expected results and RIA is limited to a formality to be included with a proposal of a regulation. It generally does not include an in-depth analysis of socio-economic impact on different stakeholder groups especially if they are not seen as the ones that would be directly affected by the proposed policies.

Given the visible development challenges related to rural development facing aging, depopulation, peripheralization and growing problems with adaptation to climate changes, the calls for rural proofing are growing. Rural proofing, defined as taking into account the rural perspective, when designing different public policies, seems to be a right approach to increase rural resilience and tackle the problem of geographies of discontent. The growing problems related to impact of climate changes on agricultural activity and its decreasing profitability, seem to be a good reason to call also for agricultural proofing. Yet, both agricultural and rural proofing should not be reduced to "fill-in forms" that are just an added administrative obligation with no actual in-depth analysis of the impact of the planned policies and thus resulting in no adjustments to specific problems of given stakeholder groups. In the times of general mistrust among stakeholders and growing problems with the spread of fake information there is a need to create deliberative processes of designing policies that engage all the relevant stakeholders with clearly defined and mutually agreed powers, including epistemic power.

The study presents the theoretical framework for the rural and agricultural proofing and the interlinkages between these two concepts in the context of the current EU debate of the multiannual financial framework 2027-2034 and the policies to be implemented in the EU in this period.

Key words: rural proofing; agricultural proofing; regulatory impact assessment; resilience; development.

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The challenges and opportunities related to the development of beekeeping farms in the Vidzeme region, with a particular focus on Madona municipality

Recently, in Latvia, as in all post-socialist Central and Eastern Europe (CEE), rural communities have been experiencing rapid socioeconomic differentiation, family farms have become more specialized and industrialized, and the income gap between small and large farms has increased. Excessive reliance on subsidies affects not only farm profitability but also the economic and social fabric of rural communities. Although farm viability and sustainability are critical for the continued operation of family farms, resilience emerges as the most decisive factor in ensuring their long-term existence. This study analyses the challenges and opportunities related to the development of beekeeping farms in the Vidzeme region, with a particular focus on Madona municipality—an area characterized by a high concentration of organic farms, active local development strategies, and marked competition between different farming models.

Key words: Common Agricultural Policy, small farms, beekeeping.

Posters

List of posters
(alphabetically by author)

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Regional Inclusive Biobased Entrepreneurship Solutions (RIBES)

The RIBES project (Regional Inclusive Biobased Entrepreneurship Solutions) is a three-year initiative funded under Horizon Europe, running from March 1, 2024, to February 28, 2027, with a budget of approximately EUR 5 million. Its overarching goal is to support the transformation of economies in European regions struggling with low levels of innovation in the bioeconomy sector.

RIBES seeks to accelerate the shift from fossil-based, linear production systems towards a circular and dynamic bioeconomy that incorporates inclusive social dimensions. The project addresses key challenges such as limited awareness of the bioeconomy, insufficient market frameworks, lack of necessary skills among local stakeholders, and underdeveloped value chains and infrastructure.

The methodological approach relies on bottom-up, multi-actor engagement, fostering collaboration among rural communities, universities, administrations, and entrepreneurs. Central to this are the Multi-actor Transformative Forums (MTFs), designed as platforms for co-creating inclusive, context-specific business and governance models.

As a tangible outcome, RIBES will deliver a “RIBES Toolkit” offering practical solutions including collaborative models, policy monitoring systems, environmental protection plans, and support mechanisms for small-scale, circular entrepreneurship. Ensuring social sustainability is a priority, with an emphasis on equal participation of all actors, including vulnerable groups, through dedicated training and business support.

Ultimately, RIBES aims to strengthen local innovation, reinforce bio-based value chains, and stimulate socio-economic development in rural and peri-urban areas, while ensuring scalability and replication of its results at national and European levels.

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Romanian Fruits and vegetable sector transition towards are more sustainable rural area

The Romanian fruits and vegetable sector has seen important changes in the last period due to several factors including climate chances, requirements coming from the Green Deal, the rural work force dynamic, the farm selling perspectives. The purpose of this paper is to make an analysis of these factors based on quantitative and qualitative data using several indicators

mainly natural resource use (energy use, water consumption,) versus chemical use along with the other factors listed above. By using a combination of a quantitative and a qualitative-investigation approach the findings suggest that the sector has an important evolution with a higher dynamic regarding the perspective on transformative knowledge although the Romanian fruits and vegetable security and availability perspective remain at stake.

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The Evolution and Challenges of the Vegetable Market in Romania within the European Context: An Analysis of the Horticultural Sector's Performance (2015–2024)

The vegetable market in Romania has undergone a complex transformation over the past decade, characterized by an increasing demand for local and healthy products, as well as structural challenges arising from competition with imports, a lack of major investments, and insufficient institutional support. Despite the significant agricultural potential and growing public interest in healthy nutrition, the horticultural sector faces persistent issues related to infrastructure, economic predictability, and adaptation to a competitive European environment. This paper provides data and information regarding Romania's horticultural sector performances during the period 2015–2024, through the analysis of key indicators such as cultivated areas, total production, domestic consumption, and foreign trade. Integrating these national data in the context of European Union trends reveals strategic orientations for agricultural and trade policies. The conclusions could provide a reference for strategy formulation to improve the industry’s competition and sustainability of the sector.

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Evolutions of the agrifood consumption in the Romanian rural area - developments and trends in the post-accession period

Accession to the European Union has supposed important structural changes in all areas of the national economy, in order to adapt to the requirements and rigors of the European Community, with direct effects on all levels of activity. Speaking about food consumption it is necessary to mentioned that it has fluctuated, both in terms of the main agri-food products, but especially by social categories and rural/urban area. Closely linked to the level of available income and food

price trends, food consumption is one of the indicators used to measure food security and food safety. In this sense, the present study aims to analyze food consumption in rural areas in Romania, by social categories, to highlight the main trends from the perspective of ensuring the sustainability of the agri-food system.

Key words: consumption, agrifood products, rural area, gaps.

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Short supply chains as a component of food system transformation – the environmental impact of transport

Abstract text: In the process of transforming food systems for sustainable rural development, we strive to reduce the environmental and social impact of agricultural production, processing, distribution, consumption, and food waste management. A key element of the analyzed transformation process is short food supply chains, which connect food producers from a specific region directly with consumers. The foundation of short food supply chains is the desire of the end consumer to purchase food of known origin that is fresh, organic, healthy, and tasty. Short food supply chains operate within regional and local food systems, in line with the farm-to-fork strategy. By organizing short food supply chains, local farmers and small producers increase their individual opportunities to sell their food products directly to consumers. A key element of short food supply chains is the process of transporting food to local markets, local sales points, electronic order collection points (parcel lockers), and directly to consumers. Food is transported using means of transport that emit environmentally harmful pollutants during delivery. Transport emissions vary and depend on the fuel used (gasoline, diesel, LPG), vehicle type and age, and the exhaust emission standards a given vehicle meets. The aim of this article is to define the transport module and determine the environmental impact of transport using the example of short food supply chains. The transport module will be a component of the food system undergoing transformation for sustainable rural development.

Key words: short food supply chains, food system, transport, sustainable transport.

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Comparative assessment of economic risk level in meat production

In the current context of agricultural activities, characterized by a high degree of economic volatility and uncertainty regarding profitability, the comparative assessment of economic risk in meat production becomes essential for decision-making in agricultural policies, as well as for the strategies adopted by farmers. The main objective of this paper is to identify the economic efficiency and the level of risk associated with the main meat production sectors, for bovine, sheep, pork, and poultry. The research method used consisted in the calculation and comparative analysis of production budgets per head of animal and per unit of product, including key indicators such as production value, total costs, variable and fixed expenses, net income, rates of return etc. The data were compared to highlight the differences between species, from the perspective of economic performance. The results showed that sheep meat production is the most profitable activity, with a net income rate of 19.4% and a significantly positive taxable income. Poultry meat has a low but constant profitability (2.23%), supported exclusively by internal efficiency, in the absence of subsidies. In contrast, beef production depends significantly on external financial support, with a modest profitability of 5% and a price below the production cost, which attracts a medium level of risk to the activity. The most vulnerable is pork production, which records significant losses (negative net income of -0.94 lei/kg), being deprived of subsidies and faced with a production cost higher than the market price obtained by producers. The conclusions indicate that decisions regarding the allocation of resources and financial support in the livestock sector must consider these structural differences, to support the economic sustainability of farms, as well as the competitiveness of agri-food products in the long term.

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The local producers in the short agrifood supply chains – a participatory vision

This study approaches the theme of rural economy' products from the perspective of local agrifood producers from the North-East development region of Romania, that have participated, throughout the time at the fair for agri-food producers "Iași in Dishes: Organic, Traditional, Mountain and Artisan Products". The research activities were conducted in two stages as a Delphi exercise, based on a questionnaire developed by a joint team of researchers from the Romanian Academy – Iași branch, the Institute of Agricultural Economics (Bucharest) and the Rural Development Research Platform (Lețcani, Iași county) and applied to local producers. The aim of the first stage was to study the structure, location, motivation and potential benefits that could be useful in the individual or collective decision-making process (producers/public authorities). The second stage of the Delphi exercise, that represents the subject of this chapter, involved 30 local producers that have also participated in the first stage, the main objectives in this case being: to identify the main problems and challenges faced by the respondents regarding the operation of their specific activities, to outline respondents' perception regarding the possible changes determined by a series of factors (ecological/climate changes, changes at policy level/specific legislation regarding this sector, technological changes, consumers' preferences, sales channels) and to delineate a participatory vision of local producers regarding the marketing events periodically organized in Iași municipality – from the perspective of: participation' motivation, perceived benefits and the need for the involvement of certain entities/institutions in the process of promoting this type of marketing events. The results highlight a participatory vision favoring the future development of the specific activities, where the diverse factors will, rather, support this process but also the special importance of this type of events for the local producers, sustained by the increase of visibility, fast capitalization of products, intensified cooperation between producers, development of direct connections with consumers and supporting the development of the short supply chains.

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How to improve agri-rural policy design? Key tools overview

Designing agri-rural policies is increasingly complicated and time consuming. To ensure the effective and efficient use of available public funds. Within an EU financed Horizon Europe project Tools4CAP the used policy design tools used by the EU member states during the preparation of their CAP strategic plans 2023-2027 were identified and evaluated. To support future policy design, the identified tools have been presented during the meetings of Tools4CAP Academy. Based on the identified tools and their applicability case studies were prepared and conducted to test modified tools and verify their potential to support policymakers at different stages of policy development.

Key words: Tools4CAP, policy design, CSPs.

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Efficient and resilient mixed farming and agroforestry – challenges and perspectives

Agricultural systems in Europe are currently facing multiple economic, environmental, institutional and social challenges. Faced with instability of world agri-food markets, climate change and increasing weather extremes, there is a need to strengthen the resilience of European agricultural production systems and at the same time ensure efficiency of production in terms of the use of resources such as water, nutrients, land and ecosystem services. Mixed farming and agroforestry systems have the potential to bring balance and synergy between efficiency and resilience.

The MIXED Project (Horizon 2020) conducted in 2020-2025 studied various forms of mixed farming and agroforestry in ten European countries. Its overall objective was to support the development of European mixed farming and agroforestry systems that optimize efficiency and resource use, reduce GHG emissions, and show greater resilience to climate change by considering agronomic, technical, environmental, economic, institutional, infrastructure and social advantages and constraints.

The present paper shows the main results in the Romanian case study - a farmers' network located in LAG Făgărașul de Sud - Ținutul Posadelor (Argeș county).

The mixed farming and agroforestry systems contribute to more circular use of resources, and they may serve as an important instrument on the path towards sustainable and resilient agriculture; therefore, policy recommendations are presented as well.

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Considerations regarding purchasing trends for agri-food products from local producers - review of the specialized literature

Local agri-food products are seen as a form of cultural capital, representing resources with a very high potential for rural development. This article conducts an analysis of the specialized literature on the purchasing trends of agri-food products from local producers. In this regard, the quantitative and qualitative data research method was used, using the scientific resources from the WoS database. Data were processed in the VOSviewer software, which generated suggestive maps regarding the correlation of keywords.

Key words: consumer, trends, agri-food products, local products, certified products.

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SOILSCAPE Soil Orchestras. The Living Labs methodology in SOILSCAPE project

SOILSCAPE (Spreading Open and Inclusive Literacy and Soil Culture through Artistic Practices and Education) is a four (**4**) year Horizon Europe project that started June 2024 and will end in May 2028, that is harnessing the power of Cultural and Creative Industries (CCIs), artists, and civil society organisations (CSOs) to promote soil preservation across Europe and beyond. Bringing together **19** partners from **11** countries made up of experts from the worlds of soil science, arts, decision-making, and humanities, the project is coordinated by the French Soil Science Society (AFES) and seeks to cultivate soil literacy and celebrate soils through creative approaches, engaging citizens and professionals throughout the project duration and beyond.

The Soil Orchestras are national networks of artists, scientists, other stakeholders and communities working together to promote soil literacy by building art-science partnerships. Each orchestra is led by a **conductor** from the SOILSCAPE consortium, responsible for its coordination, organization of festivals and is the link between the network and the project.

The presentation will focus on the phenomenon of Soil Orchestras and the process of establishing them.

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Agricultural Land Price Dynamics in Europe: Convergence, Divergence, and Policy Impacts Across EU Member States

The article examines agricultural land price dynamics in EU member states (2012–2022), addressing the gap in integrated analyses of convergence/divergence with policy impacts. It hypothesizes that the CAP fosters convergence in Eastern Europe and stabilizes prices in Western Europe, with effects modulated by national policies, foreign investment, and structural conditions. Using Eurostat and World Bank data, it applies β- and σ-convergence econometric models alongside qualitative comparative policy analysis and case studies (Romania, Poland, Netherlands, Luxembourg). Results show weak but statistically significant β-convergence—faster growth in lower-priced Eastern markets—contrasted with no lasting σ-convergence and recent divergence. CAP subsidies, liberalized foreign ownership, and market maturity explain regional differences. The study concludes that while CAP supports modernization and partial cohesion, persistent disparities require tailored, region-specific policies balancing investment, equity, and sustainability.

Key words: agricultural land prices; price convergence and divergence; European land markets; Common Agricultural Policy (CAP); foreign investment in land.

