Ruralities

RURALITIES- CLIMATE SMART, ECOSYSTEM-ENHANCING AND KNOWLEDGE-BASED RURAL EXPERTISE AND TRAINING CENTRES

D5.5 - POLICY BRIEFS ON PAN-EU-AU RURAL INNOVATION LANDSCAPE – FIRST VERSION

Horizon Europe Grant agreement: 101060876

30/09/2025 by Gabor Mester, Ema Gustafikova (PEDAL)
Version 1.0

Funded by the European Union

UKRI Innovate UK

1. DELIVERABLE INFORMATION

Work package	WP5
Task	D5.5 - POLICY BRIEFS ON PAN-EU-AU RURAL INNOVATION LANDSCAPE – FIRST VERSION
Due date	30.09.2025
Submission date	30.09.2025
Deliverable lead	UNIZG
Version	1.0
Authors	Ema Gustafikova, Gabor Mester (PEDAL)
Reviewers	SIMSES partners, SIMSES followers

Keywords	– Climate change mitigation – Education, general (including training, pedagogy, and didactics) – Public sector innovation – Rural development studies – Training and support – Vocational training

Document Revision History

Version	Date	Description of change	List of contributor(s)
V0.1	10.03.2025	Draft structure of the document	Gabor Mester (PEDAL), Marko Vincekovic (UNIZG)
V0.2	18.06.2025	Draft version	Ema Gustafikova, Gabor Mester (PEDAL)
V0.3	27.08.2025	Distribution for partners input	Gabor Mester, Ema Gustafikova (PEDAL)
V0.4	10.09.2025	Incorporating partners input	Gabor Mester, Ema Gustafikova (PEDAL)
V0.5	26.09.2025	Final review	Robert Miskuf (PEDAL)
V1.0	30.09.2025	Final version for submission	Gabor Mester (PEDAL)

Dissemination Level

x	*Public — fully open (automatically posted online)*
	Sensitive — limited under the conditions of the Grant Agreement
	EU classified — RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision 2015/444

Disclaimer

This project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement no 101060876. UK participants in Horizon Europe Project RURALITIES are supported by UKRI grant numbers: 10051963 The Highlands and Islands Transport Partnership and 10050988 Earthwatch Europe.

Copyright notice

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACRONYMS

Acronym	Description
AfDB	African Development Bank (AfDB)
AfCFTA	African Continental Free Trade Area
AU	African Union
ATA	Agricultural Transformation Agency
BoA	Bank of Agriculture
CA	Conservation Agriculture
CAADP	Comprehensive Africa Agriculture Development Programme
CAP	Common Agricultural Policy
CLLD	Community-Led Local Development
DeSIRA	Development-Smart Innovation through Research in Agriculture
DRT	Demand-Responsive Transport
EC	European Commission
EAFRD	European Agricultural Fund for Rural Development
EgCITE	Egypt Climate Smart Agriculture Innovation & Entrepreneurship Program
EU	European Union
FARM	Food and Agriculture Resilience Mission
FNSSA	Food and Nutrition Security and Sustainable Agriculture
FO4ACP	Farmers' Organizations for ACP
FSA	Food Security Accelerator
GIs	Geographical Indications
KPI	Key performance indicators
LAGs	Local Action Groups
MaaS	Mobility as a Service
MAAIF	Ministry of Agriculture
NADF	National Agricultural Development Fund
NGOs	Non-Governmental Organizations
SIA	Systemic Innovation Areas
SIMSES	Simplified Socio-ecological Systems
PDM	Parish Development Model
ProMAT	Agricultural Modernization Program (ProMAT 2025–2034)
RECs	Regional bodies

RURALITIES	Climate smart, ecosystem-enhancing and knowledge-based rural expertise and training centres
RURNEX	RURALITIES Nexus
SAPZ	Special Agro-Industrial Processing Zones
ZAAP	Agricultural Development Zones
WP	Work Package

ABSTRACT

The project 'Climate smart, ecosystem-enhancing and knowledge-based rural expertise and training centres' (RURALITIES) delivers an ecosystem-enhancing and climate action driven expertise and learning framework organized in hubs e.g., the **'RURALITIES'**, comprising a series of innovative methodologies with the learner at its core, supported by a comprehensive network of living labs, and a blockchain-based digital platform combining the Internet and wireless technologies, to assist engage, connect and empower actors. This is done via a multi-point approach e.g., multi-actors, multi-disciplines, multi-systems, multi-scale, multi-sectors, and multilevel.

RURALITIES is rooted in the recruitment, preparation, training and coaching of 1.000+ facilitators for a variety of tasks (e.g., trainers, facilitators, role models, hub coordinators, etc.), and who play a significant role in creating the matrix and the platform upon which the learning framework is built, develops and evolves. **RURALITIES** proposes to ideate, implement, futureproof, validate and deliver the expertise and learning centers via real-scale practicing in 6 simplified rural socio-ecological systems (SIMSES) e.g., demonstrators, 2 in Italy, 1 in the United- Kingdom (UK), 1 in Slovenia, 1 in Spain and 1 in Romania. RURALITIES coordinates identified actions of local, and regional authorities in support of rural innovation in regions and economic sectors where rural innovators are not yet engaged in a relevant network.

RURALITIES coordinates identified SIMSES networks promoting rural innovation solutions whilst establishing innovative multipoint 'RURALITIES Hubs' of expertise and training on rural innovation. This is done via coordinating action for the managing authorities and regional bodies influencing regional and national policy instruments in Italy, the UK, Slovenia, Spain and Romania.

PARTNERS

Number	Role	Short name	Legal name	Country
1	COO	PEDAL	PEDAL CONSULTING SRO	SK
2	BEN	RDRP	ASOCIATIA RURAL DEVELOPMENT RESEARCH PLATFORM	RO
4	BEN	ASIN	ASOCIACION DE INVESTIGACION DE INDUSTRIAS CARNICAS DEL PRINCIPADO DE ASTURIAS	ES
5	BEN	NIC	KEMIJSKI INSTITUT	SI
6	BEN	UPM	UNIVERSIDAD POLITECNICA DE MADRID	ES
7	BEN	IRI	INSTITUT ZA RAZVOJ I INOVACIJE - IRI	RS
8	BEN	PART	PARTICULA GROUP DRUSTVO S OGRANICENOM ODGOVORNOSCU ZA ISTRAZIVANJE RAZVOJ I PROIZVODNJU	HR
9	BEN	UNIZG	SVEUCILISTE U ZAGREBU AGRONOMSKI FAKULTET	HR
10	BEN	ACTS	AFRICAN CENTRE FOR TECHNOLOGY STUDIES	KE
11	BEN	CITT	CENTRO DE INVESTIGACAO E TRANSFERENCIA DE TECNOLOGIA PARA DESENVOLVIMENTO COMUNITARIO	MZ
12	BEN	EQUIP	EUROPEAN SOCIETY FOR QUALITY AND PATIENT SAFETY IN GENERAL PRACTICE/ FAMILY MEDICINE	DK
13	BEN	MUNI	MUGLA SITKI KOCMAN UNIVERSITY	TR
14	BEN	MARIN	MARIN BIYOTEKNOLOJI URUNLERI VE GIDA SANAYI TICARET LIMITED SIRKETI	TR
15	BEN	ULB	UNIVERSITE LIBRE DE BRUXELLES	BE
16	BEN	INAG	INAGRO, PROVINCIAAL EXTERN VERZELFSTANDIGD AGENTSCHAP IN PRIVAATRECHTELIJKE VORM VZW	BE
17	BEN	AASTMT	ARAB ACADEMY FOR SCIENCE, TECHNOLOGY AND MARITIME TRANSPORT	EG
18	BEN	RRAP	REGIONALNA RAZVOJNA AGENCIJA POSAVJE	SI
19	BEN	YXSAV	YXS AVALANA SRL	RO
20	BEN	UNIVI	UNIVERSITATEA PENTRU STIINTELE VIETII "ION IONESCU DE LA BRAD" DIN IASI	RO
21	BEN	SIRET	ASOCIATIA GRUPUL DE ACTIUNE LOCALA SIRET-MOLDOVA	RO
22	BEN	SUA	Sokoine University of Agriculture	TZ

23	BEN	UNINO	UNIVERSITE DE NOUAKCHOTT AL AASRIYA	MR
24	BEN	IFAYA	INSTITUT FACULTAIRE DES SCIENCESAGRONOMIQUES (IFA) DE YANGAMBI	CD
25	BEN	ACD	ALTERNATIVE COMMUNAUTAIRE POUR LE DEVELOPPEMENT DURABLE (ACDD)	CI
27	BEN	AMVO	ALMANAR VOLUNTARY ORGANIZATION	SD
28	BEN	CDD	COMMUNICATION POUR UN DEVELOPPEMENT DURABLE C.D.D.	TG
29	BEN	YTED	YOUTHS IN TECHNOLOGY AND DEVELOPMENT UGANDA LIMITED	UG
30	BEN	CTIC	FUNDACION CTIC CENTRO TECNOLOGICO PARA EL DESARROLLO EN ASTURIAS DE LAS TECNOLOGIAS DE LA INFORMACION	ES
31	BEN	FHV	FONDAZIONE HOMO VIATOR - SAN TEBALDO	IT
32	BEN	MOFE	MONTEFELTRO SVILUPPO SCARL	IT
33	BEN	MUSE	MUSEUM GRAPHIA	IT
34	BEN	CDM	LA CORTE DELLA MINIERA SRL	IT
35	BEN	DEX	DESARROLLO DE ESTRATEGIAS EXTERIORES SA	ES
36	BEN	REDA	ASOCIACION RED ASTURIANA DE DESARROLLO RURAL	ES
37	BEN	GMV	MONTAGNA VICENTINA SOCIETA COOPERATIVA	IT
38	BEN	MARA	MAROC HORIZON D'AVENTURES	MA
39	BEN	UNWI	UNIVERSITY OF MALAWI	MW
40	BEN	NOMA	0KMNOMADS.ORG	GH
41	BEN	UNIM	MAGYAR AGRAR- ES ELETTUDOMANYI EGYETEM	HU
43	BEN	UASZ	UNIVERSITE ASSANE SECK DE ZIGUINCHOR	SN
44	BEN	CPF	CONFEDERATION PAYSANNE DU FASO	BF
45	BEN	UNAD	UNIVERSITY OF RWANDA	RW
46	BEN	ZLAN	ZAMBIA LAND ALLIANCE	ZM
47	BEN	EVRO	EVROSAD PROIZVODNJA TRGOVINA EVETOVANJE D.O.O. KRSKO	SI
48	BEN	SEVO	TURISTICNO DRUSTVO SENOVO	SI
49	BEN	IISAC	ISTITUTO D'ISTRUZIONE SUPERIORE A CECCHI	IT
50	AP	HITP	THE HIGHLANDS AND ISLANDS TRANSPORT PARTNERSHIP	UK
52	AP	EW	CONSERVATION EDUCATION AND RESEARCH TRUST	UK
53	BEN	APPO	APODISSI LTD	NG

1 INTRODUCTION

Deliverable D5.5 – Policy Briefs on the Pan-EU-AU Rural Innovation Landscape (First Version) has been developed within the framework of the RURALITIES project, a collaborative initiative co-funded by the European Union under the Horizon Europe Research and Innovation Programme (Grant Agreement No. 101060876). The project also receives support from UK Research and Innovation (UKRI) through grant numbers 10051963 (The Highlands and Islands Transport Partnership) and 10050988 (Earthwatch Europe), enabling the active participation of UK-based stakeholders in the project's multi-national framework.

RURALITIES addresses the complex challenges faced by rural areas by fostering climate-smart, ecosystem-enhancing, and knowledge-driven rural expertise and training centres. Within this context, Work Package 5 (WP5) plays a pivotal role in engaging, connecting, and empowering a broad spectrum of actors within the rural innovation ecosystem. Its activities address the interlinked environmental, economic, social, and societal dimensions — collectively referred to as the RURALITIES Nexus (RURNex). WP5 aims to bridge existing gaps between stakeholders by establishing collaborative platforms that stimulate participation across sectors, including agriculture, education, governance, and civil society.

A central component of WP5 is the deployment of targeted engagement strategies in six Simplified Rural Socio-Ecological Systems (SIMSES), which serve as pilot and demonstration areas for testing and refining the project's methodologies. These SIMSES represent diverse geographic, socio-economic, and environmental contexts, providing a robust basis for developing adaptable and scalable solutions for rural innovation.

WP5 Key Objectives:

WP5 is designed to ensure that rural innovation does not happen in isolation but rather through the inclusive involvement of all relevant stakeholders in the rural context. To achieve this, WP5 focuses on the following key objectives:

- **Cross-sectoral Collaborations:** WP5 actively promotes partnerships between different sectors, including agriculture, tourism, education, technology, governance, and social enterprises, ensuring that innovation efforts are inclusive and multidisciplinary.
- **Social Participation:** Special attention is given to empowering local communities and ensuring that rural stakeholders, including farmers, local businesses, and governmental bodies, are active participants in decision-making processes. This is achieved through participatory models and community engagement frameworks that are integrated into the establishment of the hubs.
- **Inclusive Ecosystems:** WP5 strives to create an inclusive ecosystem that facilitates cooperation between all actors along the rural value chain. This ecosystem will support knowledge transfer, capacity building, and the sharing of good practices.
- **Participatory Resource Allocation:** Another core objective of WP5 is to implement participatory and interactive approaches that help identify sustainable resource allocation strategies. These strategies are designed to be adaptable to the biophysical and socio-economic needs of rural communities, ensuring the long-term sustainability of rural areas.
- **Knowledge Integration and Upscaling:** WP5 also focuses on identifying, organizing, and valorizing key learnings from multiple sources, ensuring that knowledge from the SIMSES demonstration sites can be effectively upscaled and replicated in other rural contexts across Europe and beyond.

Objective of the Policy Brief

The objective of this policy brief is to provide evidence-based guidance to policymakers, practitioners, and stakeholders on fostering rural innovation within the pan-European and pan-African contexts. It seeks to:

- Identify and summarise the key challenges affecting rural development, based on data collected from the project's demonstration areas (SIMSES) and African Union (AU) partners.
- Map these challenges against relevant policy framework options that can effectively address them.
- Present Policy Use-Cases and best practices that demonstrate successful approaches to rural innovation and resilience.
- Support the formulation and adaptation of policies that are climate-smart, ecosystem-enhancing, and socially inclusive.
- Strengthen policy coherence between European and African rural development strategies through shared learning and capacity building.

By doing so, the brief aims to inform policy formulation, enhance cross-regional collaboration, and promote scalable solutions for sustainable rural transformation.

Role of D5.5 in the RURALITIES Project:

In this context, D5.5 provides concise summaries of the key challenges in rural development, mapped against relevant policy framework options to address these needs. It also presents recommendations based on evidence-driven *Policy Use-Cases* (best practices), offering practical guidance for government policymakers and other stakeholders involved in formulating or influencing policies. The content has been co-created through targeted data collection involving SIMSES partners and SIMSES followers ensuring that the resulting recommendations are firmly anchored in real-world experience and informed by diverse stakeholder perspectives.

Connection to Other Deliverables:

This report represents the **first version** of the policy brief, synthesizing information collected during the initial phase of the project. It focuses primarily on the pan-European and pan-African contexts, complemented by specific insights from the six European demonstration areas and 5 SIMSES follower country from Africa. The **second version (D5.6)** will be prepared and submitted at the end of the project (Month 60). As capacity-building activities for African partners will be implemented in the project's final phase, the second version will place greater emphasis on the challenges and needs of the African rural landscape. It will also provide tailored policy framework options, recommendations, and best practices relevant to specific SIMSES follower countries.

3 PAN-EU AND AU RURAL INNOVATION LANDSCAPE

This section presents a comprehensive overview of the rural innovation landscape within the EU and the AU. It examines the key policy frameworks that shape rural development strategies, the funding instruments that enable their implementation, and the principal stakeholders driving innovation at local, regional, and international levels. In addition, it explores thematic priorities and innovation domains, identifies emerging trends influencing rural transformation, and pinpoints opportunities for enhanced cross-regional cooperation. By combining policy analysis with insights from practice, this section aims to provide a clear reference point for policymakers, regional and local authorities, non-governmental organisations (NGOs), researchers, and other actors engaged in advancing rural innovation. The ultimate goal is to foster informed decision-making, promote knowledge exchange, and encourage the design of adaptable, scalable solutions that strengthen the resilience and sustainability of rural areas across both regions.

3.1 Policy Frameworks Supporting Rural Innovation

3.1.1 European Union

The EU's core strategy for rural areas is anchored in the Common Agricultural Policy (CAP). The reformed CAP 2023–2027 emphasizes a "smart and resilient agricultural sector" and rural employment, with innovation and digitalization as cross-cutting objectives[1]. CAP programs (including rural development measures) aim to modernize agriculture by fostering knowledge, innovation and digitalisation in rural communities[2]. The CAP is complemented by the European Green Deal and the Long-Term Vision for Rural Areas (2040), which together promote sustainability, climate action, and vibrant rural economies. EU rural policy also embraces concepts like *Smart Villages* – community-led initiatives to tackle rural challenges (depopulation, service gaps, connectivity) through innovation and smart solutions[3].

3.1.2 African Union

The AU's guiding vision, Agenda 2063, prioritizes inclusive growth and transformation, explicitly calling for "modern agriculture for increased productivity and production"[4] as a cornerstone of Africa's future. To operationalize this, the Comprehensive Africa Agriculture Development Programme (CAADP**)** was launched as a continental framework under Agenda 2063. CAADP's 2026–2035 strategy (Kampala Declaration 2025) sets ambitious targets – mobilizing $100 billion, lifting agri-food output by 45%, tripling intra-African agricultural trade, and halving post-harvest losses[5]. It represents Africa's most comprehensive rural reform effort, aiming to eliminate hunger and reduce poverty through agriculture-led development[6]. Other AU initiatives (e.g. the Malabo Declaration 2014 and national CAADP compacts) reinforce commitments to invest in agricultural innovation, climate resilience, and sustainable rural development. Regional bodies (RECs) are tasked with coordinating cross-border aspects like market integration and infrastructure for rural areas[7].

3.2 Funding Instruments for Rural Innovation

European Union Mechanisms

The EU provides substantial funding to stimulate rural innovation. Under the CAP, the European Agricultural Fund for Rural Development (EAFRD) dedicates €95.5 billion for rural development in 2021–2027[8], supporting projects in agri-tech, rural infrastructure, smart villages, and community-led local development (LEADER). The EU's research and innovation programs (Horizon 2020 and Horizon Europe) also invest in rural innovation themes – for example, Horizon Europe earmarked ~€650 million across ~70 topics for Africa-Europe R&I cooperation in 2021–2024[9], many focusing on sustainable agriculture, climate adaptation, and digital solutions in rural areas. Additional instruments include structural funds (e.g. European Regional Development Fund) and the InvestEU program, which back rural SMEs, broadband rollout, and green economy projects. Public-private partnerships and innovation prizes further encourage rural entrepreneurs (Global Gateway).

African Union & Partners

Financing for rural innovation in Africa comes from a mix of continental, national, and international sources. AU member states committed to allocate at least 10% of national budgets to agriculture (Maputo 2003, Malabo 2014 declarations), though implementation varies. The African Development Bank (AfDB) and African Development Fund provide major support. For instance, in 2024 the AfDB approved a $129 million loan for a Tanzanian program to incubate "agripreneurs" and youth-led agribusinesses[10]. Multilateral partners like the World Bank and IFAD are also key funders of rural innovation (funding digital agriculture platforms, farmer services, and rural infrastructure). The EU supports African rural development via its NDICI-Global Europe instrument and dedicated programs such as DeSIRA (Development-Smart Innovation through Research in Agriculture)[11], which finances climate-smart agricultural research, and FO4ACP (Farmers' Organizations for Africa, Caribbean and Pacific), a €45 million EU program strengthening African farmer co-ops and value chain integration[12]. Philanthropic and private sector initiatives (e.g., agri-tech venture funds, challenge funds for startups, the Alliance for a Green Revolution in Africa) further contribute to the rural innovation financing landscape.

3.3 Key Stakeholders in Rural Innovation

Successful rural innovation ecosystems are built on the active participation and collaboration of a diverse range of actors spanning the public, private, and civil society sectors. In the European Union (EU) and African Union (AU) contexts, public authorities — from local governments to supranational bodies — provide the policy direction, regulatory frameworks, and enabling infrastructure that create a stable environment for innovation. Private enterprises contribute investment capital, market access, technological solutions, and entrepreneurial drive, translating innovative ideas into viable products and services. Civil society organisations, including NGOs, cooperatives, and community-based associations, and non-organized civil society, play a crucial role in fostering community engagement, promoting social inclusion, and mobilising local knowledge and resources.

When these actors work in synergy, they create fertile ground for innovation to emerge, adapt, and scale. Such collaboration ensures that solutions are not only technically and economically viable but also socially accepted and environmentally sustainable. In the EU–AU rural innovation landscape, these multi-actor partnerships are essential for addressing shared challenges — from climate adaptation and sustainable agriculture to digital connectivity and youth employment — and for unlocking opportunities for cross-regional learning and joint action.

Public Sector

Government bodies set enabling policies and provide funding. In Europe, the European Commission (DG AGRI, DG REGIO, DG INTPA (for Africa) etc.), national agriculture, Local Action Groups (LAGs) and rural development ministries, and regional/local authorities manage programs and infrastructure that support rural innovation. In Africa, governments lead CAADP implementation, and the AU Commission (esp. the Department of Agriculture, Rural Development, Blue Economy and Sustainable Environment) provides continental guidance. Regional Economic Communities coordinate cross-country rural initiatives. These public institutions are responsible for creating an environment where innovation can flourish, from investing in rural education and connectivity to reforming regulations that affect rural businesses.

Private Sector

Businesses and entrepreneurs drive many rural innovations uptake. This includes small farmers and agri-cooperatives adopting new technologies, start-ups offering digital services (e.g. mobile apps for farming or market access), as well as larger agribusiness companies, telecom providers (improving rural connectivity), and financial institutions (offering microfinance or insurance in rural areas). Public-private partnerships are common, for example, EU–Ghana agribusiness platforms that connect European investors with local enterprises[13]. In Africa, a growing cohort of "agritech" entrepreneurs leverage ICT (drones, solar-powered cold storage, e-commerce) to solve local challenges, often with support from incubators and impact investors.

Civil Society and Academia

Rural communities themselves – local NGOs, farmer associations, women's and youth groups – are vital innovators and change agents. In the EU, networks like the EU CAP Network (formerly ENRD/EIP-AGRI) link farmers, advisors, researchers and NGOs to exchange knowledge and best practices. African farmers' organizations and cooperatives (e.g., East Africa Farmers Federation, Pan-African Farmers Organization) advocate for farmer-led innovation and organize training and extension services. International NGOs and community-based organizations run projects from introducing climate-smart farming to fostering rural social enterprises. Research institutes and universities in both regions also play a role by developing context-appropriate technologies and providing expertise. Multi-stakeholder partnerships are increasingly common, bringing together policymakers, scientists, farmers, and businesses to co-create solutions[14, 15].

