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IMPACT OF URBANISATION ON THE TRANSFORMATION OF RURAL AREAS

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Abstract. Rapid urbanisation has intensified demographic decline, economic restructuring, and uneven infrastructural change in Albania's rural areas, creating the need to assess how these processes differ across rural community types. The study combined statistical analysis of demographic and socio-economic indicators for 2000–2025, a survey of 200 rural residents in six municipalities, and comparative analysis of periurbanised and remote localities. The findings indicate marked rural depopulation, population ageing, youth out-migration, contraction of agricultural employment, and strong territorial disparities in service access and infrastructure development. Periurbanised areas showed greater adaptive capacity and connectivity, whereas remote communities experienced deeper decline and weaker access to education, health care, and digital networks.

Keywords: social changes, spatial planning, demographic shifts, land use, infrastructure development.

Introduction

Urbanisation transforms the spatial, economic and sociocultural structure of rural areas, creating new opportunities and challenges. Urban growth, infrastructure expansion, lifestyle changes, and the outflow of labour from rural areas lead to a transformation of agricultural landscapes, a reduction in traditional forms of farming, and a reorientation of local communities. These processes alter the balance between urban and rural areas and affect resources, employment, and cultural identity, requiring closer analysis of their long-term consequences.

Similar challenges are widely discussed in European policy and research frameworks. According to Eurostat (2024), the transformation of rural areas in Europe is closely linked to demographic ageing, depopulation, and increasing functional integration between urban and rural territories. Recent European policy-oriented research emphasises that rural resilience and balanced territorial development require coordinated governance, infrastructure investment, and improved connectivity between cities and surrounding rural regions (ESPON, 2020; OECD, 2025). In addition, the European Commission's Joint Research Centre (Feliu & Dijkstra, 2025) reports highlight declining institutional trust and socio-economic disparities in many EU rural regions, underlining the importance of targeted regional development strategies.

Research on urbanisation and rural transformation highlights changes in land use, socio-economic conditions, and spatial development. For example, Asabere et al. (2020) analysed how ur-

banisation in Ghana caused land transformation, including loss of agricultural land and increased anthropogenic pressure on the natural environment. Urban growth was accompanied by uneven access to environmental benefits, highlighting the need for integrated planning to mitigate negative effects. Beckers et al. (2020) found that urbanisation processes in Belgium led to a reduction in agricultural land and changes in agricultural activity in suburban areas, accompanied by increased conflicts between land users. Their simulations showed that further expansion of cities without strategic management would lead to a loss of food potential. Ge et al. (2020) focused on rural migration in China, showing that the outflow of young people contributed to the ageing of the rural population and negatively affected agriculture, while emphasising the role of rural support policies.

Spatial transformation in the Pearl River Delta was analysed by Yang et al. (2020), demonstrating how urbanisation formed new urban-rural ties through intensive land repurposing. They showed that urbanisation stimulated infrastructure development but led to the loss of the traditional rural structure. The researchers emphasised the need to preserve cultural heritage when planning spatial changes. Zhong et al. (2020) highlighted the decline in urban agriculture in China, showing that changes in land use displaced agricultural enterprises from megacity peripheries. Preserving urban farming requires support due to its environmental and food benefits. Ma and Shi (2023) emphasised the interaction between industrial transformation and urban-rural development, arguing that new models of urbanisation contributed to the redistribution of functional burden between territories. Their model suggests that a balance between ecology, economy, and territorial development is key to sustainable growth.

Balla et al. (2023) viewed Albania as an example of intensive urbanisation leading to uneven regional development, depopulation of villages, and growing infrastructure imbalances. Regional development strategies often did not consider the needs of rural communities, highlighting the importance of including rural areas in national investment programmes. Lubonja and Shehu (2022) showed that economic benefits were concentrated primarily in urban centres, deepening socio-economic inequality and indicating the need to decentralise resources. Xhindi and Xhindi (2023) traced the dynamics of urbanisation policies in Albania between 1984 and 2020, demonstrating their impact on the economy and rural structure. Several government decisions contributed to chaotic urban expansion and the reduction of rural settlements, pointing to the need for strategic planning. Sakketa (2023) reviewed the impact of urbanisation in Sub-Saharan Africa, noting that it may stimulate rural development through intermediary markets while also creating new forms of social vulnerability.