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The Soybean Value Chain: A Sustainable Solution for Circular Agriculture and Sustainable Development

Integrating soybean cultivation into a circular value chain offers significant opportunities for increasing the sustainability of agri-food systems. In addition to its essential role in providing plant-based proteins for human and animal consumption, soybeans generate valuable by-products (meal, oil, agricultural residues) that can be reused or recycled, contributing to reducing losses and maximizing economic efficiency. The conditions in the Republic of Moldova are favorable for cultivating this precious plant. Adhering to biological requirements through the use of appropriate technologies guarantees high soybean yields. Expanding the areas cultivated with soybeans could significantly contribute to reducing imports of meals and

other feeds, as soybeans can be used as a rich source of protein for animal feed in the livestock sector, as well as for human consumption. To achieve the proposed objective, several materials, studies, research, and comprehensive analyses related to this important field in the national economy, statistical data, and international rankings were analyzed. The research results demonstrate that implementing a circular model around this crop supports reducing the carbon footprint, promotes the green economy, and strengthens the resilience of rural communities. Thus, the soybean value chain becomes a strategic tool for achieving sustainable development goals, demonstrating how agricultural resources can be fully utilized in a responsible and innovative manner.

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The Implications of Climate Change on the Livestock Sector in the Context of the Transitioning to Sustainable Food Systems

Climate change represents a major challenge to the sustainability of food systems, with significant impacts on the livestock sector. Rising temperatures, changing rainfall patterns and the increasing frequency of extreme weather events directly affect feed production, water availability, and animal production performance. As living standards improve and dietary preferences shift toward animal protein consumption, the pressure on livestock production intensifies, simultaneously amplifying its negative environmental impact, especially through greenhouse gas (GHG) emissions. These emissions contribute to global warming, creating a vicious cycle with direct effects on animal health and productivity, including reduced weight gain, decreased feed conversion efficiency, reproductive issues and an increased incidence of vector-borne diseases and pathogens. The paper aims to analyze the multiple implications of climate change on the livestock sector and to highlight sustainable solutions for adaptation and resilience. In this context, promoting sustainable practices becomes essential to facilitate the transition to more resilient food systems and to support sustainable rural development.

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Pro-ecological practices in agricultural production

Improving the technical efficiency of agricultural production generates economic benefits, but at the same time negatively affects the natural environment. The negative impact of agricultural production on the environment is manifested primarily in greenhouse gas (GHG) emissions, which is the cause of ongoing climate change. The new CAP adopts the concept of sustainable agriculture and strengthens legal instruments for environmental protection and combating climate change. The implementation of the European Green Deal (EGD) principles into agricultural practice is associated with changes in agricultural practices that should contribute to the protection of resources and the preservation of natural environmental values. One of the key tasks of the EGD is to protect soils from degradation. These activities are aimed at ensuring safe food and contributing to the transformation of the current food system into a sustainable model. A special role in maintaining healthy soils is assigned to carbon farming. Healthy soils are key to biodiversity and are essential for achieving climate neutrality. Carbon farming generates many environmental and economic benefits, including increased soil fertility and resilience to drought-related yield losses. The Farm to Fork Strategy and the Soil Protection Strategy 2030 are crucial for the future of the entire agricultural sector, especially in the context of soil protection and healthy food production.

The aim of the presented study is to analyse the implementation of carbon farming practices in Poland based on data on the implementation of Eco-schemes within the Strategic Plan for the Common Agricultural Policy 2023–2027. In particular, the analysis covers the activities covered by the "Carbon farming and nutrient management" eco-scheme and its different variants.

Key words: eco-schemes, environmental protection, farm, susitainability.

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Shaping short food supply chains – an aspect of sustainable rural development

Sustainable rural development involves ensuring decent living conditions for residents while simultaneously protecting natural resources for future generations. Development is implemented from a social, economic, and environmental perspective, considering the unique challenges and opportunities offered by rural areas. One element of this development is local products identified as healthy food, sought after by modern consumers. Considering the specificity of local products, short food supply chains are planned, where products are delivered directly to consumers, minimizing the number of intermediaries. Organizing the supply in this form ensures that consumers receive fresh food products directly from the farmer. This

arrangement fosters long-term relationships between suppliers and consumers, enabling farmers to generate a stable income and enabling consumers to purchase food of known origin. Organizationally, this process is implemented within agricultural retail, which encompasses the direct-to-consumer retail sale of farm products and processed products. This article defines the short food supply chain from a systemic perspective and presents the process of shaping the chain from an economic, social, and environmental perspective. The study was conducted on a selected farm selling food products through agricultural retail. The aim of the research was to optimize the sales process for local products through agricultural retail.

Key words: short food supply chains, sustainable rural development, optimization, agricultural retail.

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Network of Interest (NoI): A Tool for Social Inclusion in Rural Areas

The Network of Interest (NoI) is a dynamic network of multiple stakeholders whose goal is to promote social inclusion and well-being in rural areas. The network combines research findings with practical solutions and policy initiatives, providing a platform for the exchange of knowledge, best practices, and experiences. Based on the quadruple helix model, NoI brings together representatives of public administration, civil society (including NGOs), social enterprises and the private sector, as well as academics and researchers. This cooperation aims to develop a comprehensive approach to the development of the social economy. The structure of the network is flexible, based on voluntary participation, mutual trust, and common interest, without formal commitments or membership fees. The network will organize thematic meetings and workshops to facilitate discussions and enable joint development of solutions. Members will have the opportunity to actively participate in decisions on key topics, goals, and activities, such as testing new tools, sharing resources, and supporting the dissemination of the results of the INSPIRE project.

Key words: social inclusion, social economy, rural development, cooperation.

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Key Factors in the Transformation of Regional Food Systems in Poland: A Stakeholder Perspective

The aim of the study was to identify key factors supporting and barriers limiting the transformation of regional food systems, as well as to deepen understanding of the challenges and opportunities in research, development, and innovation processes in Poland. The study used a qualitative method based on semi-structured interviews with representatives of science, civil society, industry, and public authorities. The analysis was conducted using the PEST framework. The interviews were conducted as part of the VISION4FOOD project, which focuses on increasing the sustainability and resilience of food systems in Europe by developing innovative management models and promoting social engagement. The results indicate that political factors (e.g., EU funds, local support) are an important support for the transformation of regional food systems, but excessive bureaucracy and a lack of regulatory consistency are a major barrier. In economic terms, rising raw material costs and short project cycles limit investment, despite the availability of capital, and there is also a lack of private capital involvement in innovation. In social terms, growing consumer awareness and the need for education were highlighted, while resistance to change and a lack of workforce skills were also pointed out. Technological challenges include, above all, high implementation costs, the need for training, and the stability of digital infrastructure, despite advances in automation. Our research highlights the need to develop long-term strategies, improve policy coordination, ensure stable funding for interdisciplinary research, and strengthen cooperation in the quadruple helix model. It is also crucial to support local food systems, educate consumers, and build cohesive innovation ecosystems.

Key words: innovation, food system, regional transformation, food system resilience, Poland.

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Facilitating transition to a resilient and sustainable future of rural areas through Living Labs. The example of the Austrian Living Lab Nockregion-Oberkärnten in the Frame of the HE Project RUSTIK

RUSTIK (Rural Sustainability Transitions through Integration of Knowledge for improved policy processes) is a transdisciplinary research project funded by Horizon Europe, running from 2022 to 2026. It aims to enable rural actors and policy makers to design better strategies, initiatives and policies fostering sustainability transitions of rural areas by means of Living Labs. During the projects four years of duration Living Labs have been established as the central element of an action-oriented multi-actor approach in 14 European Pilot Regions in 10 European countries. They serve as a platform for implementing, evaluating, and gaining insights from both social and technical innovations in the frame of data experiments, based on the idea that practical solutions must be collaboratively created in a real-world setting.

The data experiment of the Austrian Living Lab Nockregion-Oberkärnten addresses the socio-economic transition challenge by focussing on the relevance of Small Rural Businesses (SRBs) (less than 50 employees) as analysis of statistical data and stakeholder knowledge confirm that SRBs make up the majority of businesses in the region (99%) and serve as the backbone by offering a wide variety of services and employment opportunities. Main aim of the Living Lab is to enhance the influence of SRBs, to strengthen their visibility as well as their role in regional decision-making processes. Three cycles of the Living Lab process ensure that all research and practice partners share priorities with regard to the transition challenge and data needs to be dealt with, define and implement the data experiment, and to make use of, or learn from the results of the data experiment in strategy, policy design and/or development initiatives within the region.

Key words: rural areas, regional development, transition, living lab approach, small rural businesses.

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Analysis of trade flows and soy consumption at the national level

Soybean is the most important protein crop worldwide, appreciated for its high protein content. It is widely used both in human food and in the production of feed. In Romania, as well as in the European Union, this crop is gaining increasing attention due to its strategic role; however, its development can be influenced by economic, climatic, and political factors that shape the market and the available opportunities. Romania benefits from natural conditions suitable for growing protein crops, and the increasing global demand for plant-based products opens new economic prospects. This paper aims to analyze consumption trends, as well as the value of imports and exports for soybean cultivation in Romania.

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The impact of greenhouse gases on wheat production in the South-Muntenia region and directions for a sustainable agricultural transition

The South-Muntenia region, one of the most important agricultural areas in Romania, plays a key role in wheat production at the national level. The climate change caused by increased greenhouse gas (GHG) emissions is putting pressure on local agricultural systems. Rising temperatures, frequent droughts and uneven distribution of precipitation are affecting wheat yields, especially in counties with aridity-prone lands, such as Teleorman and Giurgiu. Conventional agriculture in the area contributes to GHG emissions through use of chemical fertilizers and intensive soil cultivation, which lead to the degradation of natural resources. In this context, the transition to a sustainable food system in South-Muntenia involves not only adapting to new climatic conditions, but also transforming agricultural practices. Solutions include: promoting conservative-adaptive agriculture, cultivating drought-resistant wheat varieties, using soil and water monitoring technologies, as well as farmers' access to institutional and financial support for modernizing practices. This paper analyzes the impact of GHG on wheat cultivation in South Muntenia and proposes strategic directions for supporting sustainable rural development, with a focus on climate adaptability and economic resilience.

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Biomass use value chain in Centru Region, Romania

In Centru Region Romania, several local initiatives search for a full exploitation of the regional biomass potential, both from agricultural and wood resources. Thus, it is necessary to raise awareness of the impact on local communities of promoting the bioeconomy. Benefiting from a blend between a tradition of exploiting the local biomass potential and a strong entrepreneurial spirit, the economy of the Centru Region is advancing towards a circular bioeconomy. As part of the RuralBioUp project, are examined some bio-based business models as good practices of economic agents in the Centru Region. Their goal is to ensure, using local biomass, energy independence for local communities' public and industrial needs. Applying a local business model implies improving collaboration along the value chain, for biomass sustainable processing. To achieve this, economic agents in the Centru Region pay special attention to partnerships that cover all spheres of the quadruple helix, namely representatives of bioindustries (primary producers and SMEs), academia, civil society (social actors) and local authorities (political decision-makers). All of them are actively contributing to the creation of sustainable communities. One of these local initiatives, which achieved remarkable results and has expanded since to areas adjacent to the Centru Region, is the application of a bio-based business model called "1 Village 1 MW". This model builds on a value chain created years ago, in the vicinity of Covasna County, part of the Centru Region. Thus, it was possible to promote a regional tradition, which can be replicated in other similar areas, which could contribute to the creation of a regenerative, inclusive and fair bioeconomy in all regions of Europe.

Key words: sustainable communities, bio-based business model, value chain.

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Bio-based products – A multi-approach analysis from the perspective of food pillars

The concept of bio-based products was promoted in 2002 by the United States Department of Agriculture (US. Farm Bill) as those commercial or industrial products that contain, to a greater or lesser extent, biological products, renewable agricultural materials or forestry materials. Nowadays, specialized studies published in the field but also the European legislative

framework highlight the advantages brought by the use of bio-based products at the level of agricultural production systems and by replacing the production inputs associated with conventional agriculture.

On the other hand, the number of studies that highlight the cause-effect relationships between the impact that agricultural production activities exercise on the environmental resources and the long-term effects generated by the initial impact studied on agricultural productivity is increasing.

The benefits of using bio-based products at the farm level are frequently highlighted, especially from the perspective of the agricultural producer and the conservation of environmental resources.

This paper aims to carry out a qualitative analysis at the level of the 3 food pillars extracted from the specialized literature: Food technology, food safety, and food quality, thus presenting an overall vision not only from the perspective of the environment and the producer, but at the level of all actors involved in the food value chain, ending with the consumer of agri-food products.

Key words: bio-based products, food technology, food safety, food quality.

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iSUSTlab – Inclusive Strategies for Sustainable Food Systems: Action Research in Organic and Peri-Urban Districts

The global food system is increasingly under pressure to transition toward sustainability in the face of climate change, environmental degradation, social inequalities, and shifting consumer expectations. Current transitions towards sustainable food systems often risk reproducing forms of exclusion rather than solving them. Sustainable production and consumption choices—especially in the agri-food sector—are frequently accessible only to privileged actors with significant economic, organizational, or social capital (e.g., wellresourced companies, consumers with high purchasing power, or institutions with structural advantages). Indeed, whether through costly certification schemes, high product prices, or governance processes dominated by powerful players, these approaches risk reinforcing inequality, particularly among small-scale producers and economically disadvantaged consumers. This imbalance undermines the broader goals of sustainability, which should be rooted in equity, accessibility, and shared responsibility.

The iSUSTlab project addresses this issue by investigating how inclusive sustainable strategies can be effectively designed and implemented across the agri-food supply chain. More in detail it investigates how sustainable production and consumption systems can be designed through inclusive, participatory, and placebased strategies to foster territorially embedded, socially just, and environmentally sound food systems. The project investigates how multi-stakeholder

engagement—including firms, citizens, and institutions—can cocreate inclusive governance and market mechanisms within local and organic food districts.

The project adopts the Action Research (AR) meta-methodology to engage stakeholders across multiple dimensions: institutions and governance, firms and producers, and citizens as consumers. It focuses on territorial food systems, with a special emphasis on peri-urban and organic food districts, exploring their potential as laboratories for inclusive transition pathways.

The project takes as a premise that inclusivity is not an add-on, but a core driver of sustainable food systems. Inclusivity, in this framework, refers to removing structural, economic, informational, and relational barriers that prevent access to sustainable food practices. On the consumption side, it implies making sustainable food accessible in terms of affordability, proximity, availability, and comprehensibility. On the production side, it requires supporting the participation of small and resource-constrained producers, who often lack the means to access formal markets, meet certification demands, or invest in sustainable practices. At the institutional level, it calls for new governance arrangements that enable cooperation, co-design, and long-term engagement between local authorities, businesses, and civil society.