3.4 Major Innovation Themes in Rural Areas

Rural innovation encompasses a wide range of thematic areas (Table 1) designed to tackle both longstanding structural challenges and emerging opportunities. These themes include sustainable agriculture and agri-food systems, climate change adaptation and mitigation, renewable energy deployment, digital connectivity and smart village solutions, circular economy practices, sustainable tourism, and social innovation. By addressing these interconnected domains, rural innovation initiatives seek not only to resolve persistent issues such as depopulation, limited access to services, and economic marginalisation, but also to harness new technological, environmental, and social trends that can drive transformative change in rural communities.

Table 1 Thematic areas of rural innovation

Thematic Area	Key Challenges	Innovation Opportunities
Sustainable agriculture & agri-food systems	Low productivity, climate variability, limited market access, generational relay	Climate-smart farming, precision agriculture, short supply chains, marketing strategies based on ecological practices
Climate change adaptation & mitigation	Increasing extreme weather events, soil degradation, biodiversity loss	Nature-based solutions, carbon farming, resilient land management
Renewable energy deployment	Energy poverty, dependence on fossil fuels	Community-owned renewable projects, bioenergy, off-grid solar/wind
Digital connectivity & smart villages	Poor broadband coverage, digital skills gap	Rural broadband expansion, e-services, IoT for agriculture
Circular economy & resource efficiency	Waste generation, inefficient resource use	Upcycling, rural bioeconomy, sustainable materials
Social innovation & inclusion	Youth outmigration, ageing population, social exclusion	Social enterprises, co-working hubs, participatory governance
Sustainable tourism	Seasonality, environmental pressure, overtourism	Eco-tourism, cultural heritage valorisation, regenerative tourism

Agriculture and Agri-Tech

Agriculture remains the backbone of many rural economies, so innovation here is critical. This includes precision farming (using sensors, GPS, and drones to optimize crop management and enhance resilience of agricultural practices), improved seed varieties and animal breeds, and climate-smart agriculture practices that conserve water and soil. For example, innovators are deploying pest- and drought-tolerant crops and using data analytics to guide farm decisions. The AU's new CAADP strategy emphasizes viewing agriculture as a *holistic agri-food system* encompassing production, processing, distribution and consumption[16] – prompting innovations in agro-processing, storage (to cut post-harvest losses), and nutrition. Technology is increasingly tailored to local needs: "Agricultural systems require innovative technologies adapted to local conditions and evolving climate threats," as African ministers noted[17]. In the EU, agri-tech is advanced by research under Horizon Europe and by on-farm pilots (e.g. digital tools that help European farmers reduce fertilizer or use precision irrigation for sustainability).

Digital Transformation

Bridging the digital divide is a central theme in rural innovation. Expanding rural broadband and mobile coverage unlocks a host of opportunities: e-learning for remote schools, telemedicine in isolated areas, e-government services for villagers, and online platforms that connect enterpreneurs to markets. Both the EU and the AU have strategies to boost rural connectivity (the EU's Broadband for Rural Europe targets and the AU's Digital Transformation Strategy 2020–2030 for Africa). Digital agriculture is a standout trend – from mobile advisory services (weather, agronomic tips via SMS) to e-wallets and digital payments that include farmers in the financial system. In West Africa, for instance, digital platforms have dramatically improved farmers' access to information, inputs and buyers. Côte d'Ivoire's e-agriculture initiative connected over 220,000 rural people to the internet and helped 400,000+ farmers gain market access through an online marketplace[18]. Similarly, a Benin rural digitization project has reached 100,000 farmers with services like crop advisory apps and machinery-sharing platforms[19]. In both Europe and Africa, smart village pilots demonstrate how digital tools (community Wi-Fi, e-commerce hubs, smart energy grids) can transform rural quality of life.

Sustainability and Green Economy

Rural regions are on the frontlines of environmental sustainability. Innovation themes here include renewable energy (solar, wind, bioenergy installations in villages), sustainable forestry, and conservation of ecosystems that rural communities rely on. The circular economy model is being applied in rural contexts – for example, turning agricultural waste into biofuels or fertilizer, promoting recycling and local value addition. The African Development Bank has launched an *AfriCircular* innovation program to fund circular economy entrepreneurs in agriculture and other sectors[20]. In the EU, many rural areas are piloting bioeconomy projects (e.g. converting farm residues to biogas) and sustainable tourism systems (environmentally, economically and socially) as income sources. While eco-tourism has traditionally been promoted as a responsible travel model, today's challenge is to move beyond this "old concept" and create destinations that are fully sustainable. This requires an integrated approach that combines environmental sustainability—through effective resource management, biodiversity protection, and low-impact mobility—with economic sustainability, by fostering short supply chains, supporting local enterprises, and reducing dependence on a single tourism type or season. At the same time, social and cultural sustainability must be ensured by actively involving local communities, enhancing cultural and natural heritage, and strengthening skills and capacities to support long-term development. Climate change adaptation is another urgent focus: innovations in drought insurance, climate-resilient crops, and community-led resource management are spreading. Notably, Africa hosts 9 of the 10 countries most vulnerable to climate change[21], spurring initiatives in climate-smart farming, reforestation, and early warning systems to build resilience in rural communities.

Social Innovation and Entrepreneurship

Beyond tech and environment, *social innovation* is improving rural livelihoods. This involves new models of organizing and providing services – from cooperative business models empowering farmers, to social enterprises tackling rural healthcare, education, or gender gaps. For example, in many African countries, young graduates are forming social enterprises that train rural youth in ICT or that connect small farmers to urban consumers for fair trade. In Europe, social innovation in rural areas often takes the shape of community cooperatives (for renewable energy, community-supported agriculture, etc.) and multi-service hubs that ensure villagers can access childcare, finance, or cultural activities. Youth and women's empowerment is a common and crucial thread: programs encourage youth-led startups in agribusiness (as seen with Tanzania's "Building a Better Tomorrow" agripreneur initiative[22]) and support women's

collectives in food processing or crafts. These efforts help revitalize rural regions by creating jobs and fostering inclusion. Importantly, many innovations are low-tech or knowledge-based – e.g. new farming techniques, cooperative structures, or cultural initiatives – not just high-tech interventions.

Circular and Regenerative Economies

Rural areas are diversifying through regenerative and circular economy opportunities. This ranges from agritourism and cultural heritage projects (leveraging local traditions, cuisine, crafts) to renewable energy farms and eco-industries. In the EU, for instance, some depopulating villages have reinvented themselves as tourist destinations or craft hubs with the help of EU LEADER funding. In Africa, initiatives like farm-to-fashion value chains (turning cotton grown by local farmers into finished textiles by local artisans) illustrate circular principles and keep more value in rural communities. Embracing circular economy approaches not only reduces waste but also generates new enterprises in composting, sustainable packaging, bio-based products, etc., which can thrive in rural settings with proper training and market links.

3.5 Emerging Trends and Best Practices in Rural Innovation

Across both the EU and Africa, a number of emerging trends and early success stories demonstrate the growing momentum of rural innovation, while also revealing the persistent challenges that must be addressed to achieve long-term impact. These developments reflect the increasing adoption of digital technologies, the mainstreaming of climate-smart practices, the rise of community-driven renewable energy projects, and the strengthening of multi-actor partnerships. At the same time, they underscore continuing barriers such as limited infrastructures, skills gaps, funding constraints, and policies misalignments that hinder the scaling and uptake of successful initiatives.

Key Emerging Trends and Early Successes in EU–AU Rural Innovation

- **Digitalisation of rural economies** – Expansion of broadband and mobile connectivity enabling e-services, precision agriculture, and digital marketplaces.
- **Climate-smart and regenerative practices** – Adoption of soil restoration, agroforestry, and water-efficient farming methods to increase resilience and productivity.
- **Community-led renewable energy** – Growth of cooperative solar, wind, and bioenergy projects reducing energy poverty and carbon emissions.
- **Circular and bio-based rural economies** – Initiatives turning agricultural by-products and waste into marketable goods and renewable materials.
- **Smart village models** – Integrated approaches combining infrastructure, services, and innovation hubs to revitalise rural communities.
- **Strengthened multi-actor networks** – Partnerships linking local communities, researchers, policymakers, and businesses to co-create solutions.

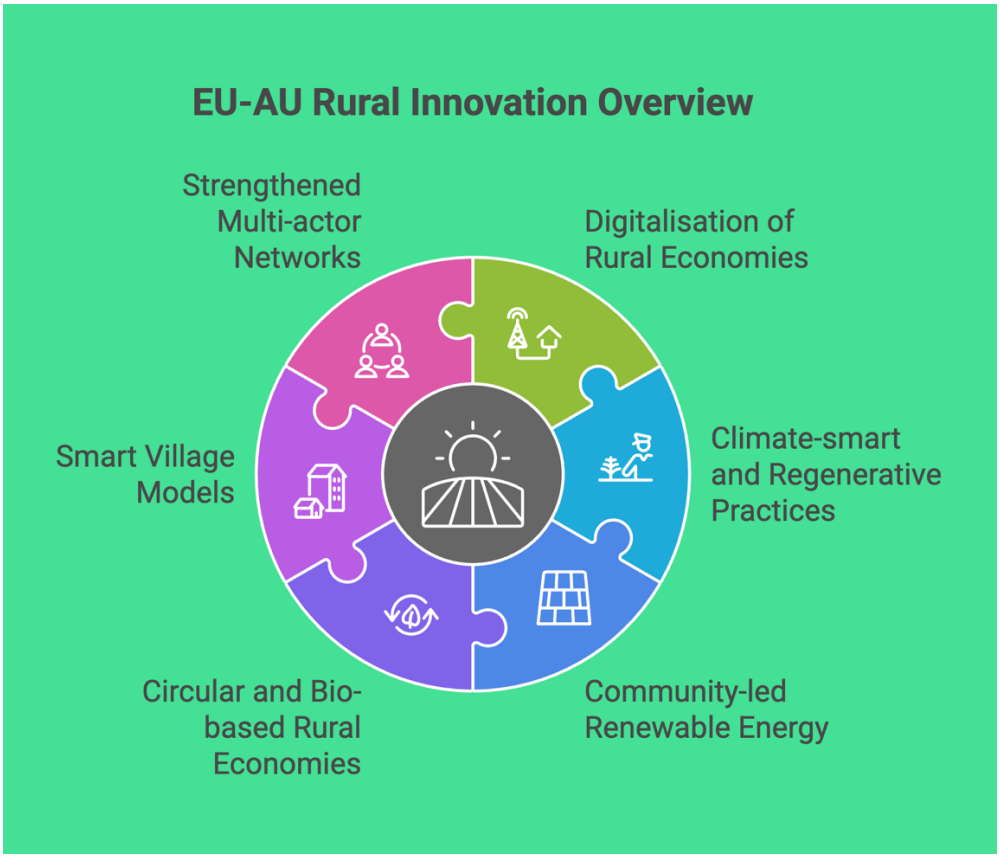


Figure 1 EU – AU Rural innovetion Overview

These trends illustrate (Figure 1) that, while the rural innovation landscape is gaining traction in both regions, sustained investment, capacity building, and supportive policy frameworks remain essential to scale up impact and ensure inclusivity.

"Smart" Rural Communities

A notable trend in Europe is the rise of *Smart Villages*. These are communities that develop innovative solutions to local problems by mobilizing digital tools and multi-sectoral partnerships. For example, EU villages have experimented with innovative mobility services (ridesharing apps for areas with no public transport), telemedicine clinics, and energy cooperatives for off-grid renewable power. The EU's Rural Action Plan and CAP Strategic Plans support such pilots, and several Member States have integrated Smart Village strategies into their rural development programs[23]. This community-driven approach is a best practice showing how rural residents can leverage innovation to improve services and the attractiveness of their area. Early evidence indicates that innovative village projects help reduce the rural digital gap and stimulate local entrepreneurship, though scaling them up remains a task for the coming years.

Digital Services and Market Access

In Africa, some of the most celebrated success stories involve digital platforms that overcome traditional rural barriers. Mobile banking and e-payment systems (like M-Pesa in East Africa) have given millions of

rural people access to financial services for the first time. Likewise, agri-market platforms and mobile apps are helping farmers get better prices and reduce middlemen. The Côte d'Ivoire e-Agriculture project, for instance, created a digital marketplace (*Agristore*) that benefited over 400,000 farmers by connecting them with buyers and real-time market info. It also linked thousands of previously unbanked farmers to mobile money services[24]. In Cameroon, an electronic voucher system for input subsidies (seeds, fertilizer) has been piloted, reaching thousands of producers who can now obtain farm inputs more efficiently via mobile phones[25]. These examples demonstrate how embracing ICT can rapidly boost productivity and inclusion. However, they also underscore challenges like the need for reliable rural internet, digital literacy training for farmers, and sustainable business models for these platforms.

Climate and Resilience Innovations

Given increasing climate risks, both continents are seeing grassroots innovation to build resilience. In Europe, farmers are adopting regenerative agriculture practices (soil conservation, agroforestry) with support from EU innovation grants, improving both environmental outcomes and farm profitability. Community energy projects (like cooperatively owned wind turbines in rural Germany, or solar micro-grids in Greek islands) are empowering villages to generate income and meet energy needs sustainably. In Africa, climate adaptation innovations are often born of necessity – e.g., farmers in the Sahel using improved rainwater harvesting and drought-resistant crops to cope with erratic rains, or pastoralist communities in East Africa using mobile apps to find water and pasture based on satellite data. A growing best practice is the integration of indigenous knowledge with modern science: local farming wisdom (crop diversification, seasonal indicators) is being combined with climate forecasts and agro-advisories to significant effect. Scaling these practices will require supportive policies and funding, especially to reach the most vulnerable smallholders.

Social Enterprises and Inclusive Value Chains

Another emerging trend is the proliferation of social entrepreneurs focusing on rural challenges. In the EU, social farms and care farming (farms providing social services or therapy) show how rural innovation can merge social inclusion with economic activity. Several EU regions have also pioneered short supply chains (farm-to-fork schemes, farmers' markets, direct online sales) that give producers a better share of value and satisfy consumers' demand for local, sustainable food – a model now being shared as a best practice across the EU. In Africa, youth-led agribusiness incubators are springing up (supported by programs like the AfDB's ENABLE Youth and others), nurturing a new generation of rural innovators. There are success stories of cooperatives run by women, such as shea butter producer cooperatives in West Africa that have tapped into global cosmetics markets with support for branding and quality improvement. These inclusive value-chain innovations improve incomes at the community level and empower underrepresented groups. The challenge remains to connect many more rural entrepreneurs to mentorship, markets, and finance. Initiatives like FO4ACP (linking farmers' organizations with capacity-building and credit) and AU's emphasis on engaging youth and women in the CAADP agenda are steps in the right direction.

Challenges and Ongoing Gaps

Despite positive trends, both the EU and AU face persistent challenges in their rural innovation landscapes. Infrastructure deficits (from roads and electricity in many African villages, to broadband

internet in remote EU regions) continue to limit the reach of innovation. Demographic pressures are a concern: European rural areas struggle with aging populations and youth out-migration, while African rural communities must create millions of jobs for a fast-growing, predominantly young population to alleviate poverty and rapid urbanization. Policy coordination is another issue – innovation efforts can be fragmented across sectors. The need for better integration of agriculture, environment, education, and ICT policies for rural areas is recognized in theory but is hard to achieve in practice. Additionally, access to finance remains tough for many rural innovators (a small farmer or start-up in a village often lacks collateral or investors). Finally, capacity building is crucial – farmers and rural SMEs need knowledge and training to adopt new technologies or business models. Both regions are addressing these challenges: the EU through its Rural Pact (a stakeholder network to implement the 2040 Vision) and the AU through the "Decade of Agricultural Transformation" now underway (2025–2035), which calls for accelerated action and resource mobilization to support rural innovation at scale[26].

3.6 EU-AU Cooperation on Rural Development and Innovation

Recognising that many rural challenges and opportunities are shared across continents, the European Union (EU) and African Union (AU) have committed to a strong cooperation agenda on rural innovation and development. This partnership builds on mutual priorities, shared learning, and joint actions to address pressing issues such as food security, climate resilience, and digital inclusion.

Joint Policy Initiatives

A milestone in collaboration was the Africa-Europe Rural Transformation Action Agenda endorsed at the 2019 AU-EU agriculture ministerial conference[27]. This agenda, informed by the Task Force Rural Africa's recommendations, laid out nine priority action areas to strengthen Africa's rural areas and agri-food systems. It includes establishing AU-EU agri-food platforms (e.g., a pilot platform in Ghana to link EU and African agribusiness investors and facilitate policy dialogue)[28], and supporting Africa's own frameworks like the continental strategy for geographical indications (GIs) to help rural producers gain value from unique local products[29]. These policy dialogues and action plans ensure high-level commitment and alignment of strategies between the two unions.

Research and Innovation Partnerships

Science and innovation cooperation is a cornerstone of EU-AU relations. The High-Level Policy Dialogue on Science, Technology and Innovation formulates long-term R&I priorities for the partnership[30]. Under this umbrella, the AU-EU Innovation Agenda (2023) has been launched to drive co-funded research in areas like food security, climate resilience, digital economy, and health, aiming to translate R&I investments into tangible products, services, and jobs in rural areas of both continents[31]. Concretely, the Food and Nutrition Security and Sustainable Agriculture (FNSSA) partnership has pooled European and African researchers to tackle common challenges in farming and food systems[32]. The EU's DeSIRA program (mentioned above) and dozens of Horizon Europe projects (including RURALITIES itself) enable African and European experts to co-develop innovations, for example, improving crop varieties, or developing digital advisory tools for farmers, and pilot them in real communities. By 2023, Horizon Europe had dedicated ~€650 million to Africa-related R&I topics, reflecting this deepening collaboration. Such efforts not only generate new technologies but also strengthen human networks and knowledge exchange between universities, research centers, and extension services across the two continents.

Capacity Building and Exchanges

The EU and AU are investing in people-to-people exchanges to share best practices in rural innovation. One flagship is the Farmers' Organizations for ACP (FO4ACP) program – a multi-year EU-supported initiative working with African farmers' unions to improve their governance, integrate farmers into value chains, and amplify their voice in policy debates[33]. This includes farmer-to-farmer exchange visits and training that allow African and European farmers to learn from each other's experiences. Another example is the OVERSTEP project, an AU-EU alliance to exchange best practices in vocational education and training for rural sectors (agriculture, agri-food processing, forestry, etc.), including mobility schemes for students and teachers between Europe and Africa[34]. These exchanges build the skills of rural youth and professionals, fostering an international community of practice on rural innovation. There is also growing cooperation on financing mechanisms – for instance, the EU is supporting the AU to explore innovative financing for agripreneurs and rural SMEs (blending grants with loans, guarantee funds, etc., often in partnership with entities like the AfDB). Through the Africa-Europe Alliance and programs like Erasmus+ and Erasmus for Young Entrepreneurs, young innovators from rural areas are benefiting from mentorship, internships, and business networking across regions. Here ERASMUS VET Capacity Building projects, the overwhelming majority of these projects focus on sustainable agriculture.

Potential New Frontiers

As the EU-AU partnership evolves, additional areas are ripe for collaboration. Digital connectivity is one of the key initiatives under the EU's Global Gateway investment strategy, which aims to extend internet and renewable energy infrastructure in African rural areas, potentially driving transformative digital innovation. Climate action is another: joint programs to finance climate adaptation in African rural communities (such as the Africa Adaptation Acceleration Program, backed by the AfDB and global partners) align with EU climate finance commitments. There is also scope for closer cooperation on rural entrepreneurship and job creation, linking EU's experience with LEADER community-led local development with Africa's focus on empowering youth and women entrepreneurs. Both unions have expressed interest in strengthening city-to-village and inter-regional partnerships – for example, twinning EU rural regions with counterparts in Africa to directly share knowledge on initiatives such as smart village planning, cooperative development, or sustainable tourism. By leveraging each other's strengths – the EU's technical and financial resources and the AU's local knowledge and youthful demographic – such cooperation can significantly accelerate rural innovation.

The rural innovation landscapes of Europe and Africa are dynamic and increasingly interconnected. Strong policy frameworks — such as the EU's Common Agricultural Policy (CAP) and the African Union's Agenda 2063 and Comprehensive Africa Agriculture Development Programme (CAADP) — provide a solid foundation for progress. A wide range of funding instruments and stakeholder-led initiatives are driving tangible change on the ground. Key innovation domains, from digital agriculture and agri-tech to sustainability solutions and social enterprises, are already delivering promising results in tackling rural challenges.

However, achieving the shared vision of vibrant, inclusive, and sustainable rural areas across both continents will require sustained efforts to scale up best practices, close critical gaps in infrastructures, skills, funding, and strengthen EU–AU cooperation. The early successes highlighted in this report — whether a smart village model in Europe or a mobile agri-services platform in Africa — offer valuable lessons for policymakers, practitioners, and communities. By leveraging these experiences and fostering

deeper cross-regional collaboration, the EU and AU can jointly create the conditions for rural communities to prosper in the decades ahead.[35]

4. SIMSES-BASED POLICY INSIGHTS AND BEST PRACTICES (EU)

This section presents a set of concise policy briefs addressing key challenges in rural development, accompanied by relevant policy framework options and evidence-based Policy Use-Cases (best practices) to meet these needs. The content draws on co-created insights from the RURALITIES project, developed through the partnership and informed by pilot regions in Europe. It is intended for government policymakers, regional authorities, and other stakeholders engaged in shaping and implementing rural policy.

Each policy brief focuses on a specific thematic area — ranging from sustainable tourism and agriculture to rural transport and cultural heritage — outlining the nature of the challenge, the policy context, and practical responses that have proven effective in similar settings. The recommended measures are grounded in real-world experience, ensuring that they are both context-sensitive and adaptable for wider application across diverse rural environments.

4.1 Sustainable Tourism & Agriculture in Rural Regions (Italy, Spain, Romania)

Many rural regions in Europe face a complex interplay of demographic decline, economic transition, and environmental pressures. In areas such as Italy's Marche (Pesaro-Urbino) and Veneto (Seven Municipalities Plateau), Spain's Asturias, and Romania's Iași (Siret–Moldova region), the central challenge lies in positioning sustainable tourism and sustainable agriculture as complementary pillars of rural innovation. These territories are characterised by rich cultural landscapes, strong local identities, and long-standing agricultural traditions. However, they also contend with population ageing, youth outmigration, and the urgent need to modernise their economies while preserving environmental and cultural assets. Harnessing their unique heritage, natural resources, and agri-food potential requires integrated strategies that align economic diversification with sustainability objectives, ensuring long-term resilience and competitiveness.[36, 37].