European foresight studies also emphasise that rural regions face increasing demographic pressure, economic restructuring, and governance challenges, which may reshape rural-urban relations by 2040 (Bock & Krzysztofowicz, 2021). This highlights the need for country-specific empirical studies. However, existing research pays limited attention to the long-term socio-cultural consequences of urbanisation for rural communities and the relationship between local spatial planning policies and rural adaptability.

To ensure conceptual clarity, the key terms used in this study are defined as follows. Periurbanisation is understood as spatial and functional transformation of rural areas located in close proximity to urban centres, characterised by increased infrastructure development, population mobility, and the gradual integration of urban and rural economic activities. A remote rural community is defined as a settlement located at a considerable distance from major urban centres, with limited transport accessibility, lower infrastructure provision, and a predominantly agrarian socio-economic structure. Urban pressure refers to the combined influence of urban expansion, demographic shifts, economic restructuring, and infrastructure development on surrounding rural territories, resulting in changes in land use, population dynamics, and local livelihoods.

The purpose of the study is to identify and analyse the mechanisms of urbanisation impact on the transformation of rural areas in Albania. The objectives are to conduct a quantitative analysis of the dynamics of the size and age structure of the rural population based on data from the Institute of Statistics of Albania (INSTAT) for 2000–2025, identify spatial and socio-economic imbalances between periurbanised and remote communities, classify key factors of their transformation, and highlight practical recommendations for balanced development of infrastructure, economy, and social services in rural areas of Albania.

Materials and methods

Study design

The study was carried out using empirical and statistical methods, which enabled a comprehensive analysis of demographic structure, land use, socio-economic conditions, and the local population's perceptions of change. Geographically, the study covered both villages located in close proximity to major cities (Tirana, Durres, Kamza) and remote communities (Pukë and Leskovik areas), which enabled the identification of contrasts in the effects of urbanisation.

Data sources and statistical analysis

To quantify socio-economic changes, the study analysed statistical data obtained from INSTAT (2025), The Global Economy (GE, 2022), and international sources, particularly the World Bank (2025). The study period covered 2000–2025. The datasets were derived from different statistical systems and reference years. Where indicators referred to different reporting periods (e.g., 2023 and 2025), the most recent officially available values were used. To ensure comparability, only indicators based on consistent definitions across sources were selected, and the analysis focused primarily on long-term trends rather than single-year fluctuations. When necessary, indicators were harmonised using comparable statistical categories provided by the respective databases. The analysis included the rural population by gender and age, the birth rate, internal migration rates, the dynamics of employment in agriculture, and the average household income in rural regions. Microsoft Excel 365 and Statistical Package for the Social Sciences (SPSS) Statistics 26 were used for the analysis.

Survey design and sampling

To investigate the subjective experience of changes related to urbanisation, a survey of the rural population was conducted. The survey was carried out in October-November 2024 in six selected locations across different municipalities of Albania: Kamza, Kurbin, Lushnje, Pukë, Klos, and Leskovik.

The selection of locations was based on a comparative sampling strategy aimed at capturing contrasting patterns of rural transformation. Three locations (Kamza, Kurbin, and Lushnje) were selected as periurbanised areas due to their proximity to major urban centres and higher levels of infrastructure development, while Pukë, Klos, and Leskovik were selected as remote rural communities characterised by limited accessibility and a predominantly agrarian structure.

Although the sample does not represent all rural regions of Albania, it reflects key types of rural settlements and allows for the identification of general trends and contrasts in urbanisation processes. The geographical distribution of the selected locations, as well as their classification into periurbanised and remote rural areas, are presented in Figure 1.