Methodologically, the project employs a mix of qualitative and quantitative tools: stakeholder interviews, consumer surveys, focus groups, natural field experiments, and participatory workshops. A comprehensive framework of indicators is being developed to assess levels of inclusivity across the production-consumption chain. From a research perspective, iSUSTlab aims to: identify barriers and enablers to inclusive sustainability in food systems; understand the roles of governance, social capital, and market structures in supporting inclusivity; test nudging strategies and information-based interventions in consumer contexts. On the action side, the project seeks to empower small-scale producers, engage citizens in sustainable behaviours, and support institutions in fostering inclusive territorial development. The results will inform policy frameworks, managerial practices, and grassroots innovations, offering transferable models for other regional and national contexts.

In the long term, iSUSTlab aims to influence both policy and practice. By aligning with national and EU policy frameworks (e.g., Farm to Fork Strategy, PNRR, Italian Law 23/2022 on biodistricts), the project positions can support bottom-up food systems transformation. Its outcomes are designed to be transferable across regional contexts and useful to a broad range of stakeholders.

The project has been financed by the Italian Ministry of University and Research (MIUR) within the Italiadomani program under the NextGenerationEU framework. It involves an interdisciplinary team with researchers in agricultural economics, institutional theory, food marketing, and sustainability science from three Italian universities (University of Verona, University of Milan and Catholic University of the Sacred Heart - Piacenza). The project is further strengthened by its partnership with real-world actors: two districts and one retail stakeholder actively involved in data collection, experimentation, and dissemination.

In conclusion, by combining theoretical innovation with practical experimentation, iSUSTlab contributes to advancing knowledge on how to build multi-actor, participatory, and inclusive food systems. The outcomes aim not only to inform public policy and market governance, but also to provide operational tools and pathways for inclusive territorial development in agriculture and food.

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Green Energy Transition in Agriculture vs. Climate and Economic Resilience: Selected Dilemmas.The Case Study from the Łódź Region in Poland

The agricultural sector is increasingly shifting toward renewable energy sources and energy self-sufficiency (Smil, 2008; Tocock et al., 2013; Merigi et al., 2021; Benoit & Motten, 2023; Takeshima et al., 2023). Efficient use of available energy sources, especially renewables, reduces costs and environmental impact, supporting sustainable agricultural growth (Martinho, 2020). The Polish Rural Development Programme (PROW) supports this transition through initiatives such as energy system modernization, building retrofits, and renewable energy deployment. National programmes like 'Agroenergia and Energia dlaWsi' (Energy for the Countryside) further promote green transformation.The research gap concerns the perception of the relationship between investments related to the green energy transition and resilience (mainly climate and economic).The aim of the paper was to assess farmers' opinions on the relationship between investments related to the green energy transition and the resilience of the sector (mainly economic and climate).A diagnostic survey was conducted among farm managers (N=383, cluster selection, CATI/CAPI) with above 1 hectare of agricultural land in the Łódź region in 2024. Surveyed farmers emphasized the importance of climate risk and the role of investments related to the green energy transition in increasing resilience (both climate and economic). Furthermore, there was a significant positive correlation between farmers' indications regarding the impact of such investments on increasing climate and economic resilience.

Key words: green energy transition, renewable energy sources, resilience, farm household, farm investment, agricultural finance, climate change.

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Dynamics of the wine sector in Romania – trends and challenges

In recent years, the wine sector in Romania has undergone intense transformations, marked by the modernization of vineyards, the attraction of budgetary and European funds, but also the interest in quality wines. In the context of permanent changes in the market economy, the analysis of the sector is of major importance for the existence of sustainable activities in this field. The purpose of this paper is to present a comprehensive analysis of the wine sector based on statistical data to highlight the evolution in the period 2019-2024 and the trends of the wine market. Among the major challenges of the sector are poor marketing, difficulties related to climate change and attracting specialized labor. Capitalizing on the potential of this sector requires a development strategy that focuses on strengthening the identity of Romanian wine and supporting small and medium-sized producers and promoting sustainability. In the rural economy, the Romanian wine sector can become an important engine of development and international image.

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Elaboration and Implementation of Rural Development Actions in the Frame of the HE Project RURACTIVE

“Empowering Rural communities to act for change” (RURACTIVE) is a Horizon Europe funded project, running from 2023 to 2027. It aims at establishing local Multi-Actor Rural Innovation Ecosystems with emphasis on strengthening multilevel governance, training and capacity development, place-based progress and inclusive participatory processes looking specifically at vulnerable groups. It should advance scientific and practical knowledge, ensure social and community-led innovation and enlarge the project impact also beyond the project duration.

The RURACTIVE consortium consists of 29 partners from 15 countries coordinated by the University of Bologna (IT). 12 “Dynamos” care for implementation, monitoring and evaluation of rural development activities. Starting from relevant rural development drivers in various pilot

regions (called Dynamos) in the frame of a Living Lab environment specific challenges are discussed and defined, for each challenge solutions are generated and for each solution the concrete steps of implementation are clarified. The steps to achieve sustainable and resilient results in a broad regional multi-actor participatory process were developed in detail by the University of Bologna. A sequence of structured local workshops enables a step by step deepening, concretization and in the end realization of activities. The topics of research, challenges and improvement covered by the 12 Dynamos are for example agri-food, nature tourism and mobility in rural spaces in Austria, socially just green transition and recreation in Finland, sustainable agri-food production, energy efficiency and mitigation of depopulation in Spain, mobility and digital connectivity in Scotland, agri- and nature-tourism and cultural innovation in Greece, social services and mobility in Ukraine and others. Interesting new items in the project are open calls and financing from the project budget for the concrete implementation of solutions and for additional Regions/Communities who want to learn from the project Dynamos and the Methods. More about the project on RURACTIVE – Empowering rural communities to act for change | RURACTIVE

Key words: Rural Development, Inclusive Development, Community-Led Development.

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Kyiv Region (Ukraine) as a Living Space of the "LandShift" Project

Kyiv region (Ukraine) serves as one of the Living Spaces for the "LandShift" Project (Community-Led Creation of Living Spaces in Shifting Landscapes for Climate-Resilient Land Use Management and Supporting the New European Bauhaus), which has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101182007, aimed at developing and implementing innovative strategies for sustainable land use.

The transformation of land-use systems in Kyiv region directly impacts regional food security and sustainable development of rural territories. Military actions and contamination of agricultural land with explosive remnants of war have removed significant areas of productive land from circulation, threatening food supply and rural population incomes. Radioactive contamination of northern territories creates additional constraints for the production of safe agricultural products. In this context, the LandShift project investigates opportunities for integrating nature-based solutions into land productivity restoration and the development of resilient agri-food systems capable of functioning under conditions of climate change and post-war reconstruction.

Kyiv region is one of the country's most historically and economically significant regions. It is an administrative-territorial unit that does not include Ukraine's capital, Kyiv, with an area of 2,816.2 thousand hectares and a population of 1.795 million people. Kyiv region is located in the north-central part of Ukraine, along the middle reaches of the Dnipro River. It is characterized by a moderately continental climate and complex land fund structure: agricultural lands comprise 58.9% (1,658.9 thousand hectares), forests and forested areas constitute 23.0% (648.7 thousand hectares), inland waters account for 6.2% (175.1 thousand hectares), and other land uses make up the remainder. The region includes 247 nature reserve fund objects with a total area of 2,927 km², representing 10.41% of the oblast's administrative area.

Kyiv region faces a complex array of interconnected land-use problems that have been exacerbated by anthropogenic impacts and military actions. The most critical challenges include the consequences of the Chernobyl disaster of 1986, which led to radioactive contamination of northern territories and the establishment of the Chornobyl Radiation-Ecological Biosphere Reserve with fundamentally altered land-use patterns. The temporary occupation and subsequent liberation of 684 thousand hectares of territory between March and April 2022 resulted in infrastructure destruction and contamination of agricultural lands with explosive remnants of war. Rapid urbanization of suburban areas around Kyiv is occurring without proper spatial planning, leading to uncontrolled residential development and loss of natural ecosystems. Additional problems include progressive soil degradation, reduction of forests and green spaces, shallowing of water bodies, drying of wetlands, and increased greenhouse gas emissions, particularly methane.

To address these identified problems, the LandShift project proposes a comprehensive approach based on New European Bauhaus principles that integrates sustainability and inclusivity in land-use planning through the implementation of nature-based solutions. These include forest restoration on degraded lands; balance between urbanization and forest conservation to maintain forest ecosystems; regenerative agriculture; implementation of "zero-waste parks"; conservation and restoration of natural lakes and ponds; protection, restoration, and preservation of wetlands; new irrigation technologies; and others. Each proposed nature-based approach targets specific regional challenges. For liberated territories, a phased restoration methodology is being developed. It includes preliminary demining followed by phytoremediation implementation for soil cleaning from heavy metals and other contaminants. For radioactively contaminated lands, forest restoration technologies using radiation-resistant plant species are proposed, which simultaneously contribute to carbon sequestration and buffer zone creation. For suburban territories around Kyiv, a "green urbanization" model is proposed that combines residential development with forest preservation through ecological corridor systems. Regenerative agriculture and precision irrigation should be implemented on lands requiring fertility restoration after military actions or prolonged contamination.

The expected results of the project will have significant scientific and practical potential not only for Ukraine but also for other European regions facing similar challenges. The developed nature-based solutions and digital tools can serve as a foundation for forming a new paradigm of land resource management under conditions of climate change and post-war territorial reconstruction. Regional authorities and local communities are demonstrating a strong commitment to exploring nature-based solutions, making this Living Space an ideal setting for co-creating and piloting scalable sustainable land-use practices.

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Connecting advisors toward a European network for consumer-producer chains

Short Food Supply Chains (SFSCs) or producer-consumer chains are supply chains involving a limited number of intermediaries between farmers and consumers, who are committed to cooperation, local economic development, and maintaining close geographical and social relations. In rebuilding post-Covid, SFSCs are being promoted by governments, civil society and consumer groups in many EU member states as a means for building more inclusive, resilient and sustainable food systems. But SFSC initiators, participants and promoters are confronted by a fragmented knowledge landscape, coupled with a lack of clarity as to essential skills and competencies in all phases from farm to fork. The COREnet project proposes to respond by supporting the systematic development of more effective SFSC advising, based on bringing together public, private and civic advisors through IT-enabled peer-to-peer learning and mutual support. This approach requires interacting with advisors, farmers, consumers and a more holistic approach aimed at helping SFSCs achieve not just a bigger market share, but a greener market impact. Project activities are concerned with (1) developing SFSC advisory capabilities based on a knowledge mapping and on-line listing of SFSC advisors from all EU27 in ways that enable the sharing and exchange of cost-effective practice solutions that improve SFSC social, economic and environmental performance and increase their impact in the food value chain; (2) preparing learning resources in the form of a network of 30 Golden Cases (exemplars of SFSC models that have achieved business success) and initiating 27 Lighthouse Projects (initiatives using Golden cases to introduce advisory services for improving SFSC performance with at least one in each of the EU-27); (3) establishing a pan-European peer-to peer learning network for SFSC advisors and proposing a formal organizational solution that assures its sustainability and integration into the AKIS.

To this end, COREnet is creating an advisory network comprising multiple relevant actors (more than 500 advisors registered so far) to allow the exchange of cost-effective practical solutions to improve SFSC performance. A list of SFSC success stories is also available on the project website knowledge hub to further encourage best practices exchange, towards more inclusive, resilient and sustainable food systems.

Key words: Short Food Supply chains (SFSCs); sustainable food systems; farmers and primary producers; consumers; innovation support services; AKIS; agricultural advisors; rural development; social innovation.

RuralBioUp
Project Session

Special RuralBioUp Project Session

XXI European Rural Development Network Conference
"Food systems transition for sustainable rural development"
23-25 September 2025
Bucharest, Romania

Small-scale biobased solutions in rural areas:
Case study CENTRU Region, Romania

Organizers:
Institute for Economic Forecasting, Romanian Academy, Romania
Supported by CENTRU Region RuralBioUp HUB Contact Point

CONCEPT NOTE

This session, hosted by the Project "RuralBioUp - Empowering EU Rural Regions to scale-Up and adopt small-scale Bio-based solutions: the transition towards a sustainable, regenerative, inclusive and just circular bioeconomy" (https://www.ruralbioup.eu/), contributes to the XXI ERDN Conference, by presenting the theme of the project and the results obtained throughout its implementation, with an emphasis on the case study offered by the "CENTRU Region RuralBioUp HUB" initiated as a pilot area in Romania.

The methods used in the project to raise awareness of the local potential of bio-industries will be illustrated, such as the stages of forming pilot areas as well as some small-scale biobased solutions in rural areas, identified as good practices that can be replicated in other areas of the EU.

One of the central themes of the RuralBioUp project refers to the value chains in the project countries and the opportunities for intersectoral collaboration between them. Referring to the pilot area in Romania, the following topics will be detailed:

- Sustainable processing of wood materials as bioproducts and valorization of wood waste for bioenergy.
- Valorization of agrobiomass (lignocellulosic agricultural residues) as bioproducts and bioenergy.

- Local initiatives and projects in the field of bioeconomy. Given the wide spectrum of interest that the broader results of the project may arouse, a space for presentation and discussion will be dedicated to the tool developed within the project, RuralBioUp One-Stop-Shop: https://ruralspot.eu/search-resources.
- Biomass, business models, available technologies, good practices, practical knowledge, training resources and financial support opportunities.

Taking into account the interference with the research topics and other projects of this Conference, we propose that our session allocates a debate space at the end to which representatives of other projects and working groups in the field are also encouraged to contribute. We would like to point out that stakeholders who contributed to the implementation of the RuralBioUp project as well as its "sister projects", such as BioRural (https://biorural.eu/about-biorural/) and CEE2ACT (https://www.cee2act.eu/) projects, which have partners from Romania, will also be invited to the proposed session.