4.1.2 Key Challenges

Demographic Decline & Youth Exodus

Rural communities see youth outmigration and aging populations. For instance, Asturias has Europe's lowest fertility and one of the highest mortality rates, with immigrants making up only 3.7% – signaling difficulty in demographic renewal. Similarly, the Seven Municipalities Plateau in Italy lost 4% of its population from 2015–2021, reflecting broader Alpine depopulation[38]. Fewer young farmers and entrepreneurs remain, threatening the continuity of local agriculture and the preservation of cultural heritage.

Economic Viability of Farming

Small farms and traditional agriculture struggle to stay competitive. Marche's Pesaro-Urbino province experienced a mass exodus from agriculture in the past decades. Although agritourism and organic farming emerged as new opportunities[39, 40], many farm operations need support to modernize. In Iași, Romania, the local economy is dominated by micro-farms (wine, fruit) and a handful of processors[41]. These enterprises face limited access to capital and technology, hindering value-added production and income diversification.

Sustainable Tourism Gaps

Rural areas often possess high tourism potential (nature, culture, food) but face underdeveloped tourism infrastructure or risks of unsustainable practices. Pesaro-Urbino, for example, attracts visitors for its Adriatic coast and cultural heritage (Renaissance history, gastronomy), yet inland villages need better tourist services to capitalize on this demand[42]. Conversely, where tourism is growing, there's a need to manage its sustainably to avoid environmental degradation or cultural commodification, together with prevent overtourism Stakeholder surveys in Slovenia's Posavje region (a similar context) found that current tourism around cultural heritage is not sufficiently sustainable and requires improvements[43].

Environmental and Climate Pressures

Climate change and environmental degradation hit rural economies hard. In Siret-Moldova (Iași), soil erosion, groundwater pollution, and extreme weather (hailstorms) already pose challenges to agriculture[44]. The storm Vaia in 2019 hit the Seven Municipalities Plateau - among other areas - changing likely altering the woods in the area permanently. Upholding biodiversity and sustainable land use is essential, especially in areas with Natura 2000 protected sites and rich ecosystems[45]. Balancing increased tourism or farm intensification with conservation is a delicate task.

Infrastructure & Connectivity

Remoteness and poor infrastructure impede rural development. The Iași pilot area notes that better road infrastructure is crucial for economic and social growth[46], as farmers need access to markets and tourists need access to sites. Digital connectivity is also an issue: without broadband and modern services, young entrepreneurs are less inclined to stay or innovate in rural areas.

4.1.3 Policy Framework Options

Empowering Local Action (LEADER)

All these regions leverage the LEADER approach through Local Action Groups (LAGs) to drive bottom-up rural development. Strengthening LAGs can help address multi-faceted challenges by funding community-led projects in sustainable tourism, SMEs support, and skills development. For example, the Montefeltro Sviluppo LAG in Marche coordinates efforts in rural tourism promotion, vocational training, and farm diversification[47]. Continued support for LEADER in the EU (and community-driven development analogues in AU) offers a framework to empower local public and private stakeholders in crafting sustainable tourism and agriculture initiatives.

Common Agricultural Policy (CAP) Instruments

Mobilizing CAP Rural Development Programs (RDP) to modernize farms and encourage agritourism is vital. The Marche Region illustrates this by allocating €40 million in RDP funds (2023–2027) to help 458 farms invest in modernization, environmental sustainability, and animal welfare[48, 49]. Such measures improve farm competitiveness *and* sustainability, aligning with EU Green Deal goals. Policy options include grants for young farmers, subsidies for organic and climate-resilient practices, and agri-environment schemes that reward farmers who provide tourism services or preserve landscape amenities.

Integrated Sustainable Tourism Strategies

Policymakers should develop rural tourism plans that align with sustainability criteria – preserving cultural heritage, benefiting local communities, and managing visitors' impact. This can involve certification schemes (e.g., Italy's national *"Agriturismo Italia"* trademark introduced in 2013) to ensure quality standards[50], and incentives for off-season or "slow" tourism (like pilgrimage trails and farm stays). Coordination between tourism boards, agricultural departments, and cultural heritage agencies is key for a unified strategy. The Romea Strata initiative in Veneto, led by Fondazione Homo Viator, exemplifies how supporting pilgrimage routes and slow cultural tourism can revitalize rural areas while preserving heritage and environment[51, 52].

Innovation and Training Programs

Building rural innovation capacity is a policy must. This includes digitalization in agriculture (precision farming, direct e-marketing for farm products) and upskilling residents for hospitality and agri-food processing. In Asturias, for instance, regional policy backed agrifood innovation clusters (like ASINCAR) and ICT centers to enhance the competitiveness of local SMEs[53, 54]. Sharing knowledge through rural innovation hubs or farm demo networks can accelerate the adoption of sustainable practices across the EU and AU. EU funding (Horizon Europe, Erasmus+ for young farmer exchanges, etc.) can support these knowledge transfers.

Youth Retention and Entrepreneurship Schemes

Tailored policy interventions to make rural living attractive for youth are critical. Options include startup grants or tax incentives for rural businesses (agro-tourism enterprises, craft food producers), improving rural education and healthcare services, and promoting social enterprises. Romania's experience suggests that supporting youth entrepreneurship and local SMEs alongside infrastructure investment helps combat depopulation. The African Union, facing similar rural youth challenges, could adapt such EU schemes to empower young agri-preneurs and tourism operators in rural communities.

4.1.4 Recommendations & Best Practices

Foster Agritourism as a Dual Benefit Model

Agritourism has proven to boost farm incomes and enrich the rural tourism offer. Italy's agritourism framework (anchored by Law 96/2006) is a best-practice example: it legally integrates tourism with

farming, ensuring farm stays and local food experiences remain an extension of farming rather than a replacement[55, 56]. This model, supported by a national quality trademark and classification system, has helped make agritourism a pillar of sustainable rural growth in Italy. Policymakers elsewhere should consider similar regulations that protect genuine farm tourism and provide training for farmers to host guests. *Use-Case:* In Le Marche, long-known for organic farming, many farms have diversified into agritourism since the 1970s, offering lodging and farm-to-table dining – preserving rural lifestyles and attracting urban visitors.

Leverage Cultural Heritage for Niche Tourism

Rural cultural and natural heritage can differentiate regions in the tourism market. A notable use case is Posavje, Slovenia's "e-Castles" digital heritage project, which blends technology with tradition. The Regional Development Agency Posavje brought together castle managers and tech firms to create 3D virtual tours and holographic displays of local castles, housed at a central interpretation center[57, 58]. This innovative approach has boosted interest in the area's history and motivated tourists to explore physical sites. Policymakers should support such creative digitalization of heritage (through culture grants or tourism funds) as a means of sustainable tourism – it attracts visitors in an educational way and spreads visitor traffic across multiple sites.

Community-Led Tourism Governance

Encourage the formation of local tourism cooperatives or networks (public-private partnerships) to manage tourism growth. For example, in Pesaro-Urbino (Marche), the Local Action Group not only funds projects but *acts as a coordinator* among municipalities, businesses, and cultural institutions. This helps align tourism promotion with rural development goals (e.g., organizing agri-food festivals, developing hiking trails linking villages). Such governance models ensure local buy-in and equitable distribution of tourism benefits. They could be replicated in African Union contexts where community conservancies and cultural villages play a pivotal role in tourism.

Environmental Safeguards and Climate Adaptation

Integrate sustainability standards into all rural tourism and farm development projects. Best practices include enforcing environmental impact assessments for new tourist facilities, promoting eco-labels for rural accommodations, and funding nature-based solutions on farms (like hedgerows, agroforestry) that enhance the landscape tourists enjoy. In Romania's Iași region, authorities are urged to address soil erosion and water issues as part of development plans – a reminder that agricultural policy and environmental policy must go hand-in-hand. The EU's CAP eco-schemes and the African Union's climate-smart agriculture initiatives can provide farmers with resources to adopt practices that both improve resilience and maintain the scenic countryside that underpins rural tourism.

Infrastructure and Accessibility Improvements

Lastly, improving connectivity underpins all other efforts. Policymakers should prioritize rural broadband expansion and last-mile transport links to villages. Even small investments, like a shuttle service from a train station to agritourism farms or the creation of cycling paths, can significantly increase tourist footfall

and local mobility. For example, an EU good practice is the use of Demand-Responsive Transport (DRT) systems – on-call mini-buses or vanpools – to serve low-density rural areas, allowing tourists and residents to book rides in advance[59]. Regions across Europe have piloted DRT with success as a cost-effective alternative to fixed bus routes. Adopting such innovative mobility solutions in rural areas (with supportive policy and possibly subsidies) can reduce isolation, enabling travelers to reach remote agri-tourism sites and villagers to access services, thereby intertwining transport and tourism policy for rural benefit.

4.2 Sustainable Transport in Remote Rural Areas (Scotland's Highlands & Islands)

The Scottish Highlands and Islands, like many rural and island regions across Europe and Africa, face pronounced transport and mobility challenges. Spanning almost half of Scotland's landmass yet home to less than 10% of its population, the region is characterised by dispersed settlements, rugged and often inaccessible terrain, and limited public transportation options. These factors create barriers to economic activity, access to services, and social inclusion, while also posing sustainability concerns linked to reliance on private vehicles.

This policy brief focuses on sustainable rural mobility — ensuring that remote and sparsely populated communities remain connected in ways that foster economic development and social cohesion, without compromising environmental objectives. The recommendations draw on the experience of the Highlands and Islands Transport Partnership (HITRANS), highlighting approaches such as integrated transport planning, low-carbon mobility solutions, and demand-responsive transport services. While rooted in the Scottish context, these insights offer valuable lessons for rural and island regions globally, particularly in addressing the dual imperative of connectivity and sustainability.

4.2.1 Key Challenges

Geographic Isolation and Low Density

Settlements are spread across vast distances, including remote mainland areas and numerous islands (some with <100 residents)[60]. This ultra-low density makes conventional public transport financially unviable in many areas; a single bus route might serve only a handful of hamlets over long distances. The terrain (mountains, lochs, sea channels) means routes are often circuitous. Some island communities depend on ferries or small aircraft, adding complexity and vulnerability to weather disruptions.

Transport Poverty and Social Exclusion

A significant portion of the rural population is at risk of "transport poverty," meaning they lack affordable, accessible transportation for daily needs. In the Highlands & Islands region, fully 58% of local areas are classified at high risk of transport poverty, far above the national average (38%)[61]**.** Limited public transit, coupled with long distances and high fuel costs, forces many households to rely on private cars – which not everyone can afford or drive (especially the elderly, youth, or low-income residents). Without adequate transport, people face isolation, difficulty accessing education, jobs, healthcare, and other services.

Aging Population & Service Provision

Rural Scotland's demographics tend older (23% aged 65+ in HITRANS vs 19% nationally), which intensifies mobility needs for healthcare and social activities while reducing the pool of drivers. As populations age and sometimes decline, maintaining regular transport services (like daily buses) becomes harder to justify economically, leading to cuts that further disadvantage those remaining. This creates a vicious cycle: poor transport leads to out-migration of youth, which then leads to even sparser demand.

Economic Impact and Opportunity Cost

Transport shortcomings directly affect rural economies. Businesses face higher costs to move goods, and workers have trouble commuting, limiting job opportunities. The Highlands & Islands rely on sectors like tourism and renewable energy, which need reliable transport links for success. (Notably, many jobs in this region are tied to tourism[62] – if tourists cannot travel comfortably, that income is at risk.) A recognised policy goal is that improving transport is essential to raising incomes and closing the prosperity gap with the rest of the country**.** Moreover, COVID-19 exacerbated problems by reducing public transport usage and revenues, leading to service cutbacks.

Environmental Sustainability

The region's environment is pristine and highly valued. There is a dual challenge of reducing transport emissions (in line with climate targets) while extending networks. More car traffic or additional ferry runs can increase carbon emissions and pollution, yet solutions like road building or cheap flights run counter to climate goals. The Highlands & Islands exemplify this tension: developing the transport network "*without compromising our pristine environment*" is paramount[63]. Similar concerns apply in African rural contexts where biodiversity hotspots need protection from the impacts of new roads or mass motorization.

4.2.2 Policy Framework Options

Rural Mobility Strategies & Partnerships

A dedicated rural transport strategy is vital. Scotland addressed this through HITRANS – a Regional Transport Partnership uniting local councils and government to plan services across the Highlands & Islands[64]. Such partnerships provide an institutional framework to coordinate solutions (e.g., synchronized ferry and bus timetables) and advocate for rural needs at higher levels. Policymakers in other regions should form similar bodies or task forces focusing on rural and remote mobility, ensuring that unique local voices (islanders, remote villagers) shape the strategy. In the EU, the concept of Sustainable Urban Mobility Plans (SUMPs) is being extended to wider areas; wider-area mobility plans for mixed urban-rural regions can fill planning gaps[65].

Investing in Multi-Modal Connectivity

Governments must invest in a mix of transport modes suited to rural contexts. This includes maintaining and upgrading roads (still the backbone for remote areas) for safety and efficiency, subsidizing lifeline ferry and air services to islands, and developing rail where feasible. For example, the Scottish Government supports discounted ferry fares and Public Service Obligations for regional flights to ensure remote communities remain connected. Policy frameworks like the EU's Rural Connectivity goals or AU's transport corridors program should incorporate funding streams specifically earmarked for *remote region connectivity*, acknowledging that normal cost-benefit criteria need adjustment for social value.

Demand-Responsive and Community Transport

Where regular bus lines are unsustainable, Demand-Responsive Transport (DRT) offers a flexible solution. DRT systems use smaller vehicles and operate on-demand (or on flexible routes/timetables) to match actual user needs. The EU policy brief on DRT notes it as a key innovation for rural mobility, with several regions piloting apps and call centers for booking shared rides. Policymakers should create enabling regulations for DRT (allowing funding for non-fixed routes) and support public-private partnerships to deploy these services. *Best practice:* In many Scottish villages, community-run minibuses or volunteer driver schemes fill gaps left by commercial operators, often funded by local councils or charities. Formalizing support for community transport (grants for vehicles, fuel subsidies, driver training programs) can significantly expand mobility for vulnerable groups.

Integrated Transport Services

Improving coordination between existing transport modes can yield quick wins. Policy measures like integrated ticketing (one ticket covers bus + ferry + train), unified timetables, and central travel information platforms make journeys smoother and more attractive. In the Highlands, a traveler might need to use a ferry, then a bus, then a train – if each leg is operated by different entities, misaligned schedules or separate fares can be a deterrent. Government can mandate or incentivize providers to collaborate (e.g., through regional transport authorities). The "joined-up services" approach directly tackles one cited issue: currently, the lack of synchronization and long waits hinder accessibility[66]. By ensuring that, say, the ferry arrival meets a waiting bus, policy can dramatically improve the user experience without huge infrastructure costs.

Low-Carbon Rural Transport Initiatives

Aligning rural transport with sustainability, authorities should promote low-carbon solutions tailored to rural settings. Options include electric vehicle (EV) charging networks across rural highways and villages (to encourage uptake of EVs for private and commercial use), transitioning public fleets (buses, postal vans) to electric or hydrogen, and even exploring innovative modes like e-bikes or electric community car-share programs for short trips. In the Highlands & Islands, with ample renewable energy resources (wind, wave, tidal), there's an opportunity to power electric transport with green energy generated locally. EU Green Deal funds and various national grants (e.g., for charging points) can be leveraged. For African rural areas, off-grid solar charging stations for e-motorbikes or support for bicycle transport could be analogous sustainable measures.

4.2.3 Recommendations & Best Practices

"Mobility as a Service" (MaaS) for Rural Areas

Adopting MaaS principles can revolutionize rural transit. This means using digital platforms to allow residents to plan and pay for door-to-door trips across multiple modes. A recent peer review in Alentejo, Portugal, focused on MaaS for very low-density areas and provided key learnings on tailoring such systems[67]. *Use-case:* A smartphone app could let a user in a Highland village book a DRT minibus to the nearest town, show onward train times, and reserve a seat – all in one go. Estonia's nationwide MaaS and Finland's rural MaaS pilots have shown improved user satisfaction and higher ridership where implemented. Policymakers should fund pilot projects for rural MaaS and scale up successful models, ensuring solutions are inclusive for those without smartphones via call-in options.

Targeted Fare Subsidies and Schemes

To address transport poverty, governments should consider subsidized fare schemes for rural residents. Scotland has implemented free bus travel for youth under 22 and seniors nationwide; extending such schemes specifically in remote regions (for inter-island ferries or rail) can reduce cost barriers. Another best practice is voucher programs: for example, some UK counties provided taxi vouchers for isolated elderly residents to reach medical appointments. In Australia's rural outback, authorities have funded "bush buses" and fuel vouchers to ensure mobility for indigenous communities. These targeted interventions, while small in budget impact, yield high social returns.

Infrastructure Maintenance & Innovation

Maintaining basic infrastructure (roads, bridges, piers) in rural areas is often underfunded. Policymakers must not neglect these in national budgets – a well-maintained rural road network is critical for the safety and efficiency of travel, including for emergency services. Innovative techniques like using recycled materials in rural road resurfacing (a practice seen in some EU projects) can cut costs and emissions. Additionally, investment in micro-infrastructure yields benefits: e.g., secure bicycle parking at bus stops or solar lighting at rural transit stops improves usability. *Best practice:* Ireland's Local Improvement Scheme provides funds to upgrade small private roads and lanes that multiple families use, acknowledging that in rural areas, even non-public roads are key for connectivity.

Community Engagement and Coproduction

Successful rural transport schemes often arise from community initiatives. Policymakers should facilitate community input in transport planning through surveys, public meetings, and pilot programs where locals co-design routes or services. In the Highlands & Islands, HITRANS engages communities to identify needs, such as which new bus routes might attract riders or which ferry schedules are most critical[68]. This co-creation ensures that limited resources target the most valued services. In African contexts, involving local communities in planning new transport links (like rural feeder roads or boat services) helps ensure cultural and practical suitability, and can provide local employment (e.g., road maintenance by village teams).

Monitor and Adapt

Establish metrics for rural mobility success beyond simple cost recovery. Governments should monitor indicators like accessibility (population within X distance of public transport), user satisfaction, and social outcomes (e.g., school attendance or clinic visits facilitated by new transport). Scotland's experience during COVID-19 – where unemployment spiked more in HITRANS areas, partly due to transport cuts – demonstrates the need for resilience. Regularly revisiting transport plans to adapt to demographic or economic changes will keep services relevant. Funding research and exchanges (such as Interreg Europe's knowledge sharing on rural mobility[69, 70]) allows regions to learn from each other's successes and setbacks, continually improving their approach to sustainable rural transport.

4.3 Cultural Heritage as a Driver for Rural Development (Slovenia's Posavje Region)

Rural areas endowed with rich cultural and natural heritage hold a distinctive asset for driving sustainable development. The Posavje region of Slovenia (Lower Sava) is a compelling example of this potential. Predominantly rural and located along a cross-border corridor, Posavje is renowned for its castles, museums, traditional crafts, and protected landscapes. These assets contribute to a strong sense of identity and offer significant opportunities for tourism, cultural industries, and place-based innovation.

However, like many rural regions in Europe, Posavje faces persistent challenges, including population decline, workforce shortages in key sectors, and the need to modernise its economic base. This policy brief explores how cultural heritage — from the preservation of historic castles to the revitalisation of traditional crafts — can be strategically leveraged to address these challenges. It outlines policy measures and best practices for heritage-led rural innovation, focusing on how such approaches can stimulate economic diversification, attract and retain skilled residents, and strengthen community cohesion. While grounded in the European experience, the recommendations also highlight opportunities for adaptation in African rural contexts, where cultural and natural heritage can similarly serve as catalysts for inclusive and sustainable rural development.

4.3.1 Key Challenges

Underutilized Heritage Potential

Posavje boasts numerous historical sites (castles such as Brežice, Rajhenburg, etc., and cultural institutions like the Posavje Museum)[71]. Yet the sustainability of this heritage is in question if visitor numbers and community engagement remain suboptimal. Research indicates that tourism centered on cultural and historical heritage in Posavje is not yet at a satisfactory level of sustainability – suggesting that heritage sites could be better promoted and managed to bring more benefit to the region. Many rural heritage sites, whether in Slovenia or Africa, suffer from low visibility, limited interpretation, and insufficient tourist services (guides, multilingual info, amenities).

Preservation Costs and Capacity

Maintaining historical buildings and landscapes requires resources and expertise, often scarce in rural municipalities. Posavje's vision "Posavje 2030" to remain green and culturally vibrant will demand constant upkeep of castles, churches, and natural parks. Smaller communities struggle to fund

restorations or even basic maintenance. There's also a skills gap, as specialized restoration experts or museum curators may not live locally. If heritage sites deteriorate, not only is cultural loss at stake, but potential tourism income is lost as well.

Balancing Modern Development with Tradition

Posavje is focusing on expanding industries like energy and logistics and modernizing manufacturing[72]. A challenge is ensuring that this economic growth does not sideline the traditional sectors (agriculture, local crafts, heritage tourism) or harm the rural landscape character. The region has a modest but growing number of organic farms and family farms that uphold traditional land uses[73]. Policymakers face a dual task: create new jobs for the future while *integrating* heritage and sustainability so that modern development reinforces rather than replaces the region's cultural identity.

Community Involvement and Youth

As populations age and young people leave, rural heritage can lose its custodians. In Posavje, many working-age residents commute out for jobs[74], potentially weakening local attachment. If local inhabitants, especially youth, do not see opportunities in heritage (whether as guides, entrepreneurs, or creators of cultural content), these assets might remain untapped. Similarly, in African rural regions, there is sometimes a disconnect between younger generations and traditional knowledge or heritage, threatening continuity. Engaging communities in heritage projects and demonstrating that culture can be a *living*, income-generating part of rural life is a significant challenge.

4.3.2 Policy Framework Options

Heritage-Led Rural Development Strategies

Governments should embed cultural heritage into rural development plans. Slovenia's national rural development and tourism policies increasingly recognize that intangible cultural heritage and local traditions can catalyze sustainable rural tourism[75]. This means not only investing in site restoration but also supporting cultural events, festivals, and creative industries in rural areas. For example, EU Structural Funds have streams for cultural preservation; ensuring rural regions like Posavje get a fair share (through well-crafted project proposals) is important. At the EU level, programs like *LEADER* and *INTERREG* have funded heritage trails, Eco museums, and cross-border cultural routes – policy frameworks should continue and expand these supports. The African Union's Agenda 2063 similarly emphasizes culture and tourism; aligning AU development programs to fund rural heritage projects (e.g., community museums, cultural tourism routes) would mirror the EU approach.