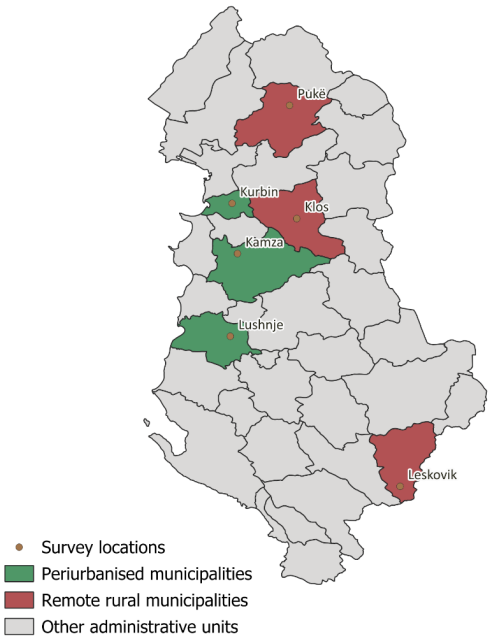

Figure 1. Classification of the selected locations into periurbanised and remote rural areas in Albania
Source: compiled by the authors.

The total sample consisted of 200 respondents, of whom 51% were women and 49% were men. Respondents ranged in age from 18 to 75 years; the average age was 39.2 years. The survey was conducted using paper forms at the local level and online Google Forms in villages with mobile coverage. It included 14 closed and 4 open questions (see Annex 1), covering the following blocks: assessment of changes in rural areas; the presence of labour migration in the family; changes in local infrastructure (roads, schools, health care facilities); employment rate; attitude to urbanisation changes. The inclusion criteria were age 18+, permanent residence in rural areas for at least 5 years, and consent to participate. The sample did not include persons who had temporary registration or stayed in the village for less than 6 months a year (seasonal workers, students, military personnel). During the study, the provisions of the Code of Ethics of the American Sociological Association (ASA, 1997) were observed. The data were anonymised and processed in accordance with the principles of voluntary participation and confidentiality.

Comparative analysis

A comparative method was used to analyse contrasts in the development of rural communities. Rural communities directly affected by urbanisation (distance to the nearest town does not exceed 15 km, availability of transport links, commercial facilities, private housing construction) were compared with remote villages where the traditional agrarian structure and low level of infrastructure provision remain. The comparison was carried out by such parameters as the rate of population decline, changes in the employment structure, development dynamics, availability of basic services and infrastructure (education, health, and communications).

Results

Analysis of the dynamics of the size and age structure of the rural population

In the context of rapid socio-economic development, urbanisation is one of the key factors in the transformation of the spatial organisation of society. This concept is understood as the process of gradually increasing the share of the urban population, expanding the boundaries of cities and intensifying links between urbanised spaces and surrounding territories. Rural areas, which have long been considered autonomous agricultural cells with stable demographics and traditional economic models, are now undergoing significant changes due to the influence of urban centres. The gap between urban and rural areas, which was once determined rather by the qualitative characteristics of the way of life and employment of the population, is increasingly manifested in quantitative indicators, population dynamics, income structure, access to social and infrastructure benefits. Rural areas have always played a key role in ensuring food security of the state, preserving cultural traditions and maintaining ecological balance (Valujeva et al., 2022; Hrinchenko et al., 2023). Significant arable areas, pastures, forests, and coastal zones form a natural resource potential that meets not only the internal needs of the country, but also serves as an important part of the world's ecosystems. However, with the growth of cities and the expansion of industrial clusters, agricultural land is increasingly being transformed into residential areas, logistics hubs, or recreational facilities (Berlow et al., 2021; Fedoniuk et al., 2021).

This process is accompanied by changes in the social structure of rural areas. The mobility of the younger generation increases, as they move to cities for work, while the older generation remains, which leads to an ageing population and a decrease in labour resources in agriculture (Ilieva, 2020; Montayeva et al., 2023). Urbanisation also encourages the development of infrastructure on the periphery of large cities, roads, water and sewer systems, power supply and communication networks are gradually penetrating into former remote villages (Bashtannyk et al., 2020; de Bruin et al., 2021). On the one hand, it expands opportunities for local residents to receive high-quality educational and medical services, and creates new jobs in the service sector or small businesses. On the other hand, rising land and real estate prices make traditional agriculture less attractive and require family farms to adapt to new conditions, often by selling land or changing the type of activity.