Proposed Papers for the Special RuralBioUp Project Session :

1) Biomass use value chain; Case study in Centru Region, Romania
Carmen Beatrice Păuna, Raluca-Ioana Iorgulescu, Boglarka Vajda, Gabriela Bilevsky
RuralBioUp Project

2) The Role of Networks in Advancing Small-Scale Rural Bioeconomy Solutions
Boglárka Vajda, Lajos Vajda
BioRural and thERBN projects

3) Co-Creating Rural Bioeconomy Pathways: Stakeholder Engagement and Roadmapping in CEE2ACT
Mária -Magdolna Gáspár, Boglárka Vajda, Lajos Vajda
CEE2ACT Project

4) Advancing Bioeconomic Transformation through Innovation in Romania
Steliana RODINO, Alina Butu
Bioeconomy in Romania Project

5) Circular Bio-Based Nanocomposites for Additive Manufacturing of Intelligent Functional Materials
Alina BUTU, Steliana RODINO, Izabela Cristina STANCU, Marian BUTU, Vili DRAGOMIR
BEAMING and Cellu4Heal projects; NUCLEU Programme - National Research, Development and Innovation Plan 2022–2027

6) Bioeconomy, a new stage of economic development
John M. Polimeni, Raluca-Ioana Iorgulescu
"The impact of biotechnologies in the transition to a digital bioeconomic society" Project

7) A transnational approach for a sustainable rural development in the Danube Region: Plan C project
Christina Leucuta

8) Perspectives and Trends of SMART Farming in the South-East Region of Romania
Carmen Cătălina Rusu, Luigi Renato Mistodie, Costică Voicu, Paul Preda Voicu
„Jointly preparing the conditions in the agricultural and connected sectors in the BSB area for the digital transformation"- BSB908 SMART Farming" Project

9) Ecosystem services and various ways to assess them in a possible framework of national sustainable development
Marioara Iordan, Mihaela-Nona Chilian
Metodologia unitară de evaluare a pagubelor în situații de urgență/dezastre (MEPSU) Project

10) I**ntegrating Fungal-Based Bioprocesses into Lignocellulosic Biorefineries**

Marina Tišma, Josip Juraj Strossmayer University of Osijek, Croatia

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Biomass use value chain; Case study in Centru Region, Romania

In Centru Region Romania, several local initiatives search for a full exploitation of the regional biomass potential, both from agricultural and wood resources. Thus, it is necessary to raise awareness of the impact on local communities of promoting the bioeconomy. Benefiting from a blend between a tradition of exploiting the local biomass potential and a strong entrepreneurial spirit, the economy of the Centru Region is advancing towards a circular bioeconomy. As part of the RuralBioUp project, are examined some bio-based business models as good practices of economic agents in the Centru Region. Their goal is to ensure, using local biomass, energy independence for local communities' public and industrial needs. Applying a local business model implies improving collaboration along the value chain, for biomass sustainable processing. To achieve this, economic agents in the Centru Region pay special attention to partnerships that cover all spheres of the quadruple helix, namely representatives of bioindustries (primary producers and SMEs), academia, civil society (social actors) and local authorities (political decision-makers). All of them are actively contributing to the creation of sustainable communities. One of these local initiatives, which achieved remarkable results and has expanded since to areas adjacent to the Centru Region, is the application of a bio-based business model called "1 Village 1 MW". This model builds on a value chain created years ago, in the vicinity of Covasna County, part of the Centru Region. Thus, it was possible to promote a regional tradition, which can be replicated in other similar areas, which could contribute to the creation of a regenerative, inclusive and fair bioeconomy in all regions of Europe.

Key words: sustainable communities, bio-based business model, value chain.

Acknowledgement: This paper presents some results of the project "Empowering EU Rural Regions to scale-Up and adopt small-scale Bio-based solutions: the transition towards a sustainable, regenerative, inclusive and just circular bioeconomy - RuralBioUp", Grant Agreement 101060618, funded by EC under Horizon Europe Programme.

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The Role of Networks in Advancing Small-Scale Rural Bioeconomy Solutions: Insights from BioRural and thERBN Empowering Small-Scale Circular Bioeconomy Through Networks

Rural communities across Europe face ongoing challenges: declining populations, underused local resources, and limited access to innovation and support. The EU-funded projects BioRural and thERBN address these issues by harnessing the power of networks—connecting small farmers, entrepreneurs, researchers, and policymakers to co-develop practical, small-scale bioeconomy solutions. This presentation highlights Romania's contribution, where national partners engaged local actors to identify simple, cost-effective approaches across agriculture, forestry, bioenergy, biomaterials, and aquaculture. The focus was on solutions grounded in traditional knowledge and adapted to real-world rural conditions, requiring minimal investment and delivering tangible local benefits. A key result is the BioRural Toolkit—an open-access, hands-on resource offering real-life examples, business model blueprints, and policy recommendations tailored to the needs of rural practitioners. By strengthening connections and promoting peer learning, these networks turn innovation into action. Romania's experience shows how inclusive, well-supported collaboration can empower rural communities to lead the transition toward a circular and sustainable bioeconomy.

Key words: Circular bioeconomy, Rural development, Small-scale solutions, Multi-actor networks, Toolkit.

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Co-Creating Rural Bioeconomy Pathways: Stakeholder Engagement and Roadmapping in CEE2ACT Bottom-Up Bioeconomy Planning in Romania

The transition to a circular bioeconomy in Central and Eastern Europe demands place-based, participatory approaches that empower rural stakeholders. Romania's involvement in the Horizon Europe project CEE2ACT illustrates how bioeconomy strategies can be co-developed through trusted networks, local leadership, and inclusive governance. This study presents the formation and implementation of the Romanian National Bioeconomy Hub (NBH), launched in 2023 and coordinated by ASIMCOV. Built on regional incubation infrastructure, the Hub mobilised clusters, SMEs, academia, and local authorities via direct outreach, thematic working groups, and co-organised events. CEE2ACT tools—including stakeholder mapping, self-assessment, e-learning, and B2B platforms—supported capacity building and knowledge exchange. The process resulted in a national bioeconomy roadmap, co-created through three participatory workshops and structured around four pillars: education, sustainable production, policy integration, and collaborative ecosystems. Findings underscore the importance of

regional clusters and facilitators in bridging rural needs with policy agendas. Romania's experience offers a transferable model for bottom-up rural bioeconomy planning in EU contexts.

Key words: Circular bioeconomy, Stakeholder engagement, Rural development, Participatory governance, Innovation networks.

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Advancing Bioeconomic Transformation through Innovation in Romania

Amidst the major challenges related to climate change, depletion of natural resources, loss of biodiversity and global population growth, the international community has begun to outline a coherent framework of policies and strategies aimed at promoting sustainable economic models. The circular bioeconomy has become an integral part of this direction, being recognized globally as a key opportunity for transforming production and consumption systems in a way that meets human needs without compromising the ecological balance.

Given the conceptual foundations and principles underlying the circular bioeconomy, we have analyzed how these directions are supported and translated into practice through public policies and the legislative framework. In addition to the legislative framework, a key role is played by concrete initiatives in the field of the bioeconomy, as well as innovative business models and success stories, which demonstrate the real potential of this approach to generate economic, social and environmental value.

Key words: bioeconomy, public policies, success models, Romania.

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Circular Bio-Based Nanocomposites for Additive Manufacturing of Intelligent Functional Materials Intelligent Bio-Based Materials via 3D Printing

The transition to a circular bioeconomy requires not only renewable resources but also design strategies that convert agro-food by-products into high-value, nature-derived nanocomposites. This study addresses the need to valorize agro-industrial residues by developing advanced bio-based materials with high performance, bioactivity, and tailored functionality. A cascade biorefinery was applied to hemp stalks, wheat straw, and apple pomace. Using enzymatic hydrolysis and ultrasound-assisted extraction, nanocellulose, pectin, and lignin were obtained and formulated into a shear-thinning hydrogel printable via direct ink writing. Silver nanoparticles were added at biocompatible levels for antimicrobial properties. The printed structures showed ~70% interconnected porosity, optimal vapor transmission, and >4-$\log_{10}$ CFU reduction in antimicrobial assays. Complete biodegradation occurred within 14–21 days under physiological conditions. These features demonstrate smart material behavior, including responsiveness and controlled degradation. This sustainable, circular approach enables the scalable production of intelligent, nature-derived nanocomposites for high-value applications.

Key words: nature-derived nanocomposites; agro-industrial residues; circular bioeconomy; additive manufacturing; smart biomaterials; tailored functionality.

Acknowledgement: This work was supported by the Horizon Europe Programme (project BEAMING), the ERANET-M-3 Programme (project Cellu4Heal), and the NUCLEU Programme - National Research, Development and Innovation Plan 2022–2027 (contract no. 7N/2023)

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Bioeconomy, a new stage of economic development

Economic development and growth are ‘the’ goal both at the national level and regional level. Nevertheless, economic growth impacts the environment, and it is of great importance if it comes at a high cost to the local environment. However, depending upon where an area (country or region) is on its economic development path will often dictate the level of environmental degradation that occurs. For example, economic growth for lower income areas will often lead to increases in pollution and resource depletion. But, over time, as income and wealth increases, investment in cleaner technologies and more stringent environmental regulations will occur, reducing the environmental impact of economic development and growth. Two theories, Rostow’s Five Stages of Economic Development and the Environmental Kuznets Curve, could

help understand this dynamic of development and growth coupled with environmental impact. The transition to a bioeconomy is discussed in connection to these two theories.

Key words: bioeconomy, economic development, regional development, W. W. Rostow, Environmental Kuznets Curve.

Acknowledgement: This work uses some ideas from the study "The impact of biotechnologies in the transition to a digital bioeconomic society" (Impactul biotehnologiilor în tranziția spre o societate bioeconomică digitală), part of the research program of the Institute for Economic Forecasting of the Romanian Academy, Romania.

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A transnational approach for a sustainable rural development in the Danube region: plan c project

A system where materials never become waste and nature is regenerated refers to the circular economy. The Romanian Cluster Association is involved in projects aimed at positioning clusters in regional value chains with a focus on the circular economy, an example being the Plan C project, carried out with a consortium of 14 partners from the Danube region. The Plan C approach, which focuses on the model of plastics and machine industry, can help address environmental challenges in rural areas. The specific objective is to strengthen innovation in the region as well as a close cooperation among partners in view to introduce a fundamental change in the complex plastics value chain, implying a radical shift of mindsets and business paradigms. Based on a design thinking process, partners co-create and demonstrate circular plastics prototypes and circular solutions for each machine life cycle phase and create related digital business models. The results contained in Handbooks and Guidelines for circularity in the plastics/machine industry, a Transnational Strategy and a related Action Plan for circularity offer practical insights and outline strategies to enhance SME competitiveness and embed circular practices into strategies. The conclusions highlight the role of cooperation and clusters in supporting the transition to the circular economy.

Key words: circular economy, Plan C, cooperation, rural development.

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Perspectives and Trends of SMART Farming in the South-East Region of Romania

The new technologies, as Robotics, AI-based systems, Internet of Things (IoT) and Industrial Internet of Things (IIoT), data processing and analytics, play a crucial role in the Romanian environment agriculture development, by enhancing productivity and efficiency, and enabling precise resource management, reducing the use of water, fertilizers, and pesticides, improving health or monitoring in specific agro-industrial fields. These innovations promote sustainability and cost savings, helping farmers to optimize their operations, and to address the challenges of SMART farming. Moreover, the collaboration with proper stakeholders and key players is the right path in developing channels that enables project management, funding opportunities, developing integrated platforms and joined communities that consolidates the targeted ecosystem.

The objective of the paper is to present the results of an implemented EU project in the framework of ENI CBC Black Sea Basin Programme 2014-2020 entitled „Jointly preparing the conditions in the agricultural and connected sectors in the BSB area for the digital transformation"- BSB908 SMART Farming", its results, and the further developments in the sustainability period.

Key words: SMART Farming, New Technologies, Drones, Robotics System for Agriculture, AI, IoT, Data Analysis, Data Analytics, Agricultural Development.

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Ecosystem services and various ways to assess them in a possible framework of national sustainable development

The benefits that people obtain from nature in the form of goods and services provided by natural and semi-natural ecosystems represent the ecosystem services, and their overall importance is becoming more and more significant in the current context of environmental challenges to society. Thus, the concept of ecosystem services became increasingly significant over the past decades as a complex framework of analysis for the socio-economic systems. Particular to such an approach is the comprehensive inclusion of different types of interactions between people and nature, but also the anthropocentric view, in the sense that nature is

considered as valuable to the extent it provides benefits to people. Nevertheless, the approaches pertaining to ecosystem services have always considered to a certain extent the pluralism of value and the fact that not all values may be assessed in monetary terms.

From another point of view, quantifying the damage to the environment produced by natural and man-made disasters and the impact of the necessary remedial actions, as well as assessing the amounts of money necessary for pro-active mitigation measures requires a variety of economic, ecological and legal principles, models and tools. In case of compensations, usually, two approaches are mostly used to compute them: determining the monetary value of the damages to natural environment and calculating the amounts needed to remediate or restore natural resources to compensate for the damage.

In this context, the paper presents, on the one hand, a brief review of the main aspects related to ecosystem services and their approach in the methods of assessing damage caused by natural and man-made disasters. On another hand, it presents also a brief review of methods to assess the possible pro-active mitigation methods envisaging preservation of ecosystem services and avoiding damages to them or diminishing their consequences, with particular reference to case studies and methodologies used in Romania.

Key words: ecosystem services, disaster impact assessment, disaster avoiding measures, Romanian case studies.

Acknowledgement: This paper presents some results of the project Contract nr.111823/20.08.2021 de servicii de consultanță, RO-GIES-197601-CS-QCBS LN 8892-RO, Metodologia unitară de evaluare a pagubelor în situații de urgență/dezastre (MEPSU), Contractor IGSU prin Banca Mondiala, Contractant IPE, 2021-2025

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Integrating Fungal-Based Bioprocesses into Lignocellulosic Biorefineries

Lignocellulosic biorefineries are systems for producing various bio-based products such as biofuels, biochemicals, biomaterials, protein-enriched food, feed, and high-value products using non-edible lignocellulosic biomass (e.g. residues from agriculture, food and wood industries, forestry, municipal waste) as feedstock. However, their commercial application remains limited due to challenges in feedstock supply and the sustainability of pre-treatment and conversion methods. Solid-state fermentation (SSF) by filamentous fungi is an environmentally friendly process which involves microbial growth on moist solid substrates without free water, using lignocellulosic biomass as both a nutrient source and a physical support. In this presentation examples how by-products from the food industry can serve as substrates in SSF processes to produce a variety of bio-based products will be given. These

examples demonstrate the potential of integrating SSF into lignocellulosic biorefinery concepts, supporting the principles of circular and sustainable bioeconomy and contributing to more sustainable and resource-efficient production systems.

Key words: fungi, bioeconomy, biorefinery, lignocellulose, bioeconomy.

Acknowledgement: This research was funded by Project of the Croatian Science Foundation "Valorisation of residues from the vegetable oil industry based on a biorefinery approach – VALREO) (HRZZ-IPS-2023-02- 6614) and by the BEAMING Project (Bioeconomy excellence alliance for stimulating innovative and inclusive green transition, grant agreement N° 101137131).