Public-Private Partnerships for Preservation

Encouraging partnerships can alleviate the burden on local governments. In Posavje, the Regional Development Agency acts as a coordinator, bridging municipalities, companies, and institutions[76]. One policy option is to incentivize private investment in heritage through tax credits or co-financing schemes (for instance, a business that sponsors the renovation of a castle wing could receive branding opportunities or fiscal benefits). Another is leveraging tourism revenues for conservation: e.g., a small heritage preservation fee on tickets or accommodations dedicated to a regional heritage fund. Such

frameworks exist in some countries (France's "Heritage Lotto" or Italy's heritage tax incentives) and could be adapted. For African contexts, engaging philanthropies and international organizations in PPPs to restore and utilize heritage (like UNESCO programs) is a viable route.

Digital Innovation and Smart Heritage

Integrating technology with cultural heritage is a forward-looking policy choice. The Posavje "e-Castles" project demonstrates how digitalization (3D models, VR tours) can both preserve heritage digitally and spark new tourism interest. Policies can support digitizing archives, creating virtual reality experiences of remote or fragile sites, and developing mobile apps for self-guided tours. The EU's Digital Agenda and cultural programs provide grants for such innovation; local authorities should be enabled to access these (perhaps through capacity-building in writing grant applications). For example, *use-case:* several European regions have adopted the INNOCASTLE approach – using EU funds to rethink historic castle use by combining tourism, community events, and digital storytelling[77]. Africa too has rich heritage that can be brought to the world via digital means (e.g., virtual tours of UNESCO heritage sites, or apps teaching indigenous knowledge), and AU-EU cooperation could facilitate knowledge transfer in this domain.

Cultural Tourism Marketing and Networks

A coordinated marketing strategy is needed to raise the profile of rural heritage destinations. Policies at the national or regional level can establish cultural routes (e.g., wine routes, castle trails, pilgrimage ways) that bundle small attractions into a larger itinerary. Posavje, for instance, could be promoted as part of a "Slovenian Castles Tour" or a transnational Danube heritage corridor. The Council of Europe's Cultural Routes program provides a framework where local sites gain visibility through thematic networks (be it fortified towns, traditional music, etc.). Policymakers should ensure rural sites are included in such initiatives. Additionally, tourism boards can help with product development – training local guides, creating multilingual materials, and enabling booking systems for rural experiences. A strong example is Italy's use of agritourism networks and "borghi" (historic villages) association to draw tourists beyond the main cities[78]. In Africa, initiatives like community-based tourism associations and cultural village circuits similarly need governmental support to flourish.

Education and Capacity Building in Heritage Management

Sustaining heritage long-term means building local capacity. Policies that encourage youth education in fields like archaeology, conservation, and cultural management – perhaps through scholarships or local university programs – can ensure a pipeline of professionals dedicated to their home regions. The Posavje pilot includes partners like the National Institute of Chemistry and local development agencies[79, 80], indicating a multidisciplinary approach. Broadening this, governments can promote living heritage by supporting elder-youth knowledge transfer programs (for crafts, oral history) and recognizing local artisans (e.g., "master craftsperson" awards). The AU's Continental Education Strategy could incorporate cultural heritage management training as a priority for rural areas.

4.3.3 Recommendations & Best Practices

Posavje's Heritage Digitalization – A Model to Emulate

The *e-Castles of Posavje* initiative is a standout best practice. By creating a shared **i**nterpretation center with holograms and VR of multiple castles, it overcame the limitation of each small site operating in isolation. Visitors get a teaser of all the castles in one place and are inspired to visit them physically. This collaborative model (multiple municipalities and attractions pooling resources) is recommended for regions with dispersed heritage sites. It not only enriches visitor experience but also fosters a sense of collective regional identity. Policymakers elsewhere should support the setup of such multi-site interpretation hubs and digital heritage labs. For example, a cluster of rural museums in West Africa could create a joint digital exhibit to draw tourists to the region, with support from both government and international donors.

Heritage as a Platform for Entrepreneurship

Encourage and incubate small businesses that build on heritage. This includes artisans making traditional products (weaving, pottery, gastronomy) and innovative services like heritage-themed accommodation or guided cultural hikes. *Use-case:* In Slovenia's Posavje, the Turistično Društvo (Tourism Association) Senovo and others can develop unique tourist experiences such as "Castles & Cuisine" tours, combining castle visits with local wine and food tasting. Policy measures to replicate this include micro-grants or competitions for the best heritage-based business ideas and providing business training for artisans. A notable best practice from Italy is the Albergo Diffuso model (scattered heritage hotel), where old village homes become parts of a hotel, run by locals, revitalizing both economy and buildings. Similar concepts can be trialed in European and African villages, with seed funding and marketing support.

Community Heritage Festivals

Annual events celebrating local heritage can boost pride and attract visitors. Posavje could expand on its traditions (for instance, a "Posavje Castle Festival" with medieval fairs at each castle, or a cultural heritage week). Such festivals often justify the maintenance of sites (as venues) and create seasonal tourist peaks. *Best practice:* The Brežice Castle already houses a well-known music festival in its Knights' Hall, leveraging the stunning frescoed venue to draw international crowds. On the policy side, regional authorities can designate "signature events" and fund their promotion, while cultural ministries might provide grants for festival content (music, exhibitions). In African rural regions, festivals celebrating heritage (dance, storytelling, crafts) have similarly proven to encourage cultural preservation and bring economic benefits; governments should formally include these in tourism calendars and provide logistical support.

Protecting Heritage through Land-Use Planning

A critical recommendation is to integrate heritage conservation into land-use and spatial planning. In Posavje, this means ensuring that new developments (like energy projects or industrial zones) do not encroach on cultural landscapes or key sightlines (e.g., preserving the scenic views of castles on hilltops). Planning regulations should require heritage impact assessments for significant projects. Slovenia's Kozjanski Park in Posavje is a protected area and illustrates good practice in balancing nature, culture, and development. Planning authorities might zone buffer areas around heritage sites and promote

adaptive reuse of old structures rather than building new ones. In the AU context, where rural land pressures (e.g., mining, large-scale agriculture) can threaten heritage sites, similar policies of protective zoning and community consultation are advised.

Cross-Regional Collaboration and Knowledge Exchange

Finally, rural regions should not operate in silos when it comes to heritage. Networks like the EU RURITAGE project or UNESCO's Creative Cities (which can include crafts and folk art) provide platforms to share what works. Posavje's development agency, partnering with institutes and clusters, shows the value of networking. Policymakers should encourage their local development agencies to participate in international projects and exchanges. For instance, a Posavje representative sharing digitalization experience with a counterpart in, say, rural Morocco (and vice versa with artisan entrepreneurship) can spark new ideas and adaptations. EU-AU cooperation under programs like Horizon Europe could specifically fund twinning projects between European and African rural communities around heritage and tourism innovation. Learning from diverse contexts will help each refine their approach and ensure that cultural heritage becomes not a relic of the past, but a springboard for inclusive and sustainable rural futures.

4.4 Sustainable Agri-Food Systems in Rural Europe – Asturias (Spain)

Asturias, in northern Spain, is a predominantly rural, mountainous region with a strong dairy and beef tradition. Its agri-food sector faces the dual challenge of remaining competitive while meeting EU climate and environmental goals. The RURALITIES pilot in Asturias focuses on implementing circular farming (closed-loop resource use) and precise agriculture systems to increase resilience, reduce environmental impact, and create value-added opportunities for small producers.

4.4.1 Key Challenges

Rural Asturias suffers from population aging and youth outmigration, with many small-scale farms on difficult terrain, making it challenging to achieve economies of scale and invest in sustainable practices. While the region's pasture-based systems are generally climate-friendly, issues such as waste management from dairy production and changing weather patterns require adaptation. The market remains heavily reliant on conventional dairy and beef, exposing farmers to price volatility, while organic and diversified products are still underdeveloped. Innovation and knowledge gaps persist, with many smallholders lacking access to expertise in circular economy technologies or organic certification. In addition, aligned with aging and demographic challenge, generational relay to continue agriculture and farming practices in rural areas is currently a relevant difficulty to overcome since it weakens the rural economy impeding the implementation of innovative practices that ensure long-term maintenance of rural regions.

4.4.2 Policy Framework Options

The transition to sustainable agri-food systems in Asturias is strongly supported by EU and national policies. The EU Farm to Fork Strategy sets an ambitious target of having 25% of EU farmland under

organic production by 2030, while also promoting reductions in chemical inputs, improved nutrient cycles, and fair incomes for producers. Spain's CAP Strategic Plan complements these goals by offering eco-schemes and rural development measures that incentivise organic conversion, agri-environmental actions, and cooperation projects in circular farming. The EU Organic Action Plan further encourages national and regional authorities to develop organic farming roadmaps, with targeted support for certification, advisory services, and market development. At the local level, LEADER and Community-Led Local Development (CLLD) approaches enable Local Action Groups in Asturias to invest in initiatives such as agritourism, SME diversification, and renewable energy adoption on farms, providing a platform to integrate circular farming pilots.

4.4.3 Recommendations & Best Practices

Scaling up organic transition is a priority, particularly for pasture-based beef and dairy farms, which can convert to organic with relatively low barriers, leveraging Asturias' native breeds and traditional grazing systems. A notable best practice is the RESUPEQ project, which transforms cheese whey—a common byproduct—into high-value human food products, creating new income streams while reducing environmental impact. Cluster-led innovation, through the ASINCAR agri-food cluster, plays a vital role in disseminating circular farming solutions, introducing processing innovations, and promoting digitalisation among SMEs. Market access can be improved by developing a regional 'Sustainable Asturias' label to promote local organic and circular products, supported by improved short supply chains and prioritisation in public procurement contracts for institutions like schools and hospitals. Capacity building is equally important, with targeted advisory services and on-farm demonstrations supported through CAP cooperation projects to ensure farmers have the skills and confidence to adopt climate-smart and circular practices.

4.5 Sustainable Food Value Chains in Iași (Romania)

Iași County, in Romania's North-East Region, has a diverse agricultural base but faces significant challenges in building robust food value chains. Production is fragmented, processing capacity is limited, and market integration remains weak. The RURALITIES pilot, through the RoRuralia Living Lab, seeks to strengthen sustainable food value chains from production to processing, distribution, and consumption by fostering innovation, collaboration, and direct links between small producers and urban markets.

4.5.1 Key Challenges

Agriculture in Iași is dominated by small farms of less than five hectares, which limits consistent supply volumes and market access. The region lacks sufficient processing facilities for dairy, meat, fruit, and vegetables, alongside insufficient cold storage and logistics infrastructure. High transport costs, lack of coordination, and dependence on intermediaries reduce farmers' share of consumer prices. Producer organisations remain weak, innovation uptake is low, and smallholders face financial and regulatory barriers, such as high compliance costs for food safety certification and difficulty accessing credit for upgrading facilities.

4.5.2 Policy Framework Options

The development of sustainable food value chains in Iași aligns closely with EU and national policies. The EU Farm to Fork Strategy promotes short supply chains, local markets, and fair returns to producers, providing a strong policy foundation for connecting rural production with urban demand. Romania's CAP Strategic Plan offers targeted funding for producer groups, on-farm processing, and short-chain development. LEADER programmes, through Local Action Groups like GAL Siret Moldova, support community-led agri-food projects. EU public procurement rules now allow contracting authorities to prioritise local, seasonal, and sustainable products, creating an opportunity to boost local demand through institutional purchasing. At the national level, the Agro-Food Sector Strategy aims to enhance infrastructure, brand quality products, and support SME development in regions like Iași.

4.5.3 Recommendations & Best Practices

Establishing a centrally located Iași Food Hub could serve as a cornerstone for aggregating, storing, and distributing products from small farms, paired with an online marketplace to connect producers directly with urban buyers. Supporting the formation of producer organisations and cooperatives would allow farmers to achieve economies of scale in production, processing, and marketing. Co-financed shared processing units—such as cheese plants or fruit canning facilities—can enable smallholders to sell branded goods rather than raw commodities. Public procurement policies should be leveraged to set targets for sourcing local and/or organic products in schools, hospitals, and other public institutions, following the successful examples from other Romanian regions. Encouraging digital innovation in traceability, logistics coordination, and online sales platforms will further modernise the value chain. Continued operation of the RoRuralia Living Lab as a training and collaboration hub will help ensure sustained cooperation between local government, SMEs, and farmers, embedding best practices and fostering long-term resilience in the region's food system.

5 SIMSES FOLLOWER POLICY INSIGHTS AND BEST PRACTICES (AU)

African Union Context (Agenda 2063, CAADP & Malabo Declaration Updates)

At the continental level, the African Union's Agenda 2063 and the CAADP/Malabo framework continue to drive rural innovation strategies into 2025. Agenda 2063's First Ten-Year Implementation Plan emphasizes modern agriculture for increased productivity, including targets to raise women's participation in commercial farming[81]. As the 2025 deadline of the Malabo Declaration approaches, AU biennial reviews have urged member states to accelerate adoption of digital and climate-smart innovations to meet commitments (e.g. ending hunger, doubling productivity)[82]. In 2023, the African Union adopted a Digital Agriculture Strategy, highlighting the need to empower rural youth and women agripreneurs through ICT and data-driven farming solutions[83]. Continental initiatives like the African Continental Free Trade Area (AfCFTA) and the AU Year of Nutrition (2022) have further underscored the importance of rural infrastructure, value addition, and resilient food systems. These AU-level frameworks set an enabling environment and ambitious benchmarks that inform national policies in Togo, Egypt, Morocco, Nigeria, and Uganda, as detailed below.

5.1 Togo

5.1.1 Key Challenges

Togo's predominantly rural population faces persistent challenges in agriculture and livelihoods. Productivity remains low – only 37% of farmers use fertilizer, 8% use improved seeds, and a mere 1% have irrigation, leading to extensive (area-driven) growth rather than intensive gains[84]. This has contributed to deforestation and soil degradation, while overreliance on rain-fed farming exposes rural communities to climate shocks[85, 86]. The agriculture sector is constrained by limited commercialization (only ~20% of output is marketed) and insufficient value addition, which cap rural incomes[87]. These structural issues, combined with high input prices and regional insecurity in the north, have kept rural poverty high. Weather variability is a growing threat: recent droughts and erratic rainfall have undermined yields of staples and increased food insecurity[88, 89]. In short, low technology adoption, weak market integration, and climate vulnerability are key challenges holding back Togo's rural transformation.

5.1.2 Policy Framework Options

The Togolese government has responded since 2023 with new policy frameworks focused on modernizing agriculture and fostering rural innovation. Notably, in 2025 Togo launched the Agricultural Modernization Program (ProMAT 2025–2034) – a comprehensive roadmap to transform agriculture over the next decade[90]. ProMAT targets four pillars: (1) helping farmers produce more and withstand climate shocks, (2) improving market access and prices for farm products, (3) expanding farmers' access to financing and private investment, and (4) strengthening sector governance for effective policy delivery[91]. This bold program builds on earlier national plans (PNIASA/PNIASAN) and clearly prioritizes climate resilience and competitiveness in the rural economy[92]. In parallel, Togo continues to develop Planned Agricultural Development Zones (ZAAP) – dedicated areas for young farmers – and is establishing agropoles across all regions to cluster agro-industries and services[93]. To support these initiatives, a new

Agricultural Transformation Agency (ATA) has been created to coordinate investments. The World Bank and partners have backed ProMAT with a $300 million Program-for-Results, reinforcing Togo's policy framework with results-based financing [94]. This program strengthens agricultural institutions and aims to expand irrigation (7,200 ha) and climate-smart practices, while improving access to mechanization, credit, and markets[95]. Crucially, Togo's updated policy framework is inclusive – ProMAT explicitly sets targets for women and youth; for example, it expects to benefit 340,000 farmers (including 114,000 women and 102,000 youth) and create 72,500 jobs through agribusiness growth[96]. By 2025, Togo's policy landscape thus centers on community-level innovation, climate adaptation, and youth empowerment to drive rural development.

5.1.3 Recommendations & Best Practices

Community-Driven Innovation: A flagship best practice is the Food Security Accelerator (FSA) Innovation Network, which held its inaugural workshop in Togo in 2025[97]. This network brings together local micro-businesses, incubators, researchers and donors to turn agricultural challenges into opportunities. At a technical workshop in Avé prefecture, participants showcased value-added products (e.g. cereal crisps, oils, creams from local crops) and exchanged ideas on linking traditional knowledge with modern innovation[98, 99]. The FSA network complements Togo's national programs like ZAAP and PNIASAN by fostering a pan-African ecosystem of grassroots innovators and demonstrating the value of local crops in new markets[100]. The inclusion of youth-led startups and cooperatives in such events is a best practice to spur community-driven rural innovation.

Climate-Smart Programs: Togo is pioneering climate-smart farming at scale through its Sustainable Agriculture Transformation Program, launched in 2025 with support from the World Bank and Global Center on Adaptation. This 10-year, multi-phase program is introducing drought-tolerant seed varieties, pay-as-you-go irrigation schemes, and digital climate advisory services to smallholders nationwide[101, 102]. For example, the program integrates the AgWISE digital platform to deliver localized weather forecasts and agronomic recommendations to farmers. It also pilots innovative agricultural insurance (index-based) to de-risk farming. Over 2025–2032 the program aims to reach 340,000 small producers (including over 100,000 women and 100,000 youth), in line with ProMAT's inclusivity goals[103, 104]. The impact so far shows the value of blending modern technology with local needs: by mid-2025 Togo had rolled out digital climate advisory to thousands of farmers and established robust climate resilience indicators, paving the way for data-driven insurance and adaptive farming[105]. This multi-partner, climate-focused program illustrates best practices in scaling rural innovation – combining government leadership with technical assistance and private investment to achieve resilient rural development[106].

Inclusion of Women and Youth: Togo's approach embeds inclusivity as a cornerstone of rural innovation. The ProMAT program and its partners actively set gender and youth targets, as noted above. Additionally, Togo has supported women's cooperatives and youth agripreneurs through training and access to finance. A successful example is the GIZ-EU rural value chains project (concluded 2023) which trained over 10,000 smallholders (83% women) in improved practices and entrepreneurship, resulting in 27% average income growth by 2020[107]. Building on such gains, the new programs emphasize empowering female farmers with climate-smart inputs and young entrepreneurs with aggregation and processing opportunities. Early evidence from Togo's interventions – such as nearly 13,000 new organic cocoa producers adopting eco-friendly methods[108] – shows that engaging women and youth in innovation boosts both productivity and sustainability. Going forward, Togo's rural development should continue to leverage these best practices: community innovation networks, climate-smart technologies, and inclusive value chain support – all aligned with RURALITIES objectives of community-led, ecosystem-enhancing, and youth-empowering development.

5.2 Egypt

5.2.1 Key Challenges

Egypt's rural sector is characterized by a mix of modern agribusiness and traditional smallholder farming, with distinct challenges since 2023. Population pressure on arable land, water scarcity, and climate change are overarching issues. Agriculture consumes over 80% of Egypt's freshwater, and successive droughts plus upstream Nile uncertainties threaten irrigation for rural farms[109]. Small farmers face land fragmentation, limiting economies of scale and technology uptake. Market access is skewed toward large producers, leaving many rural communities with low market orientation and insufficient innovative capacity[110, 111]. In Upper Egypt – home to some of the highest rural poverty rates – over 50% of jobs are in agriculture, yet productivity is low and poverty remains endemic[112]. Climate impacts (heat stress, irregular Nile flooding) further jeopardize yields in this region. Youth unemployment is a pressing challenge: while Egypt has a sizable educated youth population, rural youth often lack access to land, finance, and modern skills, driving migration to cities. Additionally, gender gaps persist in rural employment and access to resources. However, Egypt has made strides in infrastructure (e.g. nearly full electricity access in villages) and has invested in mega-projects like land reclamation and 100,000 new greenhouses to boost production[113]. The key challenge ahead is ensuring that these investments translate into inclusive, innovation-driven growth for smallholders – integrating digital technology, climate resilience, and entrepreneurship in rural communities that still lag behind the urban economy[114, 115].

5.2.2 Policy Framework Options

The Egyptian government has updated several policy frameworks since 2023 to support rural innovation and sustainability. An important overarching plan is the "Decent Life" (Hayah Karima) rural initiative, launched in 2019 and ramped up through 2023, which invests in rural infrastructure (housing, clinics, roads) and also supports livelihood projects in thousands of villages. This complements Egypt's long-term Vision 2030, which was refreshed in 2022 to emphasize inclusive growth and digital transformation across sectors. In alignment with Vision 2030, Egypt rolled out the "Digital Egypt" strategy, an all-encompassing plan focusing on digital transformation, capacity building, and innovation nationwide. Under this digital agenda, the Ministry of Agriculture has been digitizing extension services and market information systems to reach farmers via mobile and internet platforms.

Specific to agriculture, Egypt is implementing the Sustainable Agriculture Development Strategy (SADS) 2030, with renewed focus on modernizing irrigation, improving value chains, and strengthening research-extension linkages[116]. Recent policy measures (2023–2024) under SADS include scaling up climate-smart agriculture as part of Egypt's National Climate Change Strategy 2050. For example, the government expanded its climate-smart farmer field schools and introduced incentives for water-saving technologies in farming communities. Another notable framework is the introduction of an Agricultural Innovation Hubs network in 2024, supported by national research centers, aimed at incubating agritech startups and agribusiness ventures by youth.

International partnerships also shape Egypt's policy landscape. In 2023, Egypt joined the Food and Agriculture Resilience Mission (FARM) and other G7/AU initiatives to bolster food security via innovation. Additionally, the Comprehensive Africa Agriculture Development Programme (CAADP) process informs Egypt's national agricultural investment plan – Egypt has committed to Malabo Declaration targets and, by 2023, was pursuing a new National Food and Nutrition Security Strategy aligned with AU goals. In sum, Egypt's policy framework options blend national strategies (Decent Life, Digital Egypt, SADS 2030) with

climate and innovation agendas, providing multiple levers to support rural development through technology, improved services, and youth inclusion.

5.2.3 Recommendations & Best Practices

Digital Agriculture and Extension: Egypt has embraced digital solutions as a catalyst for rural innovation. A leading example is the Egypt Climate Smart Agriculture Innovation & Entrepreneurship Program (EgCITE) launched in 2023 with World Bank support. EgCITE established a one-stop digital platform for climate-smart agriculture information and early warning services[117]. Through this portal, Egyptian farmers and agripreneurs can access data-driven insights (weather forecasts, extension advice) and share knowledge. EgCITE also introduced an innovation challenge to crowdsource ICT solutions for climate and water-food challenges, aligning with national competitions like the "ClimaTech Run"[118]. Furthermore, a Climate Smart Innovation Academy was created to offer e-learning courses (e.g. GIS, remote sensing for agriculture) to extension agents and young farmers[119, 120]. This multifaceted approach – combining information portals, hackathons, and capacity building – is a best practice for leveraging digital tech to improve extension and engage youth. Early outcomes show improved access to information and better decision-making for farmers, as well as enhanced knowledge-sharing among stakeholders, thereby fostering a culture of data-driven innovation[121].