Special attention should be paid to the analysis of spatial inequality, which occurs due to the uneven location of cities and their agglomerations. Areas of direct urbanisation impact – usually within a radius of 10-20 kilometres from large centres – receive significant advantages, better roads, faster access to markets, more attractive conditions for investors, and therefore higher economic growth rates. However, remote villages located in mountainous or sparsely populated regions are often excluded from this process, facing a lack of investment, negative demographic dynamics and a decline in basic services. This polarisation creates the risk of forming two different worlds within the same country – periurbanised spaces with high levels of comfort and remote communities with a shortage of jobs, transport links, and social services.

One aspect of urbanisation is its impact on the ecological state of rural areas. Intensive urban growth is accompanied by fragmentation of natural landscapes, air and water pollution, and changes in the surface runoff regime (Moura et al., 2012; Dyomin et al., 2021). In many cases, local farmers and residents are forced to seek alternative sources of income or adapt traditional farming practices to new environmental realities. For example, increased surface runoff due to asphalting of soils near cities can lead to flooding of pastures and individual lands, and the use of intensive farming methods in areas of former forests or natural land can reduce soil fertility in the long term.

Urbanisation is also closely linked to changes in the social fabric of rural communities. Migration of the younger generation leads to a generational gap, when the older population faces a shortage of assistants in the field and in vegetable gardens, and young people seek more modern living conditions and employment in cities. This creates a need for the maintenance of intergenerational links, the transfer of traditional knowledge and skills, and the development of new models of social interaction where informal networks, community organisations and electronic platforms for information exchange play an important role (Athukorala et al., 2021). If earlier agriculture was almost the only source of income for many families, contemporary farms are supplemented by small businesses, craft initiatives, agrotourism, and remote work in the digital economy (Anguelov & Kavaldzhieva, 2021; Mikhno et al., 2023). This creates both new opportunities and challenges, including the need for professional development, access to the Internet and markets, cooperation with urban entrepreneurs, and interaction with local authorities. It is important that income diversification processes in rural communities take place with local characteristics and potential in mind, rather than being imposed from the outside without sufficient training and support.

To quantify socio-economic changes in rural areas of Albania, the following main indicators for the period 2000–2025 were collected and processed, namely, the dynamics of the rural population, the distribution of the population by gender and age, the birth and death rate, migration flows, and the share of those employed in agriculture. As of the beginning of 2025, the population of Albania was approximately 2.78 million people, which indicates a decrease of about 20 thousand people compared to the beginning of 2024. 65.7% of the population lived in urban areas, and the median age was 37.3 years. The Internet penetration rate in the country has reached almost 95%, and full 4G network coverage is provided.

Projected GDP per capita in 2025 was USD 13,364 (nominal), the unemployment rate – 10.7%, and employment – 61.3% (INSTAT, 2025). The total rural population was approximately 1,799.6 thousand in 2000, but by 2023, it decreased to 972.0 thousand people, which corresponds to a 46% decrease over 23 years (Macrotrends, 2023). This dynamic reflects national trends in urbanisation and the outflow of residents from rural areas, which have had a steady focus over the past two decades.

According to the 2023 comprehensive census, the permanent population of Albania was approximately 2.402 million, of which 1.190 million were men (49.6%) and 1.212 million were women (50.4%) (INSTAT, 2024). The age structure was dominated by the 25–54-year-old group, which accounted for about 45% of the total population. Among the rural population, it is estimated that the sex ratio was slightly different: men were about 48%, women were 52%, and the average age of rural residents was 40.1 years. The birth rate in Albania during 2000–2023 decreased from 16.7% in 2000 to 9.7% in 2023, while the death rate remained virtually unchanged and remained at 8.7% in 2023 (WorldData, 2025). In 2022, 24,688 births and 23,998 deaths were registered, indicating almost zero natural growth (+690 people) (BIRN, 2023). This stabilisation of the natural movement of the population was combined with a significant negative migration balance. Migration flows have become a key driver of demographic changes. However, demographic decline in rural areas cannot be attributed solely to migration. It is also influenced by declining birth rates, population ageing, limited access to healthcare and social services, and structural changes in the rural economy. According to data, during 2011–2022, the net migration outflow ranged from -9,473 people (2016) to -32,853 people (2021), and in 2022 it was -32,497 people. The majority of migrants are young people and the working-age population aged 18–40 years, which significantly affected the demographic and social structure of rural communities.