FoodPathS
Paving the way of the European Partnership for Sustainable Food Systems

foodpaths

Funded by
the European Union

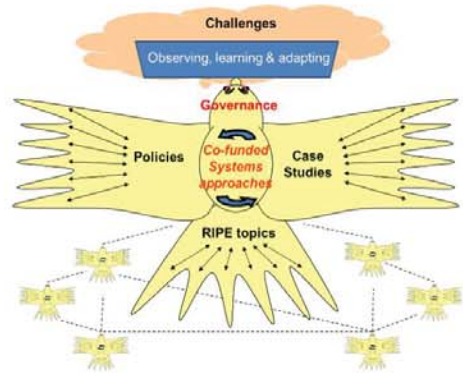
FOODPathS

Co-creating the prototype "Sustainable Food Systems" Partnership – Project Summary

Hugo De Vries (INRAE)

Rationale

The food sector increasingly is impacted by climate change, land degradation, biodiversity loss, hunger, malnutrition, diet-related diseases, food and packaging waste and safety, scarcity of fresh water and (renewable) resources, ecosystem services, social and economic inequalities, political tensions, and safeguarding food cultural heritage. Considering **today's severe crises**, an accelerated transition to sustainable food systems in Europe is imperative. Therefore, the **EC with the Member States** aims to establish the **'Partnership for Sustainable Food Systems (SFS) for people, planet and climate'**. This Partnership should be able to confront challenges via co-funded R&I projects and strategies, systemic approaches using case studies in Living Labs, agendas for **R**esearch, **I**nnovation, **P**olicy-science topics and **E**ducation (**RIPE**) and Policies (*Fig. right*).

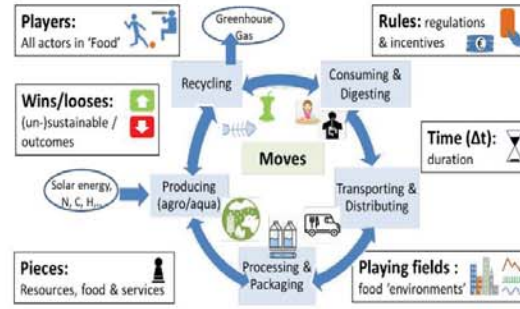


The project aims

FOODPathS' will design the **'Prototype SFS Partnership'** by executing eight inter-connected Work Packages (*Fig. left*). The Prototype will serve as the first version of *HOW* the future Partnership will function from 2024 onwards. This includes its co-funding strategies, governance model, *Modus Operandi*, sustainability charter, strategic research and innovation agenda (SRIA), and vitrine with co-creation cases. It will also list potential trade-offs and will propose ways of communicating with other HorizonEurope Partnerships.

Tasks

FOODPathS will develop (a) **food system (FS) concepts** (*Fig. right*) to understand relationships between food actors ('*players*'), their food handling activities (*moves*), used products ('*pieces*'), geographic-socio-cultural contexts ('*playing fields*'), duration of actions ('*time*'), (un-) sustainable outcomes ('*win/loose*'), regulations, ambitions, and R&I co-funding options ('*rules*'), (b) a **Hub of FS (Living) Labs** to experiment with multi-actor co-creation processes, (c) an FS **Observatory** for monitoring sustainability performance of EU FS, and (d) **RIPE** agendas to select most appropriate focus areas and leverage points.



Systemic Approach

Systemic approaches will be at the core of the future Partnership. Hence, FOODPathS will explore multi-scale and multi-actor approaches that allow adapting strategies based on gathered insights (*Fig. left*). This will help in **defining EU-wide common priorities** as well **as country-region-community-specific focus points.** Altogether, they will show the **richness of European** cases, infrastructures, networks, data, etc.

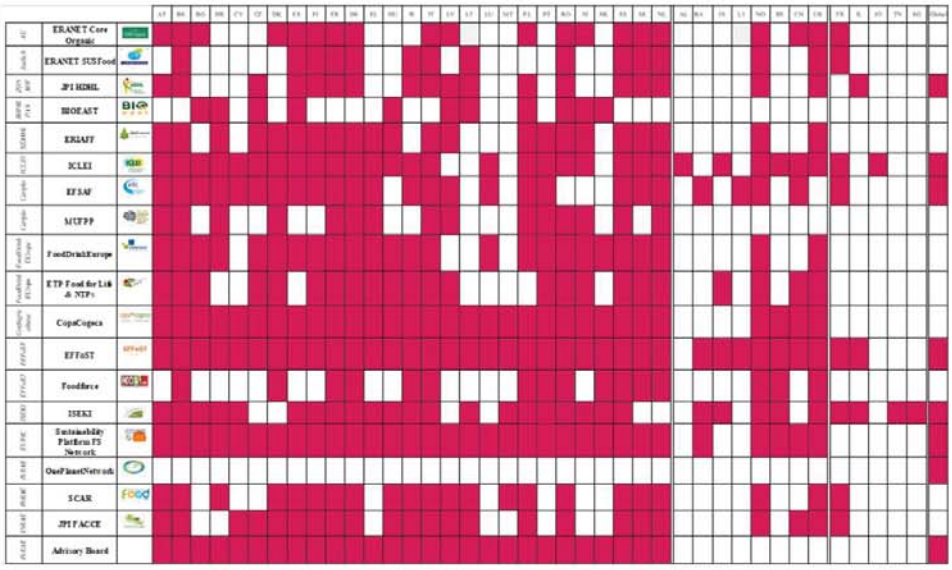
Consortium

The Consortium is built upon balanced inputs from **public and private parties**, covering research, innovation, policymaking, and education, and parties working all along food chains (consumption, production, recycling). The partners of the Consortium are **complementary in science, innovation, and education domains** (including digitalization and social science and humanities). **They all represent networks, have distinct governance models, and operate at different scales** (local to global). Their **organizational activities** jointly include communication, dissemination and exploitation, agenda-setting and project guidance. Private, public, and philanthropic actors will develop shared strategies, system approaches, observation methods, and co-creation activities in a **collective intelligence** manner; these will be the key building blocks of the Prototype Partnership Sustainable Food Systems for people, planet and climate.

Our partners

Our networks

All partners represent international networks. Consequently, the Consortium can mobilize a wide range of diverse experts across Europe and even globally. The ambition is to be **as open and inclusive as possible** to provide the future SFS Partnership with well-evidenced options. The Consortium and its management team will receive guidance from an **Advisory Board** (AB) with members from other HorizonEurope Partnerships and international institutions. The **broad presence** in each EU country and beyond is presented in the table below. This will support **defining EU-wide common topics** and **country-region-community-specific issues**.



Project information

Start: June 1st 2022
Duration: 42 months
Budget: 4.9 M

No. of Partners: 17
No. of Networks: 17
Contact Project coordinator: hugo.de-vries@inrae.fr

About European Rural Development Network

European Rural Development Network (ERDN) was established in 2002 to integrate efforts and competencies of various European research institutions in the jointly conducted work on the state and the paths of transformation of the rural areas and agri-food sector in EU Member States and neighbourhood countries. Thus the main objectives of the Network are parallel to the Community`s idea of building European Research Area for agriculture and rural development. The Network is meant to encompass the leading research centres carrying out the research in the area of agricultural economics and rural development in Europe, with special focus on Central-Eastern European Countries.

The network consists of universities and research institutes from Poland, Austria, Czech Republic, Slovakia, Hungary, Romania, Lithuania, Croatia but also from Ukraine, Serbia, Moldova, Montenegro and Kosovo. ERDN collaborates with scientists from the UK, Germany, France, Spain, Norway, Finland and Italy.

The efforts of network members in investigation of rural processes provides extensive knowledge needed to understand the specificity of rural development in CEECs. Different scientific backgrounds, cross-national origin of ERDN experts and over decade of successful cooperation provide complex and interdisciplinary, high quality solutions. The members of the Network are representing the leading Universities and Research Institutes in Central and Eastern Europe. The basis for the ERDN development, knowledge exchange and the source of future research ideas are annually organised conferences.

One of the main features of rural development is its complexity. Observations and analyses of the situation in rural areas should be carried out based on different scientific points of view which will help to determine the vision for the future.

The main objectives of the ERDN are:

- networking between researchers of different scientific backgrounds and countries of origin to analyse the state, perspectives and strategies of action with respect to the development of rural areas in Central-Eastern European Countries;
- international and intergenerational knowledge transfer through joint research in the area of rural development;
- advancing international scientific cooperation in rural development and agriculture, in particular drawing on the Network’s experience in international scientific research programmes;
- sharing and promotion of scientific experiences and achievements of the participants of the ERDN to support policymakers and stakeholders concerned with sustainable development of European rural areas.

The efforts of the Network’s members in investigation of rural processes provide extensive information needed to understand the specificity of rural development in CEE, especially in the context of the EU policy reforms and enlargements. Different scientific backgrounds, international origin of the ERDN experts and over a decade of successful cooperation help to prepare complex and interdisciplinary solutions for research and policy making. The members of the Network are representing the leading universities and research institutes in Central-Eastern Europe.

The Network takes efforts aimed at common elaboration of research topics in the fields strategic for rural development and wining new institutional partners. The cooperation involves exchange of publications, statistical data, joint initiatives to raise funds from the EU Framework Programmes (Horizon 2020 and Horizon Europe) and other entities (such as: the International Visegrad Fund, the EEA and Norway grants as well as many national programs), exchange of scientists and numerous meetings during seminars, conferences and scientific workshops.

The annual conferences are the basis for the ERDN development, knowledge sharing and the source of its future research ideas.

More info: www.erdn.eu

@ERDN *Follow us on Facebook and LinkedIn for fresh news about our members, projects and activities!*

ERDN activity in international bodies

Rural Pact

ERDN is a member of the Rural Pact. Rural Pact is an initiative of the European Union striving for a heightened position of the rural environment on the political agenda, which ERDN is a participant of. It aims to encourage rural and national authorities to act upon the needs of rural citizens and to improve collaboration between the different participants in terms of the relevant initiative. The participants of the Rural Pact include authorities, institutions, businesses and citizens. Further, the initiative supports voluntary commitments to activities in line with the Rural Pact.

Beginning on 15th of June 2022, the participants of the Rural Pact became involved in different activities such as networking (for example, building synergies between policy makers aiming for rural development), formulating rural development strategies, direct action on the ground, relevant event organization and evaluation.

These activities are in line with the themes of Rural Pact, which consist of:

- Democracy;
- Education and training;
- Research and innovation;
- Agriculture & food;
- Governance
- Nature and environment
- Social economy
- Access to services
- Bioeconomy & circular economy
- Rural-urban linkages
- Forestry
- Health and care
- Employment
- Soil health, etc.

Rural Pact Coordination Group

Additionally, ERDN is a member of the Rural Pact Coordination Group. Rural Pact Coordination Group is an informal representative group of participants who helped prepare the Rural Pact and its role is to guide the pact's application. Moreover, the coordination group will develop it further.

Appointed by the European Commission, the group's lead Directorate-General (DG) is Agriculture and rural development, while the co-lead DG is DG Regional and urban policy.

The Coordination Group responsibilities include specifying methods to develop the Rural Pact further for its various participants, encouraging their partners to become members of the Rural Pact through clarifying the EU's rural vision, and supervising the commitment to actions of Rural Pact participants. Furthermore, the Coordination Group will evaluate the progress towards the goals of the Rural Pact and its alignment with the rural vision. They will also suggest events or tasks to be organised under the Rural Pact based on good practices collected by the Rural Pact Support Office.

Strengthened governance for EU rural areas

The European Commission launched the Rural Pact in 2021. It is as part of the EU Long-Term Vision for EU's rural areas. The Rural Pact provides a framework for cooperation between public authorities, civil society, businesses, academia and citizens, at the European, national, regional and local level.

The Rural Pact aims at supporting the achievement of the shared goals of the Long-Term Vision for Rural Areas by facilitating interaction on rural matters. It helps in fostering mutual inspiration between all levels of governance and mobilising public authorities and stakeholders to act on the needs and aspirations of rural residents.

The Rural Pact has three objectives:

- Objective 1: Amplifying rural voices and bringing them higher on the political agenda.
- Objective 2: Structuring and enabling networking, collaboration & mutual learning.
- Objective 3: Encouraging and monitoring voluntary commitments to act for the vision.

Rural Pact Community Platform

Rural Pact Community Platform is a space where Rural Pact members can find the news about Rural Pact and rural revitalization. Then can also communicate with one another and become a member of Community Groups. There are 8 such groups:

1. Rural Pact Coordination Group.
2. Smart villages.
3. Women in rural areas.
4. Mountain areas.
5. Migrants and refugees' inclusion in rural areas.
6. Youth in rural areas - Empowering the next generation.
7. Social economy.
8. Rural mobility.

Access to the Platform: https://ruralpact.rural-vision.europa.eu/index_en

The Rural Pact Support Office

The Rural Pact Support Office (RPSO) coordinates and implements the networking activities of the Rural Pact and its community with the ambition to achieve the Rural Pact objectives and the Long-term vision for EU's rural areas. The RPSO is tasked for the next years to:

- animate the members of the community as well as encourage and promote commitments to act;
- identify and promote good practices that can inspire action in rural areas;
- organise webinars for capacity building and peer learning, as well as high-level policy events;

- support the meetings of the Rural Pact Coordination Group;
- keep the community informed through the website, social media channels, the monthly newsletter and the annual Magazine.

The RPSO will build synergies and complementarities with all relevant EU policy networks and initiatives working on and for rural development to jointly contribute to stronger, connected, prosperous and resilient rural areas in Europe (https://ruralpact.rural-vision.europa.eu/rural-pact_en).

Leader of the RPSO: Pascale Van Doren

More information about RPSO: https://ruralpact.rural-vision.europa.eu/RPSO_en

New European Bauhaus

ERDN is a partner of the New European Bauhaus. The New European Bauhaus is a creative and transdisciplinary movement. This movement is aimed at facilitating and steering the transformation of EU societies along three inseparable values:

- sustainability, from climate goals to circularity, zero pollution, and biodiversity;
- aesthetics, quality of experience and style beyond functionality;
- inclusion, from valuing diversity to securing accessibility and affordability (https://new-european-bauhaus.europa.eu/about/about-initiative_en).

ERDN through its research and other activities wants to advocate for including these values in rural development.

More about the New European Bauhaus: https://new-european-bauhaus.europa.eu/about/about-initiative_en

A Soil Deal for Europe

ERDN is among the signatories of the Soil Manifesto (https://ec.europa.eu/eusurvey/runner/mission-soil-manifesto) related to the EU Mission "A Soil Deal for Europe". The so-called Soil Mission is aimed to support the transition towards healthy soils. It is to be done by:

- funding an ambitious research and innovation programme with a strong social science component;
- putting in place an effective network of 100 living labs and lighthouses to co-create knowledge, test solutions and demonstrate their value in real-life conditions;
- developing a harmonised framework for soil monitoring in Europe;
- raising people's awareness on the vital importance of soils.