Climate-Smart and Inclusive Projects: In Upper Egypt, where rural poverty and climate vulnerability intersect, targeted programs have demonstrated how to boost incomes with "green" innovations. The Agricultural Innovation Project II (AIP) (2023–2026), co-financed by Germany, Switzerland, and the Netherlands, is one such model. AIP works with smallholder communities in Upper Egypt to implement environmentally friendly practices (improved soil fertility, water management, and regenerative agriculture) and introduce stress-tolerant crop varieties[122, 123]. It also promotes rural entrepreneurship by improving local services (e.g. veterinary, mechanization) and supporting new agribusiness ventures, especially for women and youth. Notably, AIP forges partnerships between small farmers and leading agrifood companies to bridge gaps in market access[124]. A key best practice from this project is the use of modern digital solutions – for instance, AIP has piloted online market platforms for farmers, mobile-based advisory services, and agri-fintech tools to expand credit access[125]. By late 2023, thousands of Upper Egyptian farmers had been trained in climate-smart techniques and connected to buyers via these digital platforms, resulting in higher incomes and more resilient production[126]. This underscores that coupling climate-smart farming with entrepreneurship support and digital linkages can effectively reduce rural poverty.

Youth and Women Empowerment: Aligning with RURALITIES goals, Egypt has made inclusion a priority in recent rural initiatives. One highlight is the AgriTech4Egypt Innovation Challenge 2024, a public-private effort (with CGIAR, Ministry of Higher Education, and international partners) to accelerate agri-tech startups. Over May–Dec 2024, the program scouted and mentored 15 early-stage agri-tech teams (selected from 900 applicants across 48 countries) with solutions in digital farming, agri-finance, value chain development, and irrigation efficiency[127, 128]. This intensive bootcamp provided business and science workshops plus mentorship, culminating in a Demo Day to showcase innovations to investors[129, 130]. Crucially, AgriTech4Egypt was designed with end-users at the center – innovations had to address farmers' needs and be affordable and deployable in the local context[131]. The challenge explicitly aimed to empower rural communities, women, and young entrepreneurs, and to create jobs by fostering a skilled agri-tech workforce[132]. Indeed, empowering women farmers and youth in agri-tech is recognized as key to securing Africa's food future[133]. Another best practice is Egypt's large-scale "Decent Life" program, which, beyond infrastructure, has organized women's savings groups and youth micro-enterprise trainings in villages (leading to thousands of small projects funded). To build on these successes, it is recommended that Egypt continue expanding digital infrastructure in rural areas (for

better connectivity), strengthen cooperatives (especially for women producers), and integrate successful pilots (like EgCITE and AgriTech4Egypt winners) into national programs. By doing so, Egypt can ensure rural innovation is community-driven and inclusive, leveraging both high-tech and "low-tech" (e.g. cooperatives, demo farms) solutions to improve livelihoods.

5.3 Morocco

5.3.1 Key Challenges

Morocco's rural development occurs against a backdrop of significant achievements as well as ongoing trials. The country has a relatively advanced agricultural sector (including high-value exports in horticulture), yet many small farmers in rain-fed areas remain vulnerable. Water scarcity is the paramount challenge – Morocco has faced six consecutive years of drought up to 2025, severely straining rainfed cereal production and causing job losses in farming communities[134]. Over one-third of Morocco's cultivable land lay unplanted in recent seasons due to drought, and wheat/barley outputs have fallen to a fraction of normal yields[135]. This "new normal" of aridity is compounded by fragile soils in many regions; Moroccan farmlands have low organic matter from years of monocropping and tillage[136, 137]. The result is declining soil fertility and erosion, undermining long-term productivity. Another challenge is rural youth unemployment and out-migration. Despite Morocco's progress in rural electrification and roads, rural youth often perceive farming as unrewarding. The sector's growth has not fully translated into the emergence of a rural middle class – rural poverty and inequality persist, especially in mountainous and oasis regions. Additionally, market access and value addition remain unequally distributed. Large agri-business firms thrive (e.g. in export-oriented agribusiness), but smallholders struggle with market requirements and standards. This creates a dualism in the rural economy. On the positive side, Morocco has been a continental leader in certain innovations (such as Conservation Agriculture and solar-powered irrigation), but scaling these to all farmers is a challenge. Finally, climate risks extend beyond drought to include flash floods in some areas and increasing temperature extremes, threatening traditional crops. In summary, Morocco's rural challenges revolve around water and land sustainability, inclusive growth for small farmers, and youth inclusion, even as the country leads in some agricultural innovations.

5.3.2 Policy Framework Options

Morocco entered the 2020s with a robust strategic vision for agriculture and rural areas – the "Green Generation 2020–2030" (Generation Green) strategy, launched in 2020. By 2023, this strategy has been the main framework guiding rural innovation. It is built on two pillars: (1) Investing in Human Capital in rural areas and (2) Sustainable Value Chain Development. Under the first pillar, Generation Green aims to create a new agricultural middle class of 350,000 to 400,000 households and encourage youth entrepreneurship by mobilizing one million hectares of collective lands for young farmers[138, 139]. To support these young agripreneurs, the plan provides new-generation cooperatives and professional organizations, alongside tailored support measures (training, credit facilitation, land contracts)[140]. This policy option directly addresses youth inclusion and land access, key for community-driven innovation. The second pillar focuses on economic development – raising agricultural GDP and exports by promoting value addition, agro-processing, and modern market infrastructure. Targets include boosting agri-food exports from MAD 50 billion to 60 billion annually and upgrading wholesale markets and logistics to integrate small producers[141, 142].

In addition to Generation Green, Morocco launched the "Forests of Morocco" 2020–2030 strategy in parallel, recognizing the link between ecosystems and rural livelihoods. This policy framework introduces

a participatory co-management model for forest resources and the use of digital tools in forest management, aiming to restore 133,000 ha of degraded forests while creating 27,500 jobs in ecotourism and forest industries[143, 144]. The strategy's axes (community participation, modernization of forest professions, biodiversity conservation) enhance rural resilience and provide low-tech, nature-based solutions (e.g. wild honey, medicinal plant value chains) to diversify incomes.

Morocco's policy mix also includes strong financial and institutional support. The government has steadily increased the agriculture ministry's budget by ~2.5% yearly to fund these strategies[145]. New institutions, such as the Agency for Agricultural Development and Regional Chambers of Agriculture, have been empowered to implement programs at local level. By 2023, Morocco also actively engaged development partners: for instance, the World Bank approved in Dec 2024 a $250 million Transforming Agri-Food Systems Program to reinforce Morocco's climate resilience and food quality initiatives[146]. This program is aligned with Generation Green and Malabo commitments, focusing on scaling up climate-smart practices (like no-till farming, drought insurance) and expanding organic farming and food safety measures[147]. In the words of the World Bank country director, this ambitious program "will help Morocco secure green jobs in rural areas and enhance food security, in line with the country's Generation Green 2020-2030 program"[148]. Such integration of international support with national strategy is a hallmark of Morocco's policy approach. Overall, Morocco's policy framework is comprehensive: it targets youth and human capital, promotes sustainable agriculture and water use, and builds institutions and financing to support innovation in rural areas.

5.3.3 Recommendations & Best Practices

Climate-Smart and Ecosystem Practices: Morocco offers a continental best practice in scaling Conservation Agriculture (CA) to tackle drought and soil degradation. The government announced a goal to convert up to 1 million hectares of cereal lands to CA by 2030, making Morocco a regional hub for dryland sustainable farming[149]. CA principles – minimum tillage, soil cover, crop rotation – have been integrated into the Generation Green strategy based on decades of local research evidence[150]. This science-policy linkage (via INRA and ICARDA research) is a best practice: rigorous trials in Morocco demonstrated that CA could halve soil erosion and even sequester carbon in farmlands[151]. Farmers who adopted no-till and rotation in variable rainfall conditions saw more stable yields compared to conventional methods[152]. The government has supported these practices with subsidies for no-till seeders and farmer training. As a result, Morocco is the only country in North Africa practicing conservation agriculture at scale, a model for ecosystem-enhancing innovation. Recommendation: Continue to incentivize CA uptake and water-saving irrigation (drip systems) – by end of 2023 Morocco had equipped 824,000 ha with drip irrigation towards its 1 million ha goal[153] – to build resilience in more communities.

Rural Entrepreneurship & Value Addition: A key to Morocco's rural innovation has been linking farmers to markets through cooperatives and startups. In 2025, Morocco held its first Agro-Export Day to showcase the potential of local agro-industries on the international stage[154]. At this event, agri-tech startups and innovative cooperatives demonstrated products and practices meeting global market standards[155, 156]. For example, cooperatives of women in argan oil and fig production have obtained quality certifications, enabling "Made in Morocco" products to penetrate new markets. The Argan tree cultivation program in southwest Morocco (supported by the Green Climate Fund) is another best practice – it has planted thousands of hectares of argan orchards, empowering rural women's cooperatives in the processing of argan oil, a high-value export[157, 158]. These efforts underscore the importance of combining innovation with tradition and branding: Morocco leveraged a traditional tree crop (argan) and enhanced its production with modern nurseries, quality control, and marketing, turning it into a global niche product. Similarly, the government's push to modernize local markets (12 wholesale

markets and many rural souks) is helping small farmers get better prices and reduce post-harvest losses[159]. Recommendation: Scale up support for rural SMEs and agri-processing units (via credit lines and public-private partnerships), and continue holding innovation fairs or "market linkage" events. By doing so, rural producers gain exposure to new ideas and buyers, fueling a cycle of innovation and improved livelihoods.

Inclusion of Youth and Women: Morocco's Generation Green strategy explicitly focuses on youth and women, but turning this into reality involves targeted programs. One notable initiative is the "Green Jobs for Youth" program, which works with vocational training centers to prepare young people for careers as irrigation technicians, agro-processing operators, and agripreneurs. This program, in partnership with IFAD and others, has trained thousands of rural youth since 2021 in technical and business skills[160]. Additionally, the government's land mobilization for youth (allocating collective land parcels) has begun in provinces like Béni Mellal and Khemisset – young beneficiaries receive land leases plus startup support. For rural women, Morocco has expanded the Territorial Inclusion Program, funding income-generating projects for women's cooperatives (from couscous production to handicrafts linked to rural tourism). A best practice emerged from the "Cooperative Lab" approach, where successful cooperatives mentor new ones, spreading good practices in governance and product innovation. Moreover, Morocco has not neglected low-tech inclusive solutions: e.g. under the Forests of Morocco strategy, communities form local resource user groups (including women herders and beekeepers) to co-manage forest areas and share in proceeds from forest products. This participatory model has both restored degraded land and provided income (from honey, pine nuts, ecotourism) in mountainous rural communities. The recommendation going forward is to sustain investment in human capital – continue increasing budgets for agricultural extension and rural education, ensure youth have access to credit (through tailored guarantee funds or microfinance for startups), and strengthen gender inclusion by securing land use rights for women in collective lands. Morocco's experience shows that when policy frameworks are backed by concrete inclusive actions (training, land access, mentoring), rural innovation flourishes among all segments of the community.

5.4 Nigeria

5.4.1 Key Challenges

Nigeria is Africa's most populous nation and has a vast rural sector, but it faces distinct challenges in transforming its rural economy. Agricultural productivity growth (about 2.5% annually) has lagged behind population growth (2.6%), contributing to food insecurity in many regions[161]. Smallholder farmers (who produce the bulk of Nigeria's food) contend with low yields, due in part to limited access to quality inputs and mechanization. The use of irrigation is minimal and fertilizer use remains below recommended levels. This has meant Nigeria still relies heavily on rain-fed extensive farming – making rural livelihoods vulnerable to droughts and erratic rainfall. Climate change is intensifying these stresses: northern Nigeria faces advancing desertification and more frequent droughts, while other areas experience flooding events. These climate impacts, alongside environmental degradation, exacerbate rural poverty and drive migration[162, 163]. Another challenge is the inadequate rural infrastructure and services – many farming communities have poor road access to markets, patchy electricity (affecting agro-processing and cold storage), and under-resourced extension services.

Crucially, Nigeria struggles with youth underemployment in rural areas. Over 60% of the population is under 25, and while agriculture could be a major employer, young people often see it as antiquated. The rural youth face barriers like lack of land ownership, financing, and modern skills/training. Gender

disparities are also pronounced; women play a huge role in farming and trading yet have unequal access to credit and land. Additionally, insecurity in certain rural zones (conflicts between farmers and pastoralists, banditry in the northwest, etc.) has disrupted agricultural activities and discouraged investment. Despite these issues, Nigeria has enormous potential – diverse agro-ecological zones, a large domestic market, and entrepreneurial talent. The main challenge is unlocking this potential by injecting technology, finance, and stability into the rural economy, and doing so in an inclusive way (bringing women and youth to the forefront of agribusiness).

5.4.2 Policy Framework Options

The Nigerian government has introduced significant policy frameworks since 2023 to drive a technology-enabled, youth-driven transformation of agriculture. Foremost among these is the National Agricultural Technology and Innovation Policy (NATIP) 2022–2027, which became operational in 2023. NATIP offers a strategic blueprint to make agriculture more attractive and competitive, especially for young people and women[164]. It emphasizes mechanization, digital agriculture, and stronger research–commercialization linkages to modernize the sector[165, 166]. Under NATIP, the government is pushing initiatives like e-extension services, smart irrigation, and improved seed adoption to boost productivity. Importantly, the policy created the National Agribusiness Promotion Agency and a coordination mechanism under the Presidential Food Systems Council to ensure different ministries and stakeholders work in tandem[167].

To finance these ambitions, Nigeria operationalized the National Agricultural Development Fund (NADF) in 2023, which is forging public-private partnerships to fund climate-smart agriculture, aggregation centers, rural roads, and other priorities[168]. A landmark decision in 2025 was the approval of ₦1.5 trillion (about $3.3 billion) to recapitalize the state-owned Bank of Agriculture (BoA) – the largest boost to agricultural finance in Nigeria's history[169]. This move is aimed at turning BoA into a dynamic development bank that provides accessible credit and capacity support to youth- and women-led agribusinesses[170].

Another framework targeting inclusion is the Revised National Youth in Agriculture Manifesto (2025–2030), launched in 2025. This was a youth-driven policy document developed with input from youth organizations and unveiled by the Ministry of Agriculture and Food Security[171]. It serves as a "youth-owned roadmap" for agricultural transformation, outlining commitments to land access for youth, dedicated financing windows, and integration of agritech innovation in curricula[172, 173]. The manifesto is accompanied by a Youth in Agribusiness Call to Action 2025, and the government has pledged to integrate these youth priorities into the National Agriculture Investment Plans and the revised National Gender Policy in Agriculture[174]. This reflects a high-level commitment to not just include youth symbolically, but to let them shape policy and hold authorities accountable.

Additionally, Nigeria launched the Presidential Fertilizer Initiative 2.0 and Special Agro-Industrial Processing Zones (SAPZ) program (with AfDB support) to improve input supply and agro-processing in rural hubs. Regionally, Nigeria is aligning with ECOWAS agricultural policy (ECOWAP) and the Malabo Declaration goals. By 2023, Nigeria increased its budgetary allocation to agriculture (though still short of the 10% target), and it has focused on import substitution for staples through programs like the Anchor Borrowers' Programme (a central bank-led credit scheme for small farmers).

In summary, Nigeria's current policy framework mix – NATIP for tech innovation, massive agri-finance mobilization (NADF, BoA recapitalization), and youth-focused strategies – provides a strong foundation. The key will be effective implementation and ensuring these policies reach the grassroots (every parish and village) where the impact is most needed.

5.4.3 Recommendations & Best Practices

Digital Platforms and Youth Initiatives: A standout best practice from Nigeria is the aggressive use of digital platforms to engage youth in agriculture. In early 2025, the government launched the Youth Farmers' Enrollment Portal, an online platform aiming to register young people nationwide for agricultural opportunities[175]. This initiative, led by the Ministry of Youth, seeks to create 6 million new jobs for youth in 2025 across agriculture and agro-allied sectors[176, 177]. Through the portal (developed in partnership with the Nigerian Youth Economic Empowerment Program), individuals aged 18–35 can access training programs, mentorship, startup grants, and linkages to financial support[178]. This approach of leveraging technology to reach scale is a best practice: it lowers the barrier for rural youth to discover programs and receive support, while also enabling government to track participants and outcomes. The portal has brought tens of thousands of young Nigerians into contact with extension services and credit schemes within its first months. Recommendation: continue to invest in and advertise such digital one-stop shops, and integrate them with mobile apps and USSD services for those with limited internet – ensuring rural youth even in remote areas can enroll.

Inclusive Policy Co-creation: Nigeria's Revised Youth in Agriculture Manifesto (2025–2030) represents a novel approach to policy co-creation that can be replicated. Facilitated by civil society (e.g. the Leonard Okonkwo Foundation and Heinrich Böll Foundation) and the Malabo Montpellier Panel, this process gathered youth voices from across Nigeria to define what they need to thrive in agriculture[179, 180]. The resulting manifesto is "bold, inclusive, and youth-driven", as the Minister described[181]. It calls for actions like greater access to land, youth-friendly financing, promotion of agritech innovation hubs, and institutional support for young leaders[182]. By launching this document and pledging to integrate it into official policy, Nigeria set a best practice in empowering young people as stakeholders rather than mere beneficiaries. Already, youth groups are using the manifesto to hold local authorities accountable for providing land and funding to young farmers. This model of participatory policy-making could be extended to other groups (for example, a women in agriculture manifesto) to ensure policies are responsive to on-the-ground needs.

Climate-Smart Villages and Value Chains: On the climate front, Nigeria is piloting "climate-smart villages" in partnership with research institutes, where communities adopt a suite of innovations (drought-resistant crops, water harvesting, agroforestry, solar dryers) to build resilience. In one such pilot in the semi-arid north, farmers using drought-tolerant maize and practicing conservation agriculture have increased yields despite erratic rains. The government, through NATIP, is also promoting aggregation centers and storage facilities to reduce post-harvest losses and stabilize prices. For example, aggregation and processing centers for rice and cassava run by youth cooperatives (supported by the AfDB's SAPZ program) have shown promising results in adding value locally and creating rural jobs. In a hub in Ogun State, a cassava processing unit managed by a women's cooperative now produces HQCF (high-quality cassava flour) for urban markets, increasing their income by 50%. These are best practices demonstrating that local processing + youth/women management = community growth.

Financial Innovation and Partnerships: Nigeria's experience also underscores the importance of innovative rural financing. The recapitalization of BoA and the creation of NIRSAL (Nigeria Incentive-Based Risk Sharing System for Agricultural Lending) earlier, have improved credit flow. One creative example is the use of mobile wallets and e-vouchers for input subsidies – an approach first trialed under the former e-wallet fertilizer scheme and now being revived with improvements. This ensures intended farmers (including women farmers) receive subsidized inputs directly via mobile codes, reducing corruption and empowering farmers with choice[183]. Coupled with the expansion of mobile money in rural areas, it's improving farmers' access to finance and markets.

In conclusion, Nigeria should continue scaling up these best practices and initiatives. Recommendations: (1) deepen the digital integration by developing an all-encompassing Digital Agriculture Platform that links the youth portal, farmers' registry, e-wallet, and extension advisories (the government did launch an open NIN-enabled farmers' registry in 2023 for better planning[184] – this should be built upon); (2) strengthen extension and training by recruiting and equipping more "agricultural extension facilitators" – possibly young graduates – to serve as village-level innovation champions; and (3) ensure security and stability in rural regions so that investments and innovations can take root. With robust implementation of NATIP and associated programs, Nigeria is poised to achieve a more tech-driven, inclusive, and resilient rural economy, turning its vast youth population into an engine of agrifood innovation.

5.5 Uganda

5.5.1 Key Challenges

Uganda has made notable progress in agricultural growth and poverty reduction in recent years, yet it faces persistent challenges in achieving a dynamic rural sector. The country's population is very young (74% under 30) and heavily rural, putting pressure on land and job creation[185]. While agriculture remains the backbone (employing the majority of the workforce), many rural youths see limited opportunities in farming. Youth unemployment and underemployment thus loom large, though Uganda has plans to create more quality rural jobs and expand vocational training in agribusiness[186]. Another challenge is the slow productivity growth in smallholder farming. Ugandan farmers typically suffer from low yields due to factors like soil fertility decline, limited use of fertilizer and improved seeds, and climate stresses. Climate change is already evident in Uganda with erratic rainfall patterns – some regions face more frequent droughts, others flooding – impacting crop output and food security.

Uganda's agricultural extension system has been undergoing reforms (from NAADS to a single spine system), but reaching millions of dispersed farmers with quality advice remains difficult. This leads to a knowledge gap and uptake gap in rural innovation. Moreover, rural infrastructure gaps (feeder roads, storage facilities) hinder market access: farmers lose a significant share of produce post-harvest or accept low farm-gate prices due to middlemen. Inclusion is an ongoing issue as well; women farmers in Uganda contribute a majority of agricultural labor but often lack control over land and decisions, reducing the incentives for them to invest in innovations. Land fragmentation in densely populated areas (like parts of the west and south) also limits economies of scale for innovation adoption. On the positive side, Uganda's government has a strong decentralization policy and has recently launched the Parish Development Model (PDM) to inject funds and services at the parish level. If effectively implemented, PDM could tackle many local-level challenges by empowering communities directly. In summary, Uganda's rural challenges revolve around generating gainful opportunities for youth, increasing farm productivity sustainably, and improving service delivery at the grassroots – all under the shadow of climate variability and rapid population growth.

5.5.2 Policy Framework Options

Uganda's policy landscape for rural development and innovation has seen significant updates through 2023–2025, centered on the ambitious Parish Development Model (PDM) and aligned with its national development planning. The PDM, rolled out nationally in 2022, is an innovative framework aimed at "leaving no one behind" by channeling resources and decision-making to the parish level (the lowest administrative unit). The primary goal of PDM is to raise household incomes and move 39% of subsistence households into the money economy, thereby eradicating extreme poverty[187, 188]. Each of

Uganda's over 10,000 parishes receives a revolving investment fund (for loans to local residents' income-generating projects) and support across seven pillars: Production, Infrastructure, Financial Inclusion, Social Services, Mindset Change, Parish Management Information System, and Governance. This model is essentially a policy framework to institutionalize community-driven development and has been backed by substantial budget allocations in 2023 and 2024.

A hallmark of the PDM is its digital backbone. Under Pillar 6, the government built the Parish Development Management Information System (PDMIS) – a nationwide database capturing household data and tracking all PDM fund disbursements digitally[189, 190][109][110]. By 2025, PDMIS had digitized records for 8 million households (about 79% of all households) and tracked UGX 2.7 trillion in funds, with UGX 2.5 trillion disbursed to 2.5 million verified beneficiaries via parish SACCOs[191, 192]. This unprecedented digital registry enables evidence-based planning and transparency in rural financing. The PDM framework empowers Parish Chiefs and local committees to identify priority projects – typically these include purchasing agricultural inputs, establishing produce stores, supporting farmer cooperatives, and other micro-projects driven by local needs. Thus, PDM operationalizes the policy option of community-led innovation financing on a national scale.

In parallel, Uganda's broader policy documents like the Third National Development Plan (NDP III, 2020–2025) prioritize Agro-Industrialization as one of the key pillars. This involves policies to support agro-processing industries, improve storage and value addition, and promote export-oriented commodities. The forthcoming NDP IV (2025–2030) is expected to continue this focus with added emphasis on innovation and climate resilience in agriculture, reflecting lessons of recent years. Uganda is also implementing a National ICT in Agriculture Strategy (updated around 2021) that aligns with the Uganda Digital Transformation Program. Under this, the Ministry of Agriculture (MAAIF) has been scaling up e-extension tools, such as call centers and SMS alert systems for farmers, and partnering with telecom companies to deliver market price information.

Another policy area is climate change adaptation: Uganda approved its Climate Change Act in 2021 and subsequently developed a National Adaptation Plan (NAP). Within that, climate-smart agriculture (CSA) is a priority – the government in 2023 started integrating CSA indicators into district performance plans, essentially incentivizing local governments to promote practices like drought-tolerant crops and water conservation. Uganda's Decentralization policy also gives districts and sub-counties the mandate to plan for local economic development, which dovetails with PDM and allows for localized policy solutions (e.g. a district can declare a campaign on coffee replanting or pest control and allocate resources accordingly).

At the regional/international level, Uganda remains committed to CAADP and Malabo targets. It has regularly reported progress (Uganda was one of the few countries on track in certain Malabo indicators by the 2019 review, such as reducing hunger[193]). The policy frameworks from AU – like the 2023 AU Digital Agriculture Strategy – have influenced Uganda's approaches, evident in the strong digital component of PDM and extension.

In summary, Uganda's key policy framework options by 2025 include the Parish Development Model for grassroots empowerment, national plans emphasizing agro-industrialization and ICT integration, and climate adaptation policies. These provide a multi-layered enabling environment where local innovation can thrive supported by national guidance and resources.

5.5.3 Recommendations & Best Practices

Community-Level Empowerment (Parish Development Model): The PDM itself is a novel best practice in making development demand-driven and data-driven. Early lessons show that digitization plus

decentralization yields benefits: PDMIS dashboards give authorities real-time visibility into fund usage and impact, enhancing accountability[194, 195]. For example, because all beneficiaries' NINs (ID numbers) are verified through PDMIS, cases of ghost beneficiaries or duplicate funding have been minimized[196]. Additionally, parishes that embraced the digital system have seen faster fund disbursement and fewer errors, whereas those initially resistant to using tablets and the app experienced delays, illustrating the importance of digital capacity at local level[197]. A recommendation is to intensify digital skilling for Parish Chiefs and SACCO leaders, as the government has started doing by distributing tablets (over 24,000 repurposed census tablets) and training local officers on data management[198, 199]. This will ensure the PDM's robust design translates into effective implementation everywhere. The PDM approach is highly transferable as a model of empowering communities with both resources and information – other countries can learn from Uganda's experiment in merging micro-finance, local government, and ICT for rural transformation.

Digital Extension and Innovation Services: Uganda has several bottom-up innovations in extension. One is the Plantwise Digital Advisory program implemented by CABI and local partners. In districts like Luwero and Mukono, young "plant doctors" have been trained and provided with the PlantwisePlus mobile apps to diagnose crop pests and diseases[200]. An inspiring example is a youth agripreneur, Anthony Ssenyonga, who set up a WhatsApp-based plant clinic hub serving over 500 farmers[201]. Farmers simply send pictures of their diseased crops via WhatsApp and receive a prompt diagnosis and management advice from trained plant doctors. This has dramatically improved pest management and reduced crop losses for those farmers. It also cuts down the cost and time of getting expert advice. Moreover, these "digital connectors" like Anthony act as rural innovation champions – he also trains other farmers and spray service providers on proper pesticide use via digital tools[202]. The best practice here is leveraging widespread mobile phone usage (even basic smartphones with WhatsApp) to deliver extension services in an interactive, peer-to-peer manner. Recommendation: Scale up such ICT-enabled extension by supporting more youth to become digital ag advisors. Government and NGOs could partner to create a network of WhatsApp helplines or call centers at sub-county level, possibly integrated with the PDM structure. This would complement traditional extension and ensure timely information reaches farmers, including women (who often have less mobility to attend training but can use phones).

Youth Agripreneurship and Skill Development: Uganda has nurtured several programs for youth in agribusiness that serve as best practices. The Youth Agri-Skilling project (by programs like Skilling Uganda and donors) created vocational training modules for poultry, horticulture, and agribusiness management, followed by start-up kits for graduates. Thousands of youth have been trained, and follow-up surveys show a high rate of business start-ups or employment after the training. Also, initiatives like the Youth Venture Capital Fund and recent EMYOOGA program (targeting organized groups including farmers, carpenters, etc. with seed capital at constituency level) have provided much-needed financing to rural youth groups. Under PDM's financial inclusion pillar, each parish SACCO must include youth and women in leadership and target at least 30% of loans to these groups, ensuring equitable access. A success story comes from a parish in Eastern Uganda where a youth group took a PDM SACCO loan to invest in chili farming and solar drying; they not only repaid the loan but also increased their incomes and are exploring export markets. Such pilots underscore that given capital plus training, rural youth can excel in non-traditional value chains (like spices, mushrooms, poultry for urban markets). Recommendation: Continue to expand targeted funds and incubators for rural youth and provide mentorship through public-private partnerships (for instance, successful agribusiness owners could mentor PDM-funded youth enterprises). Also, integrate entrepreneurship training into secondary school curricula in rural areas to instill an innovation mindset early.

Women's Inclusion and Low-Tech Solutions: To align with RURALITIES' inclusion focus, Uganda has some noteworthy practices. The country's longstanding UWEP (Uganda Women Entrepreneurship

Programme) has supported women groups with grants/credit and training, many in rural areas, to start value-add businesses (like apiary, baking, craft making linked to tourism). Evaluation showed increased incomes and confidence among women participants. Building on this, under PDM each parish is encouraged to form at least one women's production group. Low-tech innovations have also made a difference – for example, biogas digesters and fuel-efficient cookstoves have been promoted in rural Uganda (by NGOs like Heifer Intl.), reducing women's labor in collecting firewood and improving health, while producing organic fertilizer as a byproduct for farms. This kind of ecosystem-enhancing, appropriate technology improves quality of life and farm productivity simultaneously. Another local innovation is the bamboo bicycle initiative in Kasese district, where youth produce inexpensive bicycle frames from bamboo; rural farmers (especially women) can use these bicycles to transport produce to market, significantly easing a logistical bottleneck. It's a reminder that not all innovation is digital – sometimes a simple appropriate technology can be transformative in a rural context.

In conclusion, Uganda's path toward rural innovation is a multi-faceted one. The Parish Development Model anchors it by empowering communities financially and administratively. Surrounding that, expanding digital advisory services, youth skilling and financing, and gender-responsive programs will ensure the innovation is truly inclusive. If Uganda continues on this trajectory – learning and adapting as PDM unfolds, and scaling what works (be it a WhatsApp plant clinic or a climate-smart village) – it will strengthen rural livelihoods and serve as a replicable model for community-driven development in Africa.

6 CONCLUSION AND WAY FORWARD

The rural innovation landscapes of Europe and Africa are dynamic and increasingly interconnected. Strong policy frameworks — such as the EU's Common Agricultural Policy (CAP) and the African Union's Agenda 2063 and Comprehensive Africa Agriculture Development Programme (CAADP) — provide a solid foundation for progress. A wide range of funding instruments and stakeholder-led initiatives are driving tangible change on the ground. Key innovation domains, from digital agriculture and agri-tech to sustainability solutions and social enterprises, are already delivering promising results in tackling rural challenges.

However, achieving the shared vision of vibrant, inclusive, and sustainable rural areas across both continents will require sustained efforts to scale up best practices, close critical gaps in infrastructure, skills, and finance, and strengthen EU–AU cooperation. The early successes highlighted in this report — whether a smart village model in Europe or a mobile agri-services platform in Africa — offer valuable lessons for policymakers, practitioners, and communities. By leveraging these experiences and fostering deeper cross-regional collaboration, the EU and AU can jointly create the conditions for rural communities to prosper in the decades ahead[203, 204].

The SIMSES-based policy briefs demonstrate that, whether it involves promoting agritourism in an Italian village, operating a community bus service in the Scottish Highlands, or digitising a historic castle in Slovenia, the underlying principle remains the same: innovation anchored in local strengths. Rural areas across Europe and Africa possess immense assets — from fertile agricultural land and distinctive cultural traditions to exceptional natural landscapes. By tackling pressing challenges with targeted, adaptable policy tools, and by drawing lessons from proven, on-the-ground successes, policymakers can transform these areas into vibrant hubs of sustainable growth.

The recommendations presented provide a practical starting point for designing policies that not only address specific problems but also empower rural communities to prosper in a rapidly changing world. Each Policy Use-Case underscores that effective solutions are inherently collaborative and context-specific. At the same time, the cross-border exchange of these solutions within a pan-EU–AU framework can accelerate rural innovation, foster mutual learning, and deliver shared benefits for communities across both continents.

A comprehensive summary of the SIMSES-based policy analysis has been prepared to consolidate the key findings and implications for the relevant policy domains. To enhance accessibility and ensure effective communication of the results, visualized versions of the analysis are provided as standalone PDF files in the annexes. These visual materials complement the main text by offering a more intuitive representation of the outcomes, thereby supporting stakeholders in interpreting the results within the project's broader policy framework.

The second version of the deliverable (D5.6) will be prepared and submitted at the conclusion of the project (M60). Given that capacity-building activities targeting African partners are scheduled for the final phase, this version will place particular emphasis on addressing the challenges and needs of the African rural landscape. Furthermore, it will present tailored policy framework options, together with specific recommendations and best practices, to support implementation in the SIMSES follower countries.

7 REFERENCES

[1] CAP: the AKIS model, between research and innovation - https://www.agricolus.com/en/cap-the-akis-model-between-research-and-innovation/#:~:text=The%20objectives%20of%20the%20Common,and%20employment%20in%20rural%20areas

[2] EC Supporting Smart Village strategies - https://agriculture.ec.europa.eu/common-agricultural-policy/rural-development/supporting-smart-village-strategies_en#:~:text=The%20Smart%20Village%20concept%2C%20initially,of%20knowledge%2C%20innovation%20and%20digitalisation%E2%80%9D

[3] https://agriculture.ec.europa.eu/common-agricultural-policy/rural-development/supporting-smart-village-strategies_en#:~:text=The%20common%20agricultural%20policy%20,Smart%20Villages%20across%20Europe%20under

[4] https://au.int/en/agenda2063/goals#:~:text=,productivity%20and%20production

[5] https://au.int/en/pressreleases/20250506/au-launches-caadp-strategy-action-plan-2026-2035-caadp-kampala-declaration#:~:text=The%20African%20Union%20on%20Monday,harvest%20losses%20in%20half

[6] https://au.int/en/pressreleases/20250506/au-launches-caadp-strategy-action-plan-2026-2035-caadp-kampala-declaration#:~:text=About%20the%20CAADP%20The%20Comprehensive,eliminate%20hunger%20and%20reduce%20poverty

[7] https://au.int/en/pressreleases/20250506/au-launches-caadp-strategy-action-plan-2026-2035-caadp-kampala-declaration#:~:text=,Hon.%20Bwino%20said

[8] https://agriculture.ec.europa.eu/common-agricultural-policy/cap-overview/cap-glance_en#:~:text=Payments%20are%20managed%20at%20national,accordance%20with%20EU%20transparency%20rules

[9] https://agriculture.ec.europa.eu/international/international-cooperation/africa/africa-europe-rural-transformation-action-agenda_en#:~:text=%2A%20Horizon%20Europe%20boosts%20EU,and%20innovation%20policy%20priorities%20to

[10] https://faraafrica.org/2024/10/01/african-development-bank-grants-129-million-loan-to-tanzania/#:~:text=The%20Board%20of%20Directors%20of,focused%20agribusiness%20program

[11] https://agriculture.ec.europa.eu/international/international-cooperation/africa/africa-europe-rural-transformation-action-agenda_en#:~:text=,De%20SIRA%29%20initiative

[12] https://agriculture.ec.europa.eu/international/international-cooperation/africa/africa-europe-rural-transformation-action-agenda_en#:~:text=%2A%20African

[13] https://agriculture.ec.europa.eu/international/international-cooperation/africa/africa-europe-rural-transformation-action-agenda_en#:~:text=Along%20with%20the%20Department%20for,to%20credit%2C%20and%20government%20intervention

[14] https://agriculture.ec.europa.eu/international/international-cooperation/africa/africa-europe-rural-transformation-action-agenda_en#:~:text=Image%3A%20Pan,analysis%20of%20policies

[15] https://au.int/en/pressreleases/20250506/au-launches-caadp-strategy-action-plan-2026-2035-caadp-kampala-declaration#:~:text=Addressing%20the%20launching%20event%20virtually%2C,of%20a%20decade%20of%20acceleration

[16] https://au.int/en/pressreleases/20250506/au-launches-caadp-strategy-action-plan-2026-2035-caadp-kampala-declaration#:~:text=On%20his%20part%2C%20the%20African,shift%20towards%20agrifood%20systems%20transformation
[17] https://au.int/en/pressreleases/20250506/au-launches-caadp-strategy-action-plan-2026-2035-caadp-kampala-declaration#:~:text=,Steenhuisen%20said
[18] https://www.worldbank.org/en/results/2025/03/04/afw-from-fields-to-markets-the-role-of-digital-platforms-in-west-africa-agricultural-success#:~:text=along%20with%20other%20digital%20foundations,management%2C%20and%20farm%20monitoring%20using
[19] https://www.worldbank.org/en/results/2025/03/04/afw-from-fields-to-markets-the-role-of-digital-platforms-in-west-africa-agricultural-success#:~:text=instance%2C%20the%20World%20Bank,In%20Cameroon%2C%20the
[20] https://www.afdb.org/en/documents/africircular-innovators-programme#:~:text=AfriCircular%20Innovators%20Programme%20,and%20in%20collaboration
[21] https://au.int/en/pressreleases/20250506/au-launches-caadp-strategy-action-plan-2026-2035-caadp-kampala-declaration#:~:text=Currently%2C%20Africa%20is%20home%20to,increasing%20the%20level%20and%20efficiency
[22] https://faraafrica.org/2024/10/01/african-development-bank-grants-129-million-loan-to-tanzania/#:~:text=The%20project%20will%20implement%20strategies,the%20recruitment%20of%20female%20applicants
[23] https://agriculture.ec.europa.eu/common-agricultural-policy/rural-development/supporting-smart-village-strategies_en#:~:text=Smart%20Villages%20initiatives%20are%20also,rural%20communities%20and%20rural%20stakeholders
[24] https://www.worldbank.org/en/results/2025/03/04/afw-from-fields-to-markets-the-role-of-digital-platforms-in-west-africa-agricultural-success#:~:text=%2A%20The%20C%C3%B4te%20d%E2%80%99Ivoire%20e,of%20digital%20platforms%20increasing%20access
[25] https://www.worldbank.org/en/results/2025/03/04/afw-from-fields-to-markets-the-role-of-digital-platforms-in-west-africa-agricultural-success#:~:text=and%20purchasing%20over%2053%2C000%20SIM,seed%20subsidies%20since%20April%202024
[26] https://au.int/en/pressreleases/20250506/au-launches-caadp-strategy-action-plan-2026-2035-caadp-kampala-declaration#:~:text=Delegates%20also%20heard%20that%20delivering,points%20of%20influence%20in%20planning
[27] https://agriculture.ec.europa.eu/international/international-cooperation/africa/africa-europe-rural-transformation-action-agenda_en#:~:text=The%20Africa,ministerial%20conference%20in%20June%202019
[28] https://agriculture.ec.europa.eu/international/international-cooperation/africa/africa-europe-rural-transformation-action-agenda_en#:~:text=Image%3A%20a%20pair%20of%20black,hands%20cupping%20tea%20leaves
[29] https://agriculture.ec.europa.eu/international/international-cooperation/africa/africa-europe-rural-transformation-action-agenda_en#:~:text=Africa
[30] https://agriculture.ec.europa.eu/international/international-cooperation/africa/africa-europe-rural-transformation-action-

agenda_en#:~:text=particularly%20relevant%20for%20cooperation%20with,partnerships%20and%20opportunities%20for%20Africa

[31] https://www.iicba.unesco.org/en/africa-education-knowledge-platform/au-eu-innovation-agenda#:~:text=The%20AU,advocating%20for%20stronger%20partnerships%2C

[32] https://agriculture.ec.europa.eu/international/international-cooperation/africa/africa-europe-rural-transformation-action-agenda_en#:~:text=,De%20SIRA%29%20initiative

[33] https://agriculture.ec.europa.eu/international/international-cooperation/africa/africa-europe-rural-transformation-action-agenda_en#:~:text=As%20part%20of%20the%20partnership%2C,fully%20benefit%20from%20their%20activities

[34] https://agriculture.ec.europa.eu/international/international-cooperation/africa/africa-europe-rural-transformation-action-agenda_en#:~:text=,and%20European%20VET%20systems

[35] https://agriculture.ec.europa.eu/international/international-cooperation/africa/africa-europe-rural-transformation-action-agenda_en#:~:text=The%20Africa,food%20supply%20chain%20in%20Africa

[36] https://www.ruralities-project.eu/italy_asiago_plateau/#:~:text=Population

[37] https://www.ruralities-project.eu/spain/#:~:text=with%2096%20people%20per%20square,law%20and%20spoken%20in%20the

[38] https://www.ruralities-project.eu/italy_asiago_plateau/#:~:text=Population

[39] https://www.ruralities-project.eu/italy_le_marche/#:~:text=Economics

[40] https://www.ruralities-project.eu/italy_le_marche/#:~:text=richness

[41] https://www.ruralities-project.eu/romania/#:~:text=Economics

[42] https://www.ruralities-project.eu/italy_le_marche/#:~:text=The%20landscape%20is%20a%20blend,to%20the%20region%E2%80%99s%20cultural%20richness

[43] https://www.fos-unm.si/media/pdf/IP/CULTULAR_heritage_Brcar_Jakse_01.pdf#:~:text=level%20of%20sustainability%29,great%20number%20of%20ideas%20for

[44] https://www.ruralities-project.eu/romania/#:~:text=area%20has%20a%20forestry%20potential,climate%20change%2C%20such%20as%20hailstorms

[45] https://www.ruralities-project.eu/romania/#:~:text=The%20predominant%20employment%20is%20in,social%20growth%20of%20the%20area

[46] https://www.ruralities-project.eu/romania/#:~:text=youth%20and%20elderly%20dependency,social%20growth%20of%20the%20area

[47] https://www.ruralities-project.eu/italy_le_marche/#:~:text=Local%20Action%20Group

[48] https://www.vinetur.com/en/2025052387944/marche-region-allocates-40-million-euros-to-modernize-and-boost-sustainability-in-agriculture.html#:~:text=The%20Marche%20region%20in%20central,funding%20was%20published%20this%20week

[49] https://www.vinetur.com/en/2025052387944/marche-region-allocates-40-million-euros-to-modernize-and-boost-sustainability-in-agriculture.html#:~:text=The%20program%20aims%20to%20strengthen,environment%20and%20animal%20welfare%20standards

[50] https://en.wikipedia.org/wiki/Agritourism#:~:text=ImageA%20winery%20in%20Montepulciano%20%2C,167%2C%20Italy
[51] https://www.ruralities-project.eu/italy_asiago_plateau/#:~:text=Fondazione%20Homo%20Viator%20,Teobaldo
[52] https://www.ruralities-project.eu/italy_asiago_plateau/#:~:text=The%20LAG%20on%20the%20Asiago,community%20ownership%20throughout%20the%20process
[53] https://www.ruralities-project.eu/spain/#:~:text=ASINCAR
[54] https://www.ruralities-project.eu/spain/#:~:text=CTIC%20Technology%20Centre
[55] https://italylawfirms.com/en/italian-agriturismos-updates-tuscany-law/#:~:text=The%20foundation%20for%20agritourism%20activities,This%20law%20defines
[56] https://en.wikipedia.org/wiki/Agritourism#:~:text=
[57] https://posavje.com/en/regional-development-agency-posavje-is-developing-a-new-unique-tourist-experience-that-combines-digitalization-and-cultural-heritage-of-posavje-castles/#:~:text=Martin%C4%8Di%C4%8D,The%20mentioned%20room%20will%20be
[58] https://posavje.com/en/regional-development-agency-posavje-is-developing-a-new-unique-tourist-experience-that-combines-digitalization-and-cultural-heritage-of-posavje-castles/#:~:text=room%20will%20be%20to%20inspire,a%20completely%20new%20attractive%20light
[59] https://www.interregeurope.eu/collections/sustainable-rural-mobility#:~:text=Demand
[60] https://www.ruralities-project.eu/scotland/#:~:text=HITRANS%20,effectiveness%2C%20road%20fuel%20costs%2C%20and
[61] https://www.ruralities-project.eu/scotland/#:~:text=With%20a%20population%20of%20448%2C253%2C,long%20journey%20times%20hinder%20accessibility
[62] https://www.ruralities-project.eu/scotland/#:~:text=HITRANS%20has%20over%20200%2C000%20jobs,journeys%20in%20the%20HITRANS%20area
[63] https://www.ruralities-project.eu/scotland/#:~:text=inhabitants,without%20compromising%20our%20pristine%20environment
[64] https://www.ruralities-project.eu/scotland/#:~:text=The%20Highlands%20and%20Islands%20Transport,Partnership
[65] https://www.interregeurope.eu/collections/sustainable-rural-mobility#:~:text=Policy%20brief
[66] https://www.ruralities-project.eu/scotland/#:~:text=Transport%20poverty%20is%20a%20concern%2C,long%20journey%20times%20hinder%20accessibility
[67] https://www.interregeurope.eu/collections/sustainable-rural-mobility#:~:text=Mobility%20as%20a%20service%20for,density%20areas%3A%20key%20learnings
[68] https://www.ruralities-project.eu/scotland/#:~:text=HITRANS%20role%20in%20RURALITIES%20is,the%20Inner%20Moray%20Firth%20area
[69] https://www.interregeurope.eu/collections/sustainable-rural-mobility#:~:text=Sustainable%20rural%20mobility%20is%20vital,term%20sustainability%20goals
[70] https://www.interregeurope.eu/collections/sustainable-rural-mobility#:~:text=Supporting%20mobility%20in%20rural%20regions
[71] https://www.ruralities-project.eu/slovenia/#:~:text=Posavje%20is%20largely%20rural%20and,the%20Bo%C5%BEidar%20Jakac%20Art%20Museum