The Soil Mission has 8 objectives:

1. Reduce desertification.
2. Conserve soil organic carbon stocks.
3. Stop soil sealing and increase re-use of urban soils.
4. Reduce soil pollution and enhance restoration.
5. Prevent erosion.
6. Improve soil structure to enhance soil biodiversity.
7. Reduce the EU global footprint on soils.
8. Improve soil literacy in society (https://mission-soil-platform.ec.europa.eu/about/mission-soil)

Mission Soil platform website: https://mission-soil-platform.ec.europa.eu/

Pact for Skills

ERDN is a member of the Pact for Skills. Pact for Skills is one of the EU actions related to Eur opean Skills Agenda. It is supposed to help public and private entities in upskilling and reskilling their employees. ERDN committed itself to support its members in upskilling especially when it comes to topics related to other EU initiatives it is a member, like soil health, climate and rural issues.

Pact for Skills website: https://pact-for-skills.ec.europa.eu/index_en

European Climate Pact

ERDN is a member of the European Climate Pact. The European Commission launched this Pact as part of the European Green Deal and is supposed to support reaching the EU climate goals.

The Climate Pact is an opportunity to:

- learn about climate change;
- develop and implement solutions;
- connect with others and maximise the impact of these solutions (https://climate-pact.europa.eu/index_en).

ERDN as a member of the European Climate Pact wants to conduct research and its other activities that support climate change mitigation and adaptation.

Thematic Group on Rural Proofing

Prof. Barbara Wieliczko represented ERDN as a member of the Thematic Group on Rural Proofing. It was a group created by the European Network for Rural Development (ENRD) which served as a hub for exchange of information on how Rural Development policy in the EU operated. The thematic group was active in 2022.

Thematic Group on CAP Strategic Plans: Monitoring Committees

Prof. Barbara Wieliczko represented ERDN as a member of the Thematic Group on CAP Strategic Plans: Monitoring Committees. It was created by the EU CAP Network and operated in the period 2023-2024.

Harnessing Talent Platform – Working Group "Territorial development"

Prof. Barbara Wieliczko is representing ERDN as a member of the Working Group "Territorial development" which was established in 2023 as part of the Talent Booster Mechanism being part of the "Harnessing Talent Platform. A new boost for EU regions". Harnessing Talent Platform is part of the EU regional and urban development policy.

The Working Group "Territorial development" is looking for a ways that can help the regions support life-long learning.

More information: https://ec.europa.eu/regional_policy/policy/communities-and-networks/harnessing-talent-platform/working-groups_en

Central and Eastern European Initiative for Knowledge-based Agriculture, Forestry and Aquaculture in the Bioeconomy (BIOEAST)

ERDN is a founding member of the BIOEAST initiative. The mission of the BIOEAST Initiative is to support the development of knowledge and cooperation based circular bioeconomies to enhance inclusive growth in the BIOEAST countries and also to create new value-added jobs especially in rural areas, maintaining or even strengthening environmental sustainability.

Prof. Paweł Chmieliński is Chair of the Thematic Working Group Foos Systems of the BIOEAST.

More info: https://bioeast.eu/

CEE2ACT Polish National Bioeconomy Hub

ERDN is member of the of the Polish National Bioeconomy Hub coordinated by the Institute of Soil Science and Plant Cultivation – State Research Institute (IUNG-PIB)**.** The launch of the National Bioeconomy Hub is intended to be an effective response to the key barriers facing the development of actors in the bioeconomy sectors in Poland. During the inaugural conference, held on 3-4 October 2023 in Puławy, a group of stakeholders representing public and private actors clearly identified important issues that need to be addressed: the lack of clearly defined directions and strategies for action at the national level; the lack of trust and willingness to cooperate, but also of a platform of understanding; the lack of an adequate level of awareness and the high educational needs in this area; the lack of alignment of legislation with the needs of individual sectors and bioeconomy chains. In the context of the long-term vision, the National Bioeconomy Hub is to become an independent legal entity with the status of a National Key Hub. It will integrate key stakeholders of the bioeconomy in Poland. It will serve as a valuable advisory body for decision-makers in Poland and the European Union. As an entity, it will actively identify current and future issues in the bioeconomy area.

Info: https://en.iung.pl/?s=hub
https://www.youtube.com/watch?v=36Vffe62Boc

Our projects

ESIRA

ESIRA acknowledges that innovative social economy initiatives, focusing on local networks, competences, and resources, are able to recognise the important role of citizen-led activities to fulfil the needs of rural areas, especially marginalised ones. Nevertheless, many policies and initiatives fail to effectively support them and/or engage the more vulnerable groups of population. The main objective of ESIRA is to contribute to the rollout of place-based innovative social economy initiatives for rural inclusion and development in (marginalised) rural areas by supporting enabling frameworks, well-interconnected policy architecture and directly piloting innovative solutions which ultimately build more inclusive, resilient and prosperous rural areas. To achieve it, ESIRA will implement a work plan focused on the research of community-led rural innovation spaces able to connect and empower actors, reinforce the social capital and sense of community, considering the great diversity of rural areas within Europe, and eventually nurturing and piloting social economy initiatives that strengthen the inclusiveness and living conditions of different groups of population in vulnerable situation, from the improvement in the provision of (social) services, economic diversification, and sustainable management of the natural capital. This will enable to stocktake and formulate recommendations for policymakers to better support the third sector and local communities, increasing the understanding of the needs and challenges of vulnerable groups of population and social economy, and boost the knowledge-exchange among local actors, building up their capacities and facilitating the scale up and replication of social economy initiatives across Rural Europe. 9 regions in 7 European countries will be involved in the project. The exploitation and dissemination activities will aim at expanding those regional spaces and replicating our concept in new regions.

Call: HORIZON-CL6-2023-COMMUNITIES-01-1
Project starting date: 1 January 2024
Project duration: 48 months
Project leader: Universidad de Burgos https://www.esira.eu
Facebook: https://www.facebook.com/ESIRAProject
Instagram: @esira_project
LinkedIn: https://www.linkedin.com/company/esira-project

Funded by the European Union

ESIRA has received funding from the European Union Horizon Europe research and innovation programme under Grant Agreement No. 101136253.

Views and opinions expressed, however, are those of the author(s) only and do not necessarily reflect those of the granting authority. Neither the European Union nor the granting authority can be held responsible for them.

SOILSCAPE

Spreading Open and Inclusive Literacy and Soil Culture through Artistic Practices and Education

"Once upon a time, in a world where soil degradation became a priority concern, where hundreds of soil scientists and professionals rang the alarm bell, but where major gaps in societal awareness and education on the importance of soils for humans and the ecosystems 100 persisted and slowed down the change towards sustainable soil governance, a rich and expansive story started to unfold. It was a tale of transformation, and a collaborative journey towards increased soil literacy. The SOILSCAPE story began with a group of 19 pioneers, analogous to musicians, having the same objective to help boost soil awareness and care by conducting a dynamic and territorial network of what we call Orchestras. All of these Orchestras are sounding of the fundamental linkage between soils and human population, soil health and human health, resulting in hundreds of inspiring arts-based initiatives (in the broadest sense) across Europe and beyond. The resulting Symphony overcame the challenges of changing society's perceptions and engaged artists, citizens, soil professionals and institutions on soils, through innovative communication campaigns, participatory art-science, and broader cultural initiatives together with creative science-based soil activities." SOILSCAPE is a 48-month project gathering 19 partners from 8 Members states, Switzerland, and Kenya. Inter-disciplinary

and trans-disciplinary activities will be conducted through the wide diversity of expertise required to increase soil literacy, initiate an international network of local actors, and engage the society in the protection and restoration of soils through creative ways. The project involves 2 of the EU largest and liveliest Soil Sciences Societies, the United Nations Educational, Scientific and Cultural Organization, the World Agroforestry, 3 CCIs, 1 cluster of CCIs and 1 of professionals, 7 research institutes, 1 EU Rural Network, and 1 non profit organization.
Project starting date: 1 June 2024
Project duration: 48 months
Consortium leader: French Soil Science Society
Topic: HORIZON-MISS-2023-SOIL-01-07
Facebook: https://www.facebook.com/SOILSCAPE/
LinkedIn: https://www.linkedin.com/company/soilscape-project/
Instagram: https://www.instagram.com/soilscape.project/
X: https://x.com/SOILSCAPE_EU/status/1879088029299781840
Bluesjy: https://bsky.app/profile/soilscape.bsky.social

GRACE
Growing Climate Resilience in Remote rural Areas through Community Empowerment
Europe is warming faster than any other continent, with 2023 being the hottest year on record. This rapid Climate Change (CC) increases the frequency of extreme weather events such as floods, wildfires, and droughts, endangering people, infrastructure, ecosystems, and the economy. From 1980 to 2020, climate disasters cost the EU €12 billion annually, and future hazards could raise this figure to €170 billion per year. In response, the European Commission has enacted policies like the EU Green Deal, the Adaptation Strategy, and the Horizon Europe Mission on Climate Adaptation, all aiming to boost resilience, particularly in rural areas that are disproportionately vulnerable due to their dependence on natural resources and exposure to diverse climate risks. Rural areas, especially Remote Rural Areas (RRAs), face even greater obstacles like lower institutional capacity, underinvestment, and depopulation, limiting their ability to adopt climate adaptation measures. Covering 50% of the EU's rural territories, RRAs urgently need empowerment to tackle CC effectively. GRACE project focuses on addressing

the needs of rural and small/medium communities localised in EU RRAs to adapt and build resilience against CC by strengthening their capacities and empowering them to become actors of change and take transformative action. A consortium of 26 organizations from 16 countries leads the project, with five demonstrator regions (DRs) in Portugal, Italy, Austria, Denmark, and Sweden co-developing innovative climate adaptation solutions centered on nature-based approaches. These solutions aim to deliver broad social and economic benefits. Then, five replicator regions (RRs) in Greece, Slovakia, Ireland, Latvia, and Ukraine will prepare for adopting the innovations developed by the DRs. Finally, GRACE will also engage observer regions (ORs) to follow and potentially replicate these solutions, fostering widespread CC adaptation across Europe's rural areas.
Project leader: Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici (CMCC)
Partners:
INOVA+ - INNOVATION SERVICES, SA (INOVA+)
Centre International de Hautes Etudes Agronomiques Méditerranéennes (CIHEAM)
STICHTING VU (VUA) NL 5 European Public Law Organization (EPLO)
European Association for Innovation in Local Development (AEIDL)
Stowarzyszenie Centrum Rozwiązań Systemowych (CRS)
European Science Communication Institute gGmbH (ESCI)
Federal Institute of Agricultural Economics, Rural and Mountain Research (BAB)
ACONIUM GMBH (Aconium)
Institute For Rural Development Research (IFLS)
Comunidade Intermunicipal do Baixo Alentejo (CIMBAL)
Gemeinsame Region Bucklige Welt – Wechselland (BW)
Comune di Cavallino Treporti (CT)
Regional Government of Thessaly (THES)
Vidzeme Planning Region (VD)
Swedish University of Agricultural Sciences (SLU)
Region Västerbotten (VAST)
Aalborg Kommune (AAK)
Danmarks Tekniske Universitet (DTU)
Zilina self-governing region (ZSK)
Zalishchyky city council (ZCC)
Associação Estação Biológica de Mértola (EBM)
Instituto Politécnico de Beja (IPB)
Mayo County Council (CARO)
Project start: 1 October 2025
Duration: 3 years
Call: HORIZON-MISS-2024-CLIMA-01

SoilTribes

SoilTribes - Glocal Ecosystems Restoring Soil Values, Roles and Connectivity

SoilTribes main goal is to pave the way towards inspiring “back to Earth” narratives translated in new formats of knowing, feeling, and behaving in regard to soil, its importance and challenges, and its future, which is deeply connected with ours. Approximately 60-70% of EU soils are unhealthy and the soil degradation costs the EU several tens of billion euros per year. The EU Mission ‘A Soil Deal for Europe’ aims to invert this scenario having designed an ambitious plan where citizens and organisations are key. SoilTribes gathers 25 partners, from 11 countries from the different EU regions and designs a methodology that will contribute to the achievement of the ambitious EU plans by fostering soil literacy and connectivity, through the (i) establishment, activation, and empowerment of a multi-actor network (+1000 members), 7 Soil Lab Activators, 7 Stewardship Assemblies; (ii) financial and scale-up support scheme (+1,8M€ FSTP; grants, prize, competition) to nearly 80 projects/ teams recognising existing solutions or the development of new innovative and creative solutions for an enhanced soil literacy; (iii) design of +10 resources, tools and manuals for long-term use by private/public organisations willing to engage with citizens to increase soil literacy; (iv) and program, curation and implementation of nearly 200 events for wide dissemination, communication and pollination of soil topics (workshops, soilathons, soilblitz, creative exhibition, festivals). Framed by an engaging narrative, the “Tribes” will share the same commitment and will embark on a powerful journey of transition and transformation, bolstered by the nexus of science, technology, arts, and society. In SoilTribes project the ERDN team closely cooperates with gmina Michałowice, a rural commune in Mazowieckie region in Poland which is a member of SoilTribes consortium.