[72] https://www.ruralities-project.eu/slovenia/#:~:text=Posavje%E2%80%99s%20economy%20is%20underpinned%20by,of%20organic%20farms%20is%20slowly
[73] https://www.ruralities-project.eu/slovenia/#:~:text=business%20services%2C%20and%20tourism,remains%20modest%20despite%20government%20support
[74] https://www.ruralities-project.eu/slovenia/#:~:text=Kostanjevica%20na%20Krki%20and%20Kr%C5%A1ko,technical%20fields%2C%20tourism%2C%20and%20healthcare
[75] https://www.frontierspartnerships.org/journals/european-journal-of-cultural-management-and-policy/articles/10.3389/ejcmp.2024.12057/full#:~:text=Creating%20value%20from%20intangible%20cultural,creating%20value%20for%20rural%20communities
[76] https://www.ruralities-project.eu/slovenia/#:~:text=Regional%20Development%20Agency%20Posavje
[77] https://www.interregeurope.eu/collections/sustainable-rural-mobility#:~:text=Image%3A%20Green%20Landscape
[78] https://www.researchgate.net/figure/The-agricultural-landscape-of-Le-Marche-Italy-provides-an-attractive-setting-for_fig2_378793316#:~:text=attractive,opportunities%20for%20fostering%20sustainable%20development
[79] https://www.ruralities-project.eu/slovenia/#:~:text=National%20Institute%20of%20Chemistry
[80] https://www.ruralities-project.eu/slovenia/#:~:text=Regional%20Development%20Agency%20Posavje

[81] https://faolex.fao.org/docs/pdf/au225158.pdf#:~:text=The%20AU%E2%80%99s%20Agenda%202063%20specifically,nor%20are%20there%20any%20ICT
[82] https://www.worldbank.org/en/news/press-release/2024/12/19/new-program-will-boost-climate-resilience-of-agriculture-and-quality-of-food-production-in-morocco#:~:text=The%20new%20Program%20is%20designed,by%20reformed%20agricultural%20insurance%20systems
[83] https://faolex.fao.org/docs/pdf/au225158.pdf#:~:text=The%20AU%E2%80%99s%20Agenda%202063%20specifically,This%20is%20not%20to%20say
[84] https://knowledge4policy.ec.europa.eu/publication/togo-economic-update-%E2%80%93-unlocking-togo%E2%80%99s-growth-potential-%E2%80%93-october-2023_en#:~:text=%2A%20Adoption%20of%20yield,barely%201%20percent%20using%20irrigation
[85] https://knowledge4policy.ec.europa.eu/publication/togo-economic-update-%E2%80%93-unlocking-togo%E2%80%99s-growth-potential-%E2%80%93-october-2023_en#:~:text=improved%20seeds%20and%20barely%201,percent%20using%20irrigation
[86] https://knowledge4policy.ec.europa.eu/publication/togo-economic-update-%E2%80%93-unlocking-togo%E2%80%99s-growth-potential-%E2%80%93-october-2023_en#:~:text=,on%20more%20exposed%20rural%20populations
[87] https://knowledge4policy.ec.europa.eu/publication/togo-economic-update-%E2%80%93-unlocking-togo%E2%80%99s-growth-potential-%E2%80%93-october-2023_en#:~:text=,living%20standards%20in%20rural%20areas
[88] https://gca.org/news/gca-partners-with-world-bank-on-climate-smart-agricultural-program-in-togo/#:~:text=Togo%E2%80%99s%20farmers%20have%20been%20confronting,percent%20between%202019%20and%202023

[89] https://gca.org/news/gca-partners-with-world-bank-on-climate-smart-agricultural-program-in-togo/#:~:text=climate%20conditions%20have%20undermined%20yields,percent%20between%202019%20and%202023
[90] https://www.togofirst.com/en/agriculture/1203-15919-togo-announces-new-agricultural-modernization-program#:~:text=%28Togo%20First%29%20,2034
[91] https://www.togofirst.com/en/agriculture/1203-15919-togo-announces-new-agricultural-modernization-program#:~:text=vital%20for%20food%20security
[92] https://www.togofirst.com/en/agriculture/1203-15919-togo-announces-new-agricultural-modernization-program#:~:text=The%20ProMAT%20builds%20on%20previous,PNIASAN
[93] https://www.worldbank.org/en/news/press-release/2025/06/11/positioning-togo-as-a-regional-hub-in-agribusiness-and-animal-nutrition#:~:text=The%20Sustainable%20Agricultural%20Transformation%20Program,ZAAP%29%20program
[94] https://www.worldbank.org/en/news/press-release/2025/06/11/positioning-togo-as-a-regional-hub-in-agribusiness-and-animal-nutrition#:~:text=WASHINGTON%2C%20June%2011%2C%202025%20,enhancing%20investments
[95] https://www.worldbank.org/en/news/press-release/2025/06/11/positioning-togo-as-a-regional-hub-in-agribusiness-and-animal-nutrition#:~:text=This%20results,than%20340%2C000%20farmers%20%E2%80%93%20including
[96] https://www.worldbank.org/en/news/press-release/2025/06/11/positioning-togo-as-a-regional-hub-in-agribusiness-and-animal-nutrition#:~:text=sustainable%20management%20of%2050%2C000%20hectares,the%20creation%20of%2072%2C500%20jobs
[97] https://www.togofirst.com/en/agriculture/2708-16962-togo-launches-innovation-network-to-strengthen-african-food-security#:~:text=,Dzogb%C3%A9pim%C3%A9%20on%20August%2025%E2%80%9326%2C%202025
[98] https://www.togofirst.com/en/agriculture/2708-16962-togo-launches-innovation-network-to-strengthen-african-food-security#:~:text=Togo%20hosted%20the%20first%20technical,ATOP
[99] https://www.togofirst.com/en/agriculture/2708-16962-togo-launches-innovation-network-to-strengthen-african-food-security#:~:text=agriculture%20initiatives%20like%20the%20Planned,cultivated%20land%20and%20increased%20yields
[100] https://www.togofirst.com/en/agriculture/2708-16962-togo-launches-innovation-network-to-strengthen-african-food-security#:~:text=Togolese%20officials%20emphasized%20that%20the,cultivated%20land%20and%20increased%20yields
[101] https://gca.org/news/gca-partners-with-world-bank-on-climate-smart-agricultural-program-in-togo/#:~:text=GCA%E2%80%99s%20contribution%20to%20this%20Program,an%20adaptation%20tool%2C%20and%20inform
[102] https://gca.org/news/gca-partners-with-world-bank-on-climate-smart-agricultural-program-in-togo/#:~:text=To%20support%20the%20program%2C%20GCA,weather%20forecasts%20and%20agronomic%20recommendations
[103] https://gca.org/news/gca-partners-with-world-bank-on-climate-smart-agricultural-program-in-togo/#:~:text=Over%20the%20course%20of%20its,value%20chains%20will%20focus%20on
[104] https://gca.org/news/gca-partners-with-world-bank-on-climate-smart-agricultural-program-in-togo/#:~:text=Over%20the%20course%20of%20its,farmers%2C%20and%20tailored%20financial%20products
[105] https://gca.org/news/gca-partners-with-world-bank-on-climate-smart-agricultural-program-in-togo/#:~:text=pay,driven%20agricultural%20insurance

[106] https://gca.org/news/gca-partners-with-world-bank-on-climate-smart-agricultural-program-in-togo/#:~:text=%E2%80%9CBy%20integrating%20state,%E2%80%9D
[107] https://www.giz.de/en/projects/rural-development-and-agriculture#:~:text=foremost%20in%20the%20trade%20associations,sector%20and%20participation%20in%20international
[108] https://www.giz.de/en/projects/rural-development-and-agriculture#:~:text=jobs%2C%2026%2C400%20people%20are%20now,and%20pineapple%20producers%20have%20been
[109] https://ropur.com/water-scarcity-in-morocco-2024-2028-challenges-and-solutions#:~:text=Water%20Scarcity%20in%20Morocco%3A%202024,as%20reserves%20hit%20lows
[110] https://www.giz.de/en/projects/einkommenssteigerung-von-kleinbauerinnen-landwirtschaftliches-innovationsprojekt-agypten#:~:text=However%2C%20the%20agricultural%20industry%20in,10%20to%2040%20per%20cent
[111] https://www.giz.de/en/projects/einkommenssteigerung-von-kleinbauerinnen-landwirtschaftliches-innovationsprojekt-agypten#:~:text=The%20project%20aims%20to%20raise,communities%20in%20Upper%20Egypt%20by
[112] https://www.giz.de/en/projects/einkommenssteigerung-von-kleinbauerinnen-landwirtschaftliches-innovationsprojekt-agypten#:~:text=Context
[113] https://www.wbgkggtf.org/node/3902#:~:text=This%20activity%20will%20enable%20the,capacity%20building%20and%20digital%20innovation
[114] https://egyptssp.ifpri.info/2025/04/17/bep-seminar-series-climate-smart-agriculture-and-development-practices-in-egypt/#:~:text=BEP%20Seminar%20Series%3A%20Climate,ensure%20food%20supply%20chain
[115] https://openknowledge.fao.org/items/b857b724-74e0-4ba5-9095-66448365b08c#:~:text=Promoting%20climate,Upper%20and%20Lower%20Egypt
[116] https://openknowledge.fao.org/server/api/core/bitstreams/eec90055-7494-440e-ad53-1bc3663dc71b/content#:~:text=,Agricultural
[117] https://www.wbgkggtf.org/node/3902#:~:text=The%20Egypt%20Climate%20Smart%20Innovation,knowledge%20that%20will%20be%20shared
[118] https://www.wbgkggtf.org/node/3902#:~:text=%2A%20i
[119] https://www.wbgkggtf.org/node/3902#:~:text=CRAFT%20component%202
[120] https://www.wbgkggtf.org/node/3902#:~:text=The%20Climate%20Smart%20Innovation%20,using%20mobile%20data%20gathering%20tools
[121] https://www.wbgkggtf.org/node/3902#:~:text=Outcomes%20of%20EgCITE%20%3A
[122] https://www.giz.de/en/projects/einkommenssteigerung-von-kleinbauerinnen-landwirtschaftliches-innovationsprojekt-agypten#:~:text=1,food%20and%20agricultural%20businesses%20to
[123] https://www.giz.de/en/projects/einkommenssteigerung-von-kleinbauerinnen-landwirtschaftliches-innovationsprojekt-agypten#:~:text=1,The%20project%20is
[124] https://www.giz.de/en/projects/einkommenssteigerung-von-kleinbauerinnen-landwirtschaftliches-innovationsprojekt-agypten#:~:text=improving%20local%20services%20in%20rural,as%20online%20market%20platforms%2C%20online
[125] https://www.giz.de/en/projects/einkommenssteigerung-von-kleinbauerinnen-landwirtschaftliches-innovationsprojekt-agypten#:~:text=utilising%20private%20sector%20expertise%2C%20technology,term%20support

[126] https://www.giz.de/en/projects/einkommenssteigerung-von-kleinbauerinnen-landwirtschaftliches-innovationsprojekt-agypten#:~:text=The%20introduction%20of%20green%20innovations,rural%20businesses%20in%20Upper%20Egypt

[127] https://agritechchallenge.org/projects/agritech4egypt#:~:text=How%20to%20make%20agriculture%20in,resilient%20through%20innovation

[128] https://agritechchallenge.org/projects/agritech4egypt#:~:text=Agri,one%20of%20the%20priority%20areas

[129] https://agritechchallenge.org/projects/agritech4egypt#:~:text=Missed%20it%3F%20On%20Dec%2017%2C,900%20applicants%20across%2048%20countries

[130] https://agritechchallenge.org/projects/agritech4egypt#:~:text=The%20AgriTech4Egypt%20Innovation%20Challenge%20is,market%20strategy

[131] https://agritechchallenge.org/projects/agritech4egypt#:~:text=The%20AgriTech4Egypt%20Innovation%20Challenge%20is,the%20market%20demands%20of%20Egypt

[132] https://agritechchallenge.org/projects/agritech4egypt#:~:text=

[133] https://ideas.repec.org/p/ags/cfcp15/344380.html#:~:text=technologies%20to%20adolescents%20can%20influence,adoption%20of%20improved%20agricultural

[134] https://www.moroccoworldnews.com/2024/12/166731/drought-cuts-moroccos-wheat-production-by-half-as-water-crisis-deepens/#:~:text=Drought%20Cuts%20Morocco%27s%20Wheat%20Production,will%20decline%20by%20approximately%2050

[135] https://phys.org/news/2024-07-crucial-farm-jobs-dry-drought.html#:~:text=Crucial%20farm%20jobs%20dry%20up,million%20hectares%20compared%20to

[136] https://icarda.org/media/blog/morocco-convert-1m-ha-conservation-agriculture-how-icardainra-fit#:~:text=In%20Morocco%2C%20cereal%20cultivation%20%E2%80%93often,the%20country%E2%80%99s%20arable%20land%20surface

[137] https://icarda.org/media/blog/morocco-convert-1m-ha-conservation-agriculture-how-icardainra-fit#:~:text=%E2%80%9CMorocco%E2%80%99s%20soils%20are%C2%A0some%C2%A0of%20the%C2%A0most%20fragile%C2%A0in,a%C2%A0CA%C2%A0expert%20of%C2%A0more%20than%2015%20years

[138] https://www.moroccoworldnews.com/2020/02/73480/morocco-launches-new-national-programs-for-agriculture-forests/#:~:text=The%20first%20pillar%20is%20the,of%20350%2C000%20jobs%2C%20he%20said

[139] https://www.moroccoworldnews.com/2020/02/73480/morocco-launches-new-national-programs-for-agriculture-forests/#:~:text=The%20first%20pillar%20is%20the,of%20350%2C000%20jobs%2C%20he%20said

[140] https://www.moroccoworldnews.com/2020/02/73480/morocco-launches-new-national-programs-for-agriculture-forests/#:~:text=new%20generation%20of%20the%20agricultural,of%20350%2C000%20jobs%2C%20he%20said

[141] https://www.moroccoworldnews.com/2020/02/73480/morocco-launches-new-national-programs-for-agriculture-forests/#:~:text=To%20reach%20the%20objective%2C%20the,7%20billion%29%20by%202030

[142] https://www.moroccoworldnews.com/2020/02/73480/morocco-launches-new-national-programs-for-agriculture-forests/#:~:text=To%20reach%20the%20objective%2C%20the,7%20billion%29%20by%202030
[143] https://www.moroccoworldnews.com/2020/02/73480/morocco-launches-new-national-programs-for-agriculture-forests/#:~:text=The%20new%20strategy%20aims%20to,preserve%20biodiversity%2C%20said%20the%20minister
[144] https://www.moroccoworldnews.com/2020/02/73480/morocco-launches-new-national-programs-for-agriculture-forests/#:~:text=%E2%80%9CForests%20of%20Morocco%E2%80%9D%20revolves%20around,the%20management%20of%20the%20sector
[145] https://www.moroccoworldnews.com/2020/02/73480/morocco-launches-new-national-programs-for-agriculture-forests/#:~:text=The%20distribution%20process%20of%20agricultural,and%20traditional%20markets%2C%20explained%20Akhannouch
[146] https://www.worldbank.org/en/news/press-release/2024/12/19/new-program-will-boost-climate-resilience-of-agriculture-and-quality-of-food-production-in-morocco#:~:text=WASHINGTON%2C%20December%2019%2C%202024%20%E2%80%94,strengthening%20food%20safety%20and%20quality
[147] https://www.worldbank.org/en/news/press-release/2024/12/19/new-program-will-boost-climate-resilience-of-agriculture-and-quality-of-food-production-in-morocco#:~:text=This%20initiative%20will%20also%20strengthen,million%20people%2C%20including%20almost%20120%2C000
[148] https://www.worldbank.org/en/news/press-release/2024/12/19/new-program-will-boost-climate-resilience-of-agriculture-and-quality-of-food-production-in-morocco#:~:text=%22By%20supporting%20an%20ambitious%20scale,Malta%20at%20the%20World%20Bank
[149] https://icarda.org/media/blog/morocco-convert-1m-ha-conservation-agriculture-how-icardainra-fit#:~:text=On%20November%2012th%2C%20the%20Moroccan,under%20Conservation%20Agriculture%20by%202030
[150] https://icarda.org/media/blog/morocco-convert-1m-ha-conservation-agriculture-how-icardainra-fit#:~:text=%E2%80%9CThe%20ICARDA%20and%20INRA%20research,in%20Soils%2C%20Water%2C%20and%20Agronomy
[151] https://icarda.org/media/blog/morocco-convert-1m-ha-conservation-agriculture-how-icardainra-fit#:~:text=Adopting%20CA%20will%20reduce%20soil,%E2%80%9D
[152] https://icarda.org/media/blog/morocco-convert-1m-ha-conservation-agriculture-how-icardainra-fit#:~:text=%E2%80%9CFor%20more%20than%20a%20decade,Moussadek
[153] https://www.hortidaily.com/article/9639707/morocco-wants-to-equip-one-million-hectares-with-localized-irrigation-by-2030/
[154] https://www.moroccoworldnews.com/2025/08/237589/morocco-hosts-first-agro-export-day-in-november-to-boost-food-industry-exports/#:~:text=Rabat%20%E2%80%93%20The%20National%20Federation,at%20the%20Hyatt%20Regency%20Casablanca
[155] https://www.moroccoworldnews.com/2025/08/237589/morocco-hosts-first-agro-export-day-in-november-to-boost-food-industry-exports/#:~:text=Agri,practices%20that%20meet%20market%20requirements
[156] https://www.moroccoworldnews.com/2025/08/237589/morocco-hosts-first-agro-export-day-in-november-to-boost-food-industry-

exports/#:~:text=certifications%2C%20which%20are%20increasingly%20important,for%20international%20differentiation
[157] https://www.moroccoworldnews.com/2020/02/73480/morocco-launches-new-national-programs-for-agriculture-forests/#:~:text=Argan%20plantations
[158] https://www.moroccoworldnews.com/2020/02/73480/morocco-launches-new-national-programs-for-agriculture-forests/#:~:text=The%20program%2C%20costing%20around%20MAD,seven%20communes%20of%20the%20region
[159] https://www.moroccoworldnews.com/2020/02/73480/morocco-launches-new-national-programs-for-agriculture-forests/#:~:text=billion%20%28%E2%82%AC23
[160] https://www.donorplatform.org/post/blog-agro-food-jobs-for-youth-in-egypt-morocco-and-tunisia/#:~:text=Blog%20,sized%20businesses%2C
[161] https://www.giz.de/en/projects/transformative-agricultural-systems-rural-economic-development-nigeria#:~:text=Nigeria%2C%20Africa%E2%80%99s%20most%20populous%20country,food%20security%20and%20economic%20stability
[162] https://www.giz.de/en/projects/transformative-agricultural-systems-rural-economic-development-nigeria#:~:text=with%20minimal%20value%20addition%20and,food%20security%20and%20economic%20stability
[163] https://www.giz.de/en/projects/transformative-agricultural-systems-rural-economic-development-nigeria#:~:text=contributing%20to%20food%20insecurity,food%20security%20and%20economic%20stability
[164] https://technologytimes.ng/nigeria-targets-tech-enabled-agriculture/#:~:text=According%20to%20him%2C%20NATIP%20offers,at%20scale%2C%E2%80%9D%20the%20Minister%20adds
[165] https://technologytimes.ng/nigeria-targets-tech-enabled-agriculture/#:~:text=Nigeria%20targets%20tech,under%20NATIP
[166] https://technologytimes.ng/nigeria-targets-tech-enabled-agriculture/#:~:text=The%20Federal%20Government%20says%20it,Image%20credit%3A%20Image%20FX
[167] https://technologytimes.ng/nigeria-targets-tech-enabled-agriculture/#:~:text=He%20explains%20that%20the%20policy,PFSCU
[168] https://technologytimes.ng/nigeria-targets-tech-enabled-agriculture/#:~:text=African%20Development%20Bank
[169] https://technologytimes.ng/nigeria-targets-tech-enabled-agriculture/#:~:text=In%20what%20he%20describes%20as,5%20trillion
[170] https://technologytimes.ng/nigeria-targets-tech-enabled-agriculture/#:~:text=the%20nation%E2%80%99s%20history%2C%20Kyari%20announced,5%20trillion
[171] https://www.vanguardngr.com/2025/08/minister-kyari-unveils-revised-natl-youth-manifesto-in-agriculture/#:~:text=The%20Federal%20Government%20has%20launched,leadership%20in%20Nigeria%E2%80%99s%20agricultural%20sector
[172] https://www.vanguardngr.com/2025/08/minister-kyari-unveils-revised-natl-youth-manifesto-in-agriculture/#:~:text=%E2%80%9CToday%20is%20more%20than%20the,%E2%80%9D
[173] https://www.vanguardngr.com/2025/08/minister-kyari-unveils-revised-natl-youth-manifesto-in-agriculture/#:~:text=The%20Minister%20assured%20that%20the,both%20federal%20and%20state%20levels
[174] https://www.vanguardngr.com/2025/08/minister-kyari-unveils-revised-natl-youth-manifesto-in-agriculture/#:~:text=will%20integrate%20the%20Call%20to,both%20federal%20and%20state%20levels

[175] https://technologytimes.ng/nigeria-launches-youth-farmers-enrolment-portal/#:~:text=The%20Federal%20Government%20has%20launched,address%20unemployment%20and%20food%20insecurity
[176] https://technologytimes.ng/nigeria-launches-youth-farmers-enrolment-portal/#:~:text=ADVERTISEMENT
[177] https://technologytimes.ng/nigeria-launches-youth-farmers-enrolment-portal/#:~:text=,Olawande%2C%20Minister%20of%20Youth%20Development
[178] https://technologytimes.ng/nigeria-launches-youth-farmers-enrolment-portal/#:~:text=According%20to%20the%20Youth%20Development%2C,strengthening%20the%20country%E2%80%99s%20agricultural%20sector
[179] https://www.vanguardngr.com/2025/08/minister-kyari-unveils-revised-natl-youth-manifesto-in-agriculture/#:~:text=Security%2C%20Sen,Policy%20Coordination%20in%20the%20Ministry
[180] https://www.vanguardngr.com/2025/08/minister-kyari-unveils-revised-natl-youth-manifesto-in-agriculture/#:~:text=Kyari%20commended%20the%20Leonard%20%26,innovations%20shaped%20the%20revised%20manifesto
[181] https://www.vanguardngr.com/2025/08/minister-kyari-unveils-revised-natl-youth-manifesto-in-agriculture/#:~:text=Kyari%20commended%20the%20Leonard%20%26,innovations%20shaped%20the%20revised%20manifesto
[182] https://www.vanguardngr.com/2025/08/minister-kyari-unveils-revised-natl-youth-manifesto-in-agriculture/#:~:text=The%20Co,ownership%20of%20the%20agricultural%20space
[183] https://www.sciencedirect.com/science/article/pii/S2452292925000475#:~:text=Determinants%20of%20use%20of%20digital,among%20farming%20households%20in%20Nigeria
[184] https://technologytimes.ng/nigeria-launches-youth-farmers-enrolment-portal/#:~:text=live
[185] https://www.donorplatform.org/post/publications/uganda-case-study-youth-ahead-policy-innovations-to-create-opportunities-for-young-people-in-africas-agrifood-systems/#:~:text=This%20case%20study%20on%20Uganda,improve%20access%20to%20education%20and
[186] https://www.donorplatform.org/post/publications/uganda-case-study-youth-ahead-policy-innovations-to-create-opportunities-for-young-people-in-africas-agrifood-systems/#:~:text=growth%2C%20meeting%20commitments%20under%20the,sustainable%20development%20and%20economic%20growth
[187] https://ngoforum.or.ug/wp-content/uploads/2024/05/The-Parish-Development-Model-Two-Years-Later.pdf#:~:text=,and%20reduce%20vulnerability%20across%20Uganda
[188] https://ngoforum.or.ug/wp-content/uploads/2024/05/The-Parish-Development-Model-Two-Years-Later.pdf#:~:text=The%20primary%20goal%20of%20the,and%20reduce%20vulnerability%20across%20Uganda
[189] https://ict.go.ug/media/news/digitization-driving-progress-in-ugandas-parish-development-model#:~:text=The%20Parish%20Development%20Model%20,time%20access%20at%20all
[190] https://ict.go.ug/media/news/digitization-driving-progress-in-ugandas-parish-development-model#:~:text=actively%20uses%20the%20Parish,PDMIS%20captures%20vital
[191] https://ict.go.ug/media/news/digitization-driving-progress-in-ugandas-parish-development-model#:~:text=The%20Parish%20Development%20Model%20Information,makers%20at%20all%20levels
[192] https://ict.go.ug/media/news/digitization-driving-progress-in-ugandas-parish-development-model#:~:text=comprehensive%20digital%20database%20of%20beneficiaries,traceable%20beneficiaries%20receive%20payments%2C%20PDMIS
[193] https://www.donorplatform.org/post/publications/uganda-case-study-youth-ahead-policy-innovations-to-create-opportunities-for-young-people-in-africas-agrifood-

systems/#:~:text=growth%2C%20meeting%20commitments%20under%20the,sustainable%20development%20and%20economic%20growth

[194] https://ict.go.ug/media/news/digitization-driving-progress-in-ugandas-parish-development-model#:~:text=household%2C%20community%20profiles%20and%20digitize,NINs

[195] https://ict.go.ug/media/news/digitization-driving-progress-in-ugandas-parish-development-model#:~:text=amounts%2C%20repayments%2C%20savings%2C%20account%20details%2C,funds%20reach%20the%20intended%20beneficiaries

[196] https://ict.go.ug/media/news/digitization-driving-progress-in-ugandas-parish-development-model#:~:text=infrastructure%20significantly%20enhances%20transparency%20and,records%20throughout%20Uganda%2C%20covering%20nearly

[197] https://ict.go.ug/media/news/digitization-driving-progress-in-ugandas-parish-development-model#:~:text=this%20digital%20foundation%20will%20empower,MOPFED%29%2C%20Ministry%20of

[198] https://ict.go.ug/media/news/digitization-driving-progress-in-ugandas-parish-development-model#:~:text=efficiency%2C%20resulting%20in%20fewer%20reported,support%20PDMIS%20operations%2C%20aiding%20in

[199] https://ict.go.ug/media/news/digitization-driving-progress-in-ugandas-parish-development-model#:~:text=Additionally%2C%20in%20partnership%20with%20the,tablets%20for%20Local%20Government%20Statisticians

[200] https://blog.plantwise.org/2025/08/08/from-field-to-farm-how-digital-innovation-is-transforming-precision-agriculture-in-uganda/#:~:text=Farmers%20in%20Luwero%2C%20Nakasongola%2C%20Nakaseke%2C,as%20fertilizers%20and%20farm%20inputs

[201] https://blog.plantwise.org/2025/08/08/from-field-to-farm-how-digital-innovation-is-transforming-precision-agriculture-in-uganda/#:~:text=Anthony%E2%80%99s%20experience%20began%20with%20acquiring,on%20how%20to%20manage%20them

[202] https://blog.plantwise.org/2025/08/08/from-field-to-farm-how-digital-innovation-is-transforming-precision-agriculture-in-uganda/#:~:text=hub%20on%20WhatsApp%2C%20serving%20over,on%20how%20to%20manage%20them

[203] https://agriculture.ec.europa.eu/international/international-cooperation/africa/africa-europe-rural-transformation-action-agenda_en#:~:text=The%20Africa,food%20supply%20chain%20in%20Africa

[204] https://www.worldbank.org/en/results/2025/03/04/afw-from-fields-to-markets-the-role-of-digital-platforms-in-west-africa-agricultural-success#:~:text=along%20with%20other%20digital%20foundations,management%2C%20and%20farm%20monitoring%20using

ANNEXES

Ruralities

Policy Brief

Sustainable Food Value Chains in Iași

Case Study: RoRuralia Living Lab in Romania

📍 Overview

Iași County, in Romania's North-East Region, has rich agricultural potential but struggles to build strong food value chains. Production is fragmented, processing capacity is low, and market integration is limited. The RoRuralia Living Lab works to connect small producers with processing, logistics, and urban markets, fostering innovation and collaboration for sustainable food systems.

⚠️ Key Challenges

Challenge	Impact
Fragmented small-scale farms (<5 ha)	Inconsistent volumes and weak bargaining power.
Limited processing facilities	Reliance on raw commodity sales, low value-added income.
Weak logistics & storage	High post-harvest losses and reduced competitiveness.
Dependence on intermediaries	Farmers receive a small share of consumer prices.
Regulatory & financial barriers	Difficulties in meeting food safety standards and accessing credit.

🛠️ Policy Options

- Support producer groups/cooperatives to aggregate production and share processing facilities.
- Establish a centrally located Iași Food Hub with cold storage and online marketplace.
- Leverage CAP funds for short-supply chains, on-farm processing, and cooperative projects.
- Use public procurement to prioritise local, sustainable food for schools and hospitals.
- Promote digital traceability and logistics platforms for direct farmer-consumer links.

🌍 Best Practices

- Co-financed shared processing units (e.g., cheese plants, canning facilities) to boost branding and value-added sales.
- Local procurement targets following examples from other Romanian regions.
- Digital platforms to coordinate distribution and improve transparency.
- RoRuralia Living Lab as a hub for continuous training, networking, and innovation sharing.

💡 Key Takeaway

Building cooperative structures, investing in processing, and leveraging local procurement can transform Iași's fragmented production into a resilient, market-driven food value chain

Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement no 101060876. UK participants in Horizon Europe Project RURALITIES are supported by UKRI grant numbers: 10051963 The Highlands and Islands Transport Partnership and 10050988 Earthwatch Europe.

Contact

info@ruralities-project.eu
www.ruralities-project.eu

UKRI Innovate UK

Ruralities

Policy Brief

Cultural Heritage as a Driver for Rural Development

Case Study: Slovenia's Posavje Region

📍 Overview

Rural areas endowed with rich cultural and natural heritage hold a distinctive asset for driving sustainable development. The Posavje region of Slovenia (Lower Sava) exemplifies this potential, with its castles, museums, traditional crafts, wine-growing tradition, gastronomy, beekeeping, and protected landscapes (Natura 2000). While these assets offer significant opportunities for tourism, cultural industries, and place-based innovation, the region faces challenges such as population decline, workforce shortages, and economic modernisation needs. This policy brief explores how cultural heritage can be leveraged for rural innovation, economic diversification, and community cohesion, with lessons applicable to African rural contexts as well.

⚠️ Key Challenges

Challenge	Impact
Underutilised Heritage Potential	Heritage sites have low visibility and insufficient tourist services, limiting economic and cultural benefits.
Preservation Costs and Capacity	Maintaining historic sites is resource-intensive; rural areas face funding and skills gaps.
Balancing Development with Tradition	Economic growth must not undermine traditional sectors or rural landscape character.
Community Involvement and Youth	Ageing population and youth outmigration weaken heritage stewardship and continuity.

🛠️ Policy Options

- Heritage-Led Development – Integrate cultural heritage into rural development strategies and tourism plans.
- Public-Private Partnerships – Incentivize private investment in heritage preservation through co-financing or tax benefits.
- Digital Innovation – Support projects like 'e-Castles' to digitise and promote heritage sites using VR, 3D models, and apps.
- Cultural Tourism Marketing – Create thematic routes and coordinated promotion for rural heritage destinations.
- Education & Capacity Building – Train local youth in heritage management, restoration, and cultural entrepreneurship.

🌍 Best Practices

- Posavje e-Castles – A shared interpretation centre offering VR and holographic experiences of multiple castles.
- Heritage Entrepreneurship – Support artisans and small businesses offering heritage-based products and services.
- Community Heritage Festivals – Annual events to celebrate and promote local heritage, boosting tourism.
- Protective Land-Use Planning – Ensure development projects do not compromise cultural landscapes or heritage sites.
- Cross-Regional Collaboration – Participate in EU and AU heritage networks for mutual learning and innovation.

💡 Key Takeaway

Cultural heritage can be a powerful driver for sustainable rural development when linked to tourism, entrepreneurship, and community engagement. Strategic investment, digital innovation, and cross-regional cooperation can help rural regions like Posavje – and counterparts in Africa – turn heritage into a catalyst for inclusive growth.

Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement no 101060876. UK participants in Horizon Europe Project RURALITIES are supported by UKRI grant numbers: 10051963 The Highlands and Islands Transport Partnership and 10050988 Earthwatch Europe.

Contact
info@ruralities-project.eu
www.ruralities-project.eu

UKRI Innovate UK

Ruralities

Policy Brief

Sustainable Tourism & Agriculture in Rural Regions

Case Studies: Italy, Spain, Romania

📍 Overview

Many rural regions in Europe face a complex interplay of demographic decline, economic transition, and environmental pressures. In Italy's Marche (Pesaro-Urbino) and Veneto (Seven Municipalities Plateau), Spain's Asturias, and Romania's Iași (Siret–Moldova region), the challenge is to position sustainable tourism and agriculture as complementary pillars of rural innovation. Rich cultural landscapes, strong local identities, and agricultural traditions coexist with population ageing, youth outmigration, and the urgent need to modernise economies while preserving environmental and cultural assets.

⚠️ Key Challenges

Challenge	Impact
Demographic Decline & Youth Exodus	Youth outmigration and ageing populations threaten the continuity of agriculture and preservation of cultural heritage.
Economic Viability of Farming	Small farms struggle to compete; agritourism and organic farming offer opportunities but need investment, modernization, and training.
Sustainable Tourism Gaps	High potential is often hindered by underdeveloped infrastructures or risks of unsustainable practices.
Environmental & Climate Pressures	Soil erosion, biodiversity loss, and climate impacts challenge agriculture and tourism.
Infrastructure & Connectivity	Poor transportation systems and digital access limit market reach and reduce attractiveness for young entrepreneurs and visitors.

🛠️ Policy Options

• Empowering Local Action (LEADER) – Strengthen Local Action Groups to fund and coordinate community-led tourism and agriculture initiatives.
• CAP Instruments – Use Rural Development Programmes to modernise farms, support young farmers, and promote agri-environment schemes.
• Integrated Sustainable Tourism Strategies – Align tourism development with sustainability standards and cultural preservation.
• Innovation and Training – Build rural innovation hubs, promote digitalisation in agriculture, and upskill residents for hospitality and agri-food sectors.
• Youth Retention and Entrepreneurship – Provide startup grants, tax incentives, and quality-of-life improvements to keep young people in rural areas.

Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement no 101060876. UK participants in Horizon Europe Project RURALITIES are supported by UKRI grant numbers: 10051963 The Highlands and Islands Transport Partnership and 10050988 Earthwatch Europe.

Contact
info@ruralities-project.eu
www.ruralities-project.eu

UKRI Innovate UK

Ruralities

Policy Brief

Sustainable Tourism & Agriculture in Rural Regions

Case Studies: Italy, Spain, Romania

🛠️ Policy Options

• Empowering Local Action (LEADER) – Strengthen Local Action Groups to fund and coordinate community-led tourism and agriculture initiatives.

• CAP Instruments – Use Rural Development Programmes to modernise farms, support young farmers, and promote agri-environment schemes.

• Integrated Sustainable Tourism Strategies – Align tourism development with sustainability standards and cultural preservation.

• Innovation and Training – Build rural innovation hubs, promote digitalisation in agriculture, and upskill residents for hospitality and agri-food sectors.

• Youth Retention and Entrepreneurship – Provide startup grants, tax incentives, and quality-of-life improvements to keep young people in rural areas.

🌍 Best Practices

• Foster Agritourism – Integrate tourism with farming through legal frameworks and quality trademarks (e.g., Italy's Agriturismo Italia).

• Leverage Cultural Heritage – Use digital tools (3D tours, holograms) to promote heritage sites while spreading out visitor flows.

• Community-Led Governance – Create tourism cooperatives or networks to manage growth and ensure equitable benefits.

• Environmental Safeguards – Fund nature-based solutions, enforce impact assessments, and support eco-labels for rural accommodations.

• Infrastructure Improvements – Expand broadband and transport links, including Demand-Responsive Transport for remote tourism sites.

💡 Key Takeaway

Success depends on integrated policies, community engagement, targeted funding, and preservation of cultural and natural assets. Sustainable tourism and agriculture for instance can reinforce each other to drive rural innovation and resilience. The experiences from Italy, Spain, and Romania offer adaptable models for rural regions across the EU and AU.

Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement no 101060876. UK participants in Horizon Europe Project RURALITIES are supported by UKRI grant numbers: 10051963 The Highlands and Islands Transport Partnership and 10050988 Earthwatch Europe.

Contact

info@ruralities-project.eu
www.ruralities-project.eu

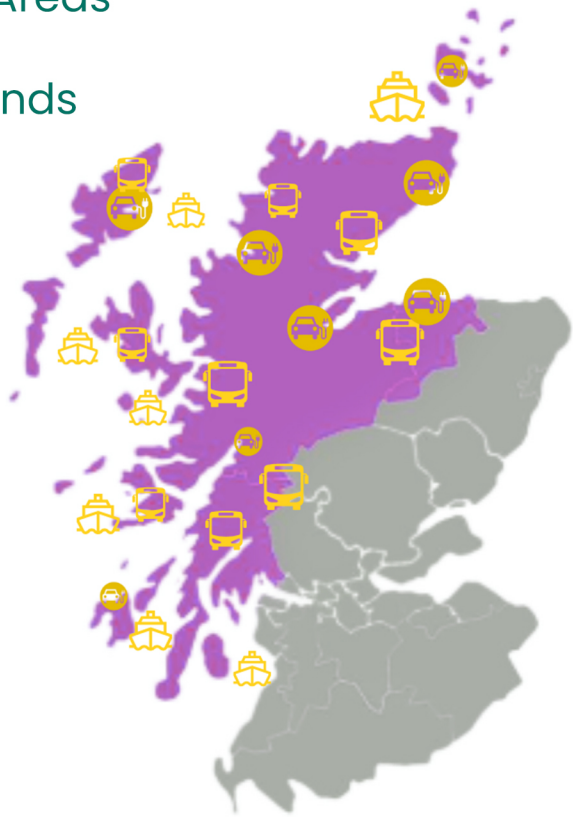
UKRI Innovate UK

Ruralities

Policy Brief

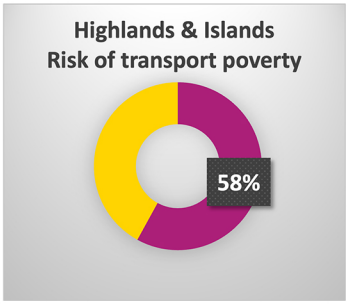
Sustainable Transport in Remote Rural Areas

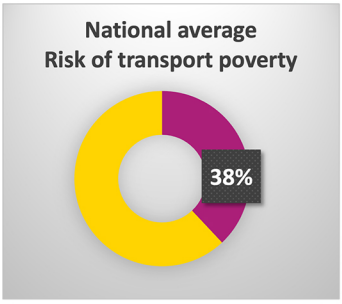
Case Study: Scotland's Highlands & Islands



📍 Overview

The Highlands & Islands cover almost half of Scotland's territory, yet are home to less than 10% of its population. Dispersed settlements, challenging geography, and limited public transport hinder access to jobs, education, healthcare, and markets. The region's experience provides transferable lessons for remote rural and island areas worldwide, including in Africa, on how to design sustainable, low-carbon mobility solutions.





⚠️ Key Challenges

Challenge	Impact
Geographic isolation	Vast distances and rugged terrain make conventional public transport costly; some islands rely on ferries or small aircraft.
Transport poverty	58% of areas at high risk, excluding non-drivers and low-income households.
Ageing population	Higher mobility needs, fewer drivers, reduced service viability.
Economic constraints	Limits tourism, jobs, and business competitiveness.
Environmental tension	Need to expand mobility while meeting climate targets.

Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement no 101060876. UK participants in Horizon Europe Project RURALITIES are supported by UKRI grant numbers: 10051963 The Highlands and Islands Transport Partnership and 10050988 Earthwatch Europe.

Contact
info@ruralities-project.eu
www.ruralities-project.eu

UKRI Innovate UK

Ruralities

Policy Brief

Sustainable Transport in Remote Rural Areas

Case Study: Scotland's Highlands & Islands

🛠️ Policy Options
- Rural mobility partnerships – Regional coordination (e.g., HITRANS) to integrate services and advocate needs.
- Multi-modal connectivity – Coordinated road, ferry, rail, and air services with social-value funding.
- Demand-Responsive Transport (DRT) – Flexible, on-demand shared transport tailored to low-density areas.
- Integrated ticketing – One-ticket travel and synchronised timetables across modes.
- Low-carbon mobility – EV charging, fleet electrification, e-bike and community car-share schemes.

🌍 Best Practices
- MaaS for rural areas – Digital and phone-based trip booking across all transport modes.
- Targeted fare subsidies – Free/discounted travel for youth, seniors, and isolated residents.
- Community-led transport – Volunteer driver networks, community minibuses.
- Infrastructure innovation – Maintain rural roads, upgrade ferry terminals, add cycle storage.
- Co-design with communities – Involving locals to tailor routes and schedules.

💡 Key Takeaway
Investing in flexible, integrated, and low-carbon rural mobility delivers social inclusion, economic opportunity, and climate resilience. The Scottish experience shows that solutions must be context-specific yet can inspire similar innovations in rural Africa and beyond.

Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement no 101060876. UK participants in Horizon Europe Project RURALITIES are supported by UKRI grant numbers: 10051963 The Highlands and Islands Transport Partnership and 10050988 Earthwatch Europe.

Contact
info@ruralities-project.eu
www.ruralities-project.eu

UKRI Innovate UK

Ruralities

Policy Brief

Sustainable Agri-Food Practices in Asturias

Case Study: Circular & Organic Farming in Northern Spain

📍 Overview

Asturias, in northern Spain, covers just over 10,00 square kilometers and has a population of slightly above one million people, making it one of the smaller yet densely settled regions of the country. Its rugged orography, dominated by the Cantabrian Mountains and fertile valleys that descend toward the coast, defines both its landscape and settlement patterns. About 60% of the Asturian territory is classified as rural, but only around 20% of its inhabitants live there, which highlights the demographic imbalance and steady depopulation of inland areas. Rural life remains strongly tied to agriculture and livestock, with emblematic products such as dairy, cider apples, the well-known faba asturiana, and even kiwi cultivation gaining relevance. Still, the sector faces key challenges: population decline and aging, geographic isolation linked to its mountainous terrain, limited innovation or digitalization in traditional farming systems or lack of promotion of new economic sectors implemented in rural areas. Strategies to address these issues focus on strengthening and protecting local brands and designations of origin, promoting digital tools for farms and cooperatives, and investing in training programs that support generational renewal and encourage younger populations to remain in rural areas through the implementation of new job opportunities. . The RURALITIES pilot focuses on circular farming (closed-loop resource use), to boost resilience, improve digitalization of rural areas to cut environmental impact, and open value-added opportunities for small producers.

⚠️ Key Challenges

Challenge	Impact
Demographic decline & youth outmigration	Fewer young farmers and entrepreneurs to adopt sustainable practices. Lack of generational relay.
Difficult terrain & small-scale farms	Higher costs, lower economies of scale, slower adoption of innovation.
Geographical isolation	The orography of Asturias region isolates some rural areas (specially those in mountainous regions) limiting their access to services, innovation and sustainable practices.
Revalorization of high contaminants by-products of rural industries (e.g. whey or manure)	Environmental pressures, methane and nutrient management issues.
Market reliance on conventional dairy & beef	Vulnerability to price volatility and low diversification.
Knowledge & certification gaps	Limited adoption of circular farming technologies and organic standards.

Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement no 101060876. UK participants in Horizon Europe Project RURALITIES are supported by UKRI grant numbers: 10051963 The Highlands and Islands Transport Partnership and 10050988 Earthwatch Europe.

Contact

info@ruralities-project.eu
www.ruralities-project.eu

UKRI Innovate UK

Ruralities

Policy Brief

Sustainable Agri-Food Practices in Asturias

Case Study: Circular & Organic Farming in Northern Spain

🛠️ Policy Options
• Use CAP eco-schemes and rural development funds to support organic conversion and circular practices.
• Integrate circular farming pilots into LEADER/CLLD initiatives for rural diversification.
• Develop regional organic farming roadmaps and advisory services.
• Link climate adaptation measures with pasture-based systems.
• Support short supply chains and public procurement for sustainable local products.

🌍 Best Practices
• RESUPEQ project – converts cheese whey into high-value food products, reducing waste and creating income.
• ASINCAR cluster – drives agri-food innovation and digitalisation for SMEs.
• Promote regional brands of Asturias' food products to boost sustainable production system located in rural areas
• On-farm demonstrations and cooperation projects to build farmer skills and confidence.
• Transition towards digitalized farming and agri-food rural systems
• Promotion of spaces and training services in rural areas that ensures adoption of innovation and smooth incorporation of new generations to rural regions and economy.

💡 Key Takeaway
Asturias' pasture-based systems, native breeds, and traditions make it well-placed for a rapid shift to organic and circular farming — provided policy, market, and skills support are aligned.

Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement no 101060876. UK participants in Horizon Europe Project RURALITIES are supported by UKRI grant numbers: 10051963 The Highlands and Islands Transport Partnership and 10050988 Earthwatch Europe.

Contact
info@ruralities-project.eu
www.ruralities-project.eu

UKRI Innovate UK