Topic: HORIZON-MISS-2023-SOIL-01-07 - Back to earth:

Duration: 1 of November 2024 - 31 October 2027

Consortium leader: INOVA+ - INNOVATION SERVICES, SA, Portugal

https://soiltribes.eu/

https://www.instagram.com/soiltribes/

https://www.youtube.com/channel/UCnkQxBsysUC_TWpJ5GNDSmw
https://www.linkedin.com/company/soiltribes
https://open.spotify.com/user/31rwrajr4lrqjwbnxgrsck4biw34?si=4c92a10a326c458f&nd=1&dlsi=5b8ae0e67c504f09

Tools4CAP

Innovative Toolbox empowering effective CAP governance towards EU ambitions

Tools4CAP - Innovative Toolbox empowering effective CAP governance towards EU ambitions The New Delivery Model established in Regulation EU 2115/2021 entails significant changes to Common Agricultural Policy (CAP) governance with the introduction of Strategic Plans and new monitoring, review and evaluation requirements. The CAP is expected to contribute significantly to the Green Deal's ambitions, securing the achievement of sustainability and resilience goals for the EU's Agri-food systems. Innovative governance models are essential to enable result-based policymaking to deliver the best policy pathways to facilitate the green transition. Tools4CAP will (1) support the implementation of National Strategic Plans 2023 2027, and (2) lay the foundations for sound preparation of Post-2027 Strategic Plans. Accordingly, Tools4CAP establishes a flexible and participatory Coordination & Support Action designed to boost learning, exchange processes, and adoption of innovative solutions and good practices for the design, monitoring and evaluation of CAP Strategic Plans. Tools4CAP's methods and tools will cover three key areas: (1) quantitative modelling tools for ex-ante and ex-post evaluations, (2) participatory and multi-governance decision tools, and (3) novel data and monitoring solutions. The project will deliver a comprehensive inventory of methods and tools used in the 27 Member States, methodological guidelines on innovative solutions and a Handbook of good practices. Results will be integrated in a Capacity Building

Toolkit, designed to enhance science-policy interfaces. Tools4CAP utilises a Stakeholder Engagement Platform to boost bottom-up adaptation of innovative methods and tools. It will establish a Replication Lab to demonstrate their use in 10 Member States and to promote their uptake across the EU-27. The project will also set up a Capacity Building Hub to help end-users (ministries, management authorities, paying agencies, other stakeholders) reinforce their capacity to use innovative tools, including models used by the European Commission.
In Tools4CAP project ERDN is represented not only the ERDN Team Poland but also by its six institutional members:
1. Lithuanian Center for Social Sciences, Institute of Economics and Rural Development, Lithuania.
2. Agrarkozgazdasagi Intezet Nonprofit Kft (AKI), Hungary.
3. University of Latvia, Latvia.
4. Institute of Agricultural Economics, Bulgaria.
5. Institute of Agricultural Economics – Romanian Academy, Romania.
6. Slovenska Polnohospodarska Univerzita v Nitre, Slovakia.

Call: HORIZON-CL6-2022-GOVERNANCE-01-05
Project leader: ECORYS, Belgium
Project period: 2023-2027
More information:
https://www.tools4cap.eu/
https://x.com/TOOLS4CAP
https://www.linkedin.com/company/tools4cap/
https://www.youtube.com/@Tools4CAP

INSPIRE

Supporting the inclusion, wellbeing, and growth of rural areas through multi-actor Smart Villages labs for enhanced governance frameworks
The INSPIRE project (Horizon Europe, 2024–2027) aims to strengthen social inclusion, wellbeing, and sustainable development in European rural areas by co-developing innovative governance frameworks and Smart Villages labs. Within the consortium, the European Rural Development Network (ERDN) acts as a bridge between academic research and rural communities, ensuring that evidence-based insights inform both policy and practice. ERDN's

contribution focuses on field-based piloting and knowledge sharing across Central and Eastern Europe.

In Poland, a pilot case in the Parczew district illustrates key vulnerabilities of rural populations: economic insecurity, limited access to healthcare, demographic aging, digital exclusion, weak transport infrastructure, and agricultural instability. Despite these challenges, communities demonstrate resilience through social cohesion, grassroots initiatives, reliance on public institutions, and intergenerational solidarity. Observational data and narrative research highlight both coping strategies and systemic barriers that hinder wellbeing and inclusion.

ERDN integrates these findings into the broader INSPIRE framework by promoting territorial typologies, facilitating stakeholder dialogue in Smart Village labs, and contributing to the development of a Rural Social Inclusion Policy Dashboard. The network's activities support capacity-building for local actors, strengthen social economy initiatives, and provide evidence for EU-level debates on the future of rural areas. The results not only inform the Long-Term Vision for Rural Areas and the Rural Pact but also contribute to the transformation of food systems and inclusive governance models in Europe.

https://inspireprojecteu.eu

https://www.linkedin.com/company/inspire-project-eu/posts/?feedView=all

https://www.facebook.com/profile.php?id=61569429994625

RIBES

Regional Inclusive Biobased Entrepreneurship Solutions (RIBES)

The RIBES project (Regional Inclusive Biobased Entrepreneurship Solutions) is a three-year initiative funded under Horizon Europe, running from March 1, 2024, to February 28, 2027, with a budget of approximately EUR 5 million. Its overarching goal is to support the transformation of economies in European regions struggling with low levels of innovation in the bioeconomy sector. RIBES seeks to accelerate the shift from fossil-based, linear production systems towards a circular and dynamic bioeconomy that incorporates inclusive social dimensions. The project addresses key challenges such as limited awareness of the bioeconomy, insufficient market frameworks, lack of necessary skills among local stakeholders, and underdeveloped value chains and infrastructure. The methodological approach relies on bottom-up, multi-actor engagement, fostering collaboration among rural communities, universities, administrations, and entrepreneurs. Central to this are the Multi-actor Transformative Forums (MTFs), designed as platforms for co-creating inclusive, context-specific business and governance models. As a tangible outcome, RIBES will deliver a "RIBES Toolkit" offering practical solutions including collaborative models, policy monitoring systems, environmental protection plans, and support mechanisms for small-scale, circular entrepreneurship. Ensuring social sustainability is a priority, with an emphasis on equal participation of all actors, including vulnerable groups, through dedicated training and business support. Ultimately, RIBES aims to strengthen local innovation, reinforce bio-based value chains, and stimulate socio-economic development in rural and peri-urban areas, while ensuring scalability and replication of its results at national and European levels.

https://ribesproject.eu/
https://www.linkedin.com/company/ribes-project/
https://www.facebook.com/profile.php?id=61557477905411

GRANULAR

GRANULAR – Giving Rural Actors Novel data and re-Useable tools to Lead public Action in Rural areas

EU rural areas are facing simultaneous demographic, climate, economic, social and environmental changes which affect their characteristics and metabolisms. Responding to these challenges requires a precise understanding of what rural areas are and what rural communities are facing nowadays. Definitions of rural areas tend to lean on population density or size. They do not provide sufficient insights into the dynamics, drivers and fluidity of contemporary diverse rural-urban relations and identities that characterize ruralities across Europe. Despite the increasing acknowledgement that rural areas are diverse and that typologies should better reflect the identities of such territories, the lack of data at a fine scale prevents such innovations. Departing from an updated conceptualisation of rurality based on the multi-dimensional nature of contemporary rural-urban interrelations and interdependencies, GRANULAR will generate new insights for characterising rural diversity based on a multi actor and interdisciplinary approach. Based on insights from Multi-Actor Labs, it will generate novel datasets using a wide range of methods and primary data, such as remote sensing, crowd sourced data, mobile phone data and web-scraping. This data will then be combined with a variety of existing institutional data to derive indicators relevant to rural communities for the implementation of the Long-Term Vision for Rural Areas (LTVRA), so to measure resilience, well-being, quality of life and attractiveness. This will enable GRANULAR to create a Rural Compass, that take into account

the factors affecting rural communities and their functional characteristics, informing policymakers and rural actors for the design of tailored rural policies. 95 After ensuring the up-scalability of the results, datasets, data visualization and other tools will be directly available on a dedicated platform designed by and for rural actors.

Call: HORIZON-CL6-2021-COMMUNITIES-01-01
Project leader: Mediterranean Agronomic Institute of Montpellier, France
Project period: 1 October 2022 – 30 September 2026
Website: https://www.ruralgranular.eu/
Facebook: https://www.facebook.com/ruralgranular
X: https://twitter.com/ruralgranular
LinkedIn: https://www.linkedin.com/company/87389717

thERBN

thERBN - Thematic European Rural Bioeconomy Network

The objective of thERBN is to put into operation an EU-wide multi-actor (MA) thematic network (TN) for knowledge sharing on innovative solutions for sustainable circular bioeconomy (CB) applicable by small farms and foresters (practitioners) at a local scale in rural areas. Such a framework will contribute to empowering practitioners (PPs) solving the gap between available and viable CB solutions and the problems they face in their everyday. Starting

from their most urgent needs on the management and use of biological by-products and residues, thERBN will identify existing solutions from grassroots from PPs, innovations developed by Operational Groups (OGs) and research applied results from national and EU projects, to produce practice-oriented easily understandable materials to be shared in national and EU demo days and training and through channels most consulted by PPs. thERBN TN will assure open access to long-term digital structures like EU-Farmbook, and EU-CAP Network, complemented by the thERBN platform to facilitate multilanguage access and a social environment to interact among and integrate CB-interested OGs, TNs & project communities, thus enhancing the cross-border dimensions and effects of thERBN TN, and reducing the fragmentation in knowledge and innovation. The MA thERBN TN will connect with the key actors (researchers, advisors, innovation brokers) and structures (national and regional AKIS, extension services, advisors networks) necessary to encompass the transition of small rural farms and foresters towards climate neutrality and more sustainable and resilient operation. Bottom-up MA-based dialogue will yield evidence on the current PPs' needs, the remaining gaps for CB solutions that new innovative products and services can cover, and policy briefs proposing policies or instruments to support the adoption of small-scaled CB solutions by small farms.
Call: HORIZON-CL6-2024-GOVERNANCE-01-9
Consortium leader: Ghent University
Project starting date: Autumn 2024
Project duration: 36 months
https://www.facebook.com/therbn.eu/
https://www.linkedin.com/company/therbn/

VISION4FOOD

EnVISIONing an integrated quadruple helix and RRI framework for FOOD system transformation and regional innovation ecosystem enhancement
VISION4FOOD aims to enhance the sustainability and resilience of EU food systems through the development of innovative governance models that contribute to better informed decision making processes while promoting social engagement and innovation in 5 European regions (Finland, Spain, Italy, Greece, Poland) with different innovation ecosystem maturity levels. Through the project, our regions will be supported to strengthen their role in the creation of Food Innovation Platforms (FIPs), fostering collaboration among Quadruple Helix stakeholders 102 and facilitating the identification, and scaling of innovations for food system transformation. The methodology involves co-creating R&I strategies, emphasizing open science, and Responsible Research Innovation (RRI). Through VISION4FOOD multistakeholder approach and the integration of tools and services we will provide them all the necessary support for knowledge exchange, networking and priority setting in the form of an acceleration agenda tailored to each region’s priorities and needs while facilitating the

transition to an innovative and inclusive food system. We will closely monitor and evaluate the performance of the governance models' operation, providing evidence of its impacts.

Call: HORIZON-CL6-2024-GOVERNANCE-01-2 Vision4Food - Envisioning an integrated quadruple helix and RRI framework for food system transformation and regional innovation ecosystem enhancement
Consortium leader: WHITE RESEARCH SRL (WR), Belgium
Period: 36 months (starting date 1 January 2025)
https://vision4foodproject.eu/
https://www.linkedin.com/company/vision-4-food-project-eu/
https://www.instagram.com/vision4foodprojecteu/
https://www.facebook.com/profile.php?id=61572975586728

LandShift

LANDSHIFT
Balancing Land Use Through Innovation and Beauty

LandShift - Community-Led Creation of Living Spaces in Shifting Landscapes for Climate-Resilient Land Use Management and Supporting the New European Bauhaus

LandShift is a groundbreaking initiative aimed at addressing the urgent challenges of climate change, biodiversity loss, and unsustainable land management practices. With a focus on the EU's land-use sector, LandShift seeks to develop innovative solutions that not only mitigate biogenic emissions but also enhance ecosystem resilience and promote sustainable resource management. LandShift aims to support the EU's ambitious climate goals by maximizing net removals from LULUCF, while minimizing biogenic emissions from agriculture. By strategically utilizing Living Earths, integrating FAO LCCS with optimized EO data, and Data Cubes as centralized data hubs, the project aims to implement tailored strategies for local and regional contexts, fostering stakeholder engagement and collaboration. Central to LandShift's approach is the integration of NBS aligned with the principles of the New European Bauhaus. These solutions leverage natural processes and ecosystems to enhance carbon sequestration, improve biodiversity, and strengthen ecosystem services. By harnessing the power of NBS, LandShift aims to create synergies between climate mitigation, biodiversity conservation, and sustainable land management. Furthermore, LandShift recognizes the importance of data driven decision-making and monitoring to track progress and inform policy development. The project will establish robust MRV systems to ensure the effectiveness of implemented strategies and measure their impact on biogenic emissions, biodiversity, and ecosystem health. In addition to technical solutions, LandShift places a strong emphasis on policy influence and capacity building. Through targeted outreach and engagement activities, the project aims to raise awareness, build capacity, and foster collaboration among stakeholders at all levels. By empowering policymakers, land managers, and local communities, LandShift seeks to create an enabling environment for sustainable land use sector and management practices.

Call: HORIZON-CL6-2024-CLIMATE-01
Consortium leader: Eratosthenes Centre of Excellence, Cyprus
Project duration: 36 months, starting date: 1st November 2024
https://landshift.eu/
https://www.linkedin.com/company/landshift/
https://bsky.app/profile/landshift.bsky.social
https://www.youtube.com/@LandShift

NEMESIS

Soil Health Living Lab Network for Combating Desertification in the Mediterranean

Nemesis strategically establishes five autonomous yet interconnected user-oriented, sustainable Living Labs (LLs) in Cyprus, France, Italy, North Africa (Tunisia/Algeria), and Spain, to combat desertification and improve soil health across the Mediterranean. These LLs will evolve into a multi-disciplinary virtual LL, with primary goal to incorporate all relevant soil health descriptors across a spectrum of heterogeneous real-life environments. The Nemesis community envisions itself as a potent hub of innovative solutions addressing adverse soil degradation issues in the region and beyond, and supporting the Soil Monitoring Law at multiple levels. Nemesis seeks to promote effective, sustainable land management practices and tackle the various societal challenges associated with soil health deterioration in the region. A comprehensive set of tools and frameworks will be established. These are designed to secure the long term viability and optimal functionality of the LLs, with the aim to advance LLs' pilot sites (60 already identified at the proposal stage) into Lighthouses where they can showcase solutions and exemplary achievements. A core principle guiding Nemesis is its commitment to co-creation and co-development. Nemesis will also emphasize the active engagement of local communities and citizens, with a special focus on representing future generations to build a foundation of environmentally conscious citizens. Nemesis facilitates the exchange of knowledge and fosters the development of novel and adaptable tools that are essential for informed decision-making and policy shaping. The project recognizes the importance of policy creation in addressing the complex challenges it seeks to tackle. This ensures that the innovative solutions generated within the Nemesis LL network will influence broader policy frameworks, fostering a more comprehensive and coordinated approach to combating desertification, among other objectives.

Call: HORIZON-MISS-2024-SOIL-01

Project leader: ERATOSTHENES CENTRE OF EXCELLENCE

Project duration: 48 months.

Start: October 2025

V4GreenReporting

Green evaluation of food industries in V4 countries from EU Taxonomy perspective Supported by Realization of EU's green goals is particularly important for the food industries of V4 countries. Uniform system of criteria is needed for the development of environmentally sustainable activities. After the NFRD and Green Deal, the EU Taxonomy was the next fundamental step to create principles of this system. The objectives of Taxonomy became a defining element of CSRD as well. The main aim of the project led by AKI is to provide comprehensive knowledge about the current situation and future opportunities of food industries' sustainable goals and activities in V4 countries in order to promote environmental-friendly solutions. The cooperation of V4 countries is important from geographical and financial point of view as well. There is a lack and urgent need of this intended examination in our area. The common target is to find the most effective solutions for the sustainable improvement of food industries in our region and to achieve determining behaviour-changing

effects. We will focus on strengthening macroregional and sectoral cooperation by a taxonomy-centered, qualitative and quantitative analysis of voluntary and mandatory sustainability reports of large companies using sectoral financial database. We plan to accomplish unique scientific studies and to provide new, outstanding information for key stakeholders (experts, companies, financiers, consumers, political decisionmakers) in order to realize more effective changes in green transition. According to our scientific concept the planned transparent assessment can also reduce the problem of green washing.

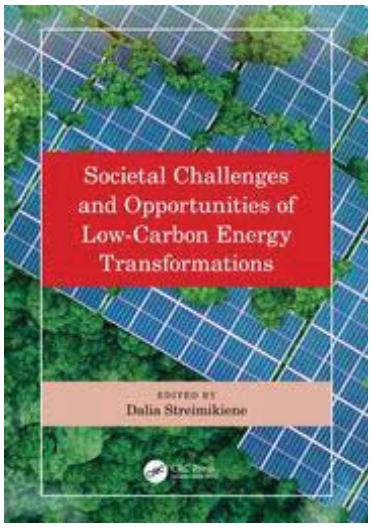
Partners: Agrárközgazdasági Intézet Nonprofit Kft. (AKI), Széchenyi István Egyetem (HU), AMBIS vysoká škola (CZ), Slovenská poľnohospodárska univerzita v Nitre (SK), European Rural Development Network (PL)

Visegrad Fund Project ID 22320032

Duration: 1 October 2023 – 31 March 2025

Final conference video: https://www.youtube.com/watch?v=e1YD4rFiFDc

Book summaries



Societal Challenges and Opportunities of Low-Carbon Energy Transformations

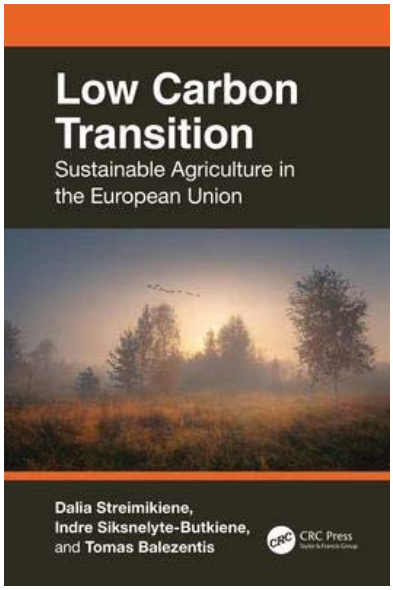
Edited By Dalia Streimikiene, ISBN 9781032852805, 400 Pages 40 Color & 43 B/W Illustrations, Published March 31, 2025 by CRC Press

Low-carbon energy transformations to support carbon-neutral societies is an important and urgent topic and subject to current national priorities and socio-economic planning. This book addresses the societal challenges and opportunities that come with the transition in EU member states such as energy poverty and inequality, energy security, gender inequality, energy efficiency improvements, climate change mitigation, growth in green investments, etc. It contains a balanced approach of theoretical concepts with an impressive range of relevant case studies to investigate the issues, develop indicator frameworks, identify barriers and drivers, and create policies and measures to unlock opportunities.

The main features of the book:

- Addresses systematically and comprehensively the low-carbon energy transition, its barriers, and its societal implications
- Discusses the main societal challenges and opportunities of low-carbon energy transition from theoretical and practical points of view
- Provides definitions of concepts, measurement indicators, policies, and a framework for overcoming barriers and enforcing drivers
- Includes case studies on low-carbon energy transition challenges and opportunities that are developed for EU countries
- Encourages discussion on policies and measures necessary to overcome identified barriers and proposes how to promote a just and smooth low-carbon energy transition

This book is a great reference for academics, researchers, graduate students, and professionals such as energy producers, city planners, policymakers, etc. interested in current and emerging trends in sustainable energy.



Low Carbon TransitionSustainable Agriculture in the European Union

By Dalia Štreimikienė, Indre Siksnelyte-Butkiene, Tomas Balezentis, ISBN 9781032607900, 334 Pages 17 Color & 42 B/W Illustrations

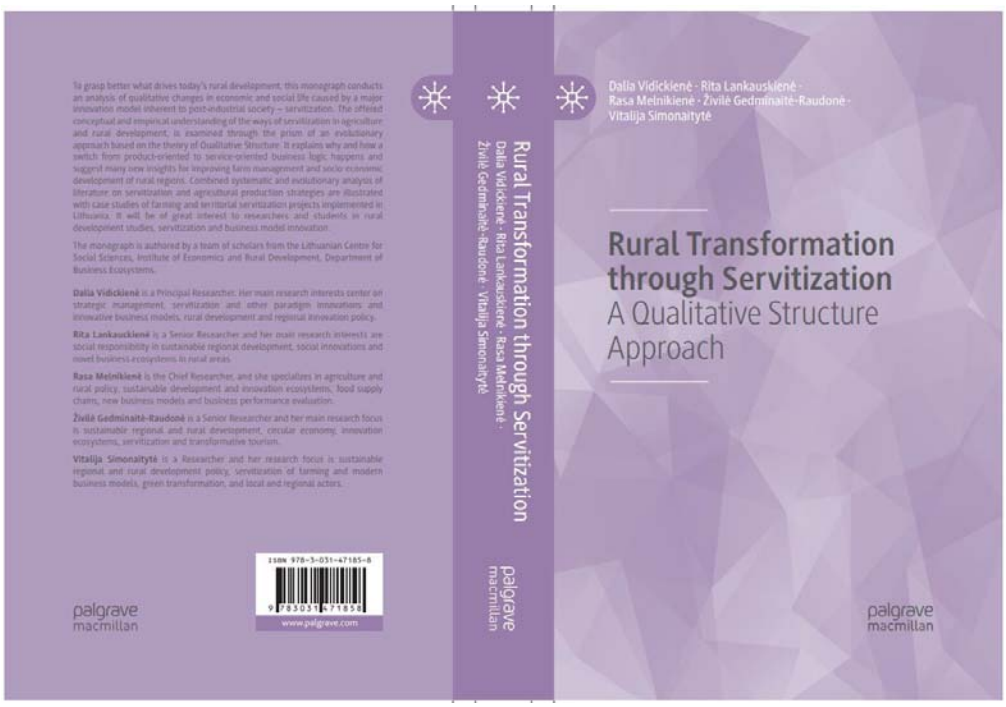
Published June 4, 2024 by CRC Press

Low carbon transition is a shift from an economy which depends heavily on fossil fuels to a sustainable, low carbon energy economy. This book analyses the role of renewables in driving the low carbon transition in agriculture, explores the circular bio-based economy, and examines policies and strategies designed to facilitate low carbon transition in agriculture, greenhouse gas mitigation, and adaptation trends in the European Union agriculture sector. It provides new knowledge and understanding about the impact of low carbon energy transition, emphasizes the key role of renewable energy in a wide range of agricultural activities, and offers alternative sustainable solutions to current practices.

The main features of the book:

- Discusses a novel approach on low carbon transition that is not considered by the majority of studies
- Emphasizes the urgent need to minimize the carbon and environmental footprint of the EU agriculture and food system through low carbon energy transition
- Provides theoretical background of sustainable agriculture and explains the decarbonization path of agriculture.
- Investigates the role of renewables, new technologies, business models, and practices in agriculture while assessing their socioeconomic and environmental effects.
- Presents a case study on the applications of low carbon transition policies in selected EU member states and analyses in details various implications.

This book is suitable for senior undergraduate and graduate students, professionals in agriculture, researchers, and policy makers interested in sustainable agriculture and renewable energy usage and their economics.



Rural Transformation through Servitization: A Qualitative Structure Approach

Authors: Dalia Vidickienė, Rita Lankauskienė, Rasa Melnikienė, Živilė Gedminaitė-Raudonė, Vitalija Simonaitytė

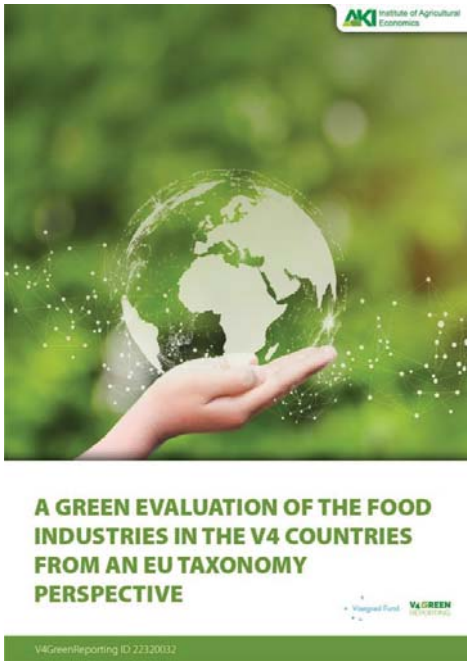
Abstract: Rural development paradigms after the Second World War depended on a set of assumptions relevant to the mass-scale industrialization of the agricultural sector. However, most of these assumptions are now invalid and we need strategies for redesigning the industrial economic system to co-create value according to the rules of post-industrial society. To grasp better what drives today's rural development, this book conducts an analysis of qualitative changes in economic and social life caused by a major innovation model inherent to post-industrial society – servitization.

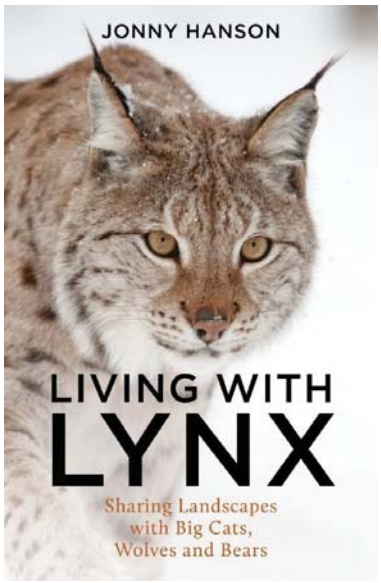
The book aims to contribute to the scarce literature on the role of servitization in farming and rural development. It offers a conceptual and empirical understanding of the ways of servitization in agriculture and rural development, examined through the prism of an evolutionary approach based on the theory of qualitative structure. The method of qualitative structure explains why and how a switch from product-oriented business logic to service-oriented business logic happens and helps to find many new insights useful for improving farm management and socio-economic development of rural regions. It combines a systematic and evolutionary analysis of literature on servitization and agricultural production strategies with case studies of farming and territorial servitization projects implemented in Lithuania. It will be of great interest to researchers and students in the field of rural development studies, servitization and business model innovation.

Keywords: rural development, paradigm innovations, collaboration networks, farming, business models.

More information about the book can be found here:
https://link.springer.com/book/10.1007/978-3-031-47186-5

Vidickienė, D. Lankauskienė, R., Melnikienė, R., Gedminaitė-Raudonė, Ž., Simonaitytė, V., (2024). Rural Transformation through Servitization. A Qualitative Structure Approach. Palgrave Macmillan, Cham. Hardcover ISBN 978-3-031-47185-8. Softcover ISBN 978-3-031-47188-9. eBook ISBN 978-3-031-47186-5. Pages: 387. https://doi.org/10.1007/978-3-031-47186-5





Living with Lynx: Sharing Landscapes with Big Cats, Wolves and Bears

Jonny Hanson

Overview

Jonny Hanson's Living with Lynx (Pelagic Publishing, 2025) offers a multidisciplinary and reflexive examination of the ecological, socio-political, and philosophical dimensions of rewilding and large carnivore reintroductions in Britain and Ireland. Drawing on his background as an environmental social scientist and practitioner in conservation and agriculture, Hanson constructs a narrative that is both empirically grounded and theoretically expansive. The book is structured in three parts—Past, Present, and Future—each interrogating the historical extinction, contemporary coexistence, and prospective reintroduction of apex predators such as lynx, wolves, and bears.

Methodology and Scope

Hanson's methodology combines autoethnography, qualitative fieldwork, stakeholder interviews, and policy analysis across multiple geographies (UK, Ireland, Switzerland, Netherlands, USA). His narrative is informed by over 50 interviews and site visits, including farming communities, conservation NGOs, and government agencies. The book integrates insights from evolutionary psychology, cultural studies, ecological science, and governance theory to explore the symbolic and material dimensions of human–carnivore relations.

Key Themes and Arguments

Historical and Psychological Foundations

Hanson explores the cultural memory and psychological imprint of predators in European societies, drawing on evolutionary theory, folklore, and trauma studies. He argues that rewilding debates are shaped as much by internal landscapes—fear, myth, identity—as by external ecological realities.

Coexistence Strategies and Management Tools

The book provides a comparative analysis of deterrence methods (e.g., fencing, livestock guarding dogs, shepherding), financial instruments (compensation, insurance, proactive payments), and governance frameworks. Case studies from Switzerland, the Netherlands, and the American West illustrate the operational and ethical complexities of managing predator–livestock interactions.

Governance and Stakeholder Engagement

Hanson emphasizes the importance of inclusive, adaptive governance in rewilding initiatives. He critiques technocratic and top-down approaches, advocating instead for participatory models that reconcile divergent stakeholder values. The Colorado wolf reintroduction process is presented as a case study in symbolic conflict and democratic negotiation.

Market-Based Conservation and Enterprise

The book evaluates the role of wildlife tourism, hunting, and predator-friendly certification schemes in creating economic incentives for coexistence. Hanson argues that commodifying carnivores can generate conservation value but must be carefully designed to avoid ethical and distributive pitfalls.

Philosophical and Political Dimensions

Hanson engages with philosophical debates on wildness, control, and moral pluralism. He situates rewilding within broader transitions toward ecological modernity, noting parallels with other contested socio-political transformations (e.g., Brexit). He calls for a reconciliation ethic that balances ecological restoration with cultural continuity and social justice.

Conclusion

Living with Lynx advances a nuanced and interdisciplinary framework for understanding rewilding as a socio-ecological process. It challenges binary narratives of nature versus culture and proposes a spectrum-based model of coexistence. Hanson's work contributes to the emerging literature on conservation social science, offering both empirical insights and normative reflections on the future of human–predator relations in post-agricultural landscapes.

The book can be purchased from the publisher https://pelagicpublishing.com/products/living-with-lynx as well as Amazon.

European Rural Development Network

http://erdn.eu