The share of people employed in agriculture decreased from 53.3% of total employment in 1991 to 34.9% in 2022 (GE, 2022). This reflects a structural change in the economy – the transi-

tion of labour resources from the agricultural sector to industry and services, in particular, in urban centres. According to INSTAT (2023), the average income of a farm employed in the agricultural sector was about ALL 80,000 (approximately EUR 650) per month, which is 5% higher than in 2022. However, in remote communities, this reference income remained below EUR 600, while in peripheral areas near Tirana it reached EUR 700-750. Regression showed a statistically significant negative dependence of the rural population on proximity to the capital (β=-0.42; $p<0.01$), which indicates increased migration pressure within a radius of 30 km from Tirana. Histograms of rural demography dynamics over three-time sections (2000, 2010, 2020) showed a shifting age pyramid, the proportion of people over 60 years of age increased from 12% in 2000 to 25% in 2020, while young people (18–35 years) decreased from 40% to 22%. This indicates the rapid ageing of rural communities as a result of the emigration of young people.

As a result of a comprehensive analysis, it was found that during 2000–2023, the rural population of Albania decreased by almost half, which indicates a pronounced demographic depletion of rural communities. Simultaneously, there was a noticeable ageing of the population in these communities, the share of residents over the age of 60 has more than doubled, creating an additional burden on social and medical services. Young people aged 18–35 actively migrated to urban centres, which led to a shortage of working resources and a slowdown in the natural reproduction of the population.

In economic terms, there was a significant outflow of labour from the agricultural sector, the share of those employed in agriculture decreased to less than 35% of all employment, while the average household income in the peripheral zones grew more slowly than in the suburbs of large cities. This confirms the existence of regional inequality: communities located within a radius of 15 km from Tirana were characterised by higher incomes and lower population decline compared to remote areas where income growth was slower and migration losses were more significant. Thus, the observed dynamics reflect the simultaneous processes of demographic devastation, socio-economic transformation and aggravation of regional imbalances in rural areas of Albania.

Spatial and socio-economic imbalances between periurbanised and remote communities and classification of the key factors of their transformation

To better understand the subjective experience of rural residents, a survey was conducted, the results of which are summarised in Table 1.

A survey of two hundred respondents with different ages (18–75 years, average age 39.2 years) and gender (51% of women, 49% of men) showed clear trends and moods regarding urbanisation transformations in rural areas of Albania. Almost half of the respondents (55%) noted a decrease in the population in their villages over the past ten years, and only 10% saw an increase. More than 60% of respondents reported only partial or significant improvement in local infrastructure, although 15% reported its deterioration. Access to healthcare services was rated mostly as good or satisfactory (70%), but 30% called it limited or absent. In terms of socio-economic aspects, 40% of families have members working as migrants in cities, and another 20% abroad, which together with 40% of households without labour migration indicates an active mobile exchange of the population. The main source of income for 30% of respondents remains agriculture, and 25% earn money in cities; another 20% live on social benefits or pensions. Only a third of the community (35%) plan to leave the village in the next three years, while 40% see themselves here in the future.

Table 1. Results of a survey of rural residents

Sections	Questions	Results
I. Demographic characteristics	1. Age	18–25 years – 22% 26–35 years – 28% 36–45 years – 25% 46–60 years – 15% 61 and older – 10%
	2. Gender	Male – 49% Female – 51%
	3. How many years have you lived in your village?	Less than 5 years – 15% From 5 to 10 years – 25% More than 10 years – 30% Whole life – 30%
	4. Do you plan to leave the village within the next 3 years?	Yes – 35% No – 40% Hard to say – 25%
II. Socio-economic change and access to services	5. How has the population in your village changed over the past 10 years?	Increased – 10% Decreased – 55% Not changed – 20% I do not know – 15%
	6. Has the quality of local infrastructure changed over the past decade?	Significantly improved – 20% Partially improved – 40% Not changed – 25% Deteriorated – 15%
	7. What is the level of access to health services in your community?	Good – 30% Satisfactory – 40% Limited – 20% Absent – 10%
	8. Is there a high school in your community?	Yes – 70% No – 30%
	9. Are there any members in your family who migrated to the city or abroad in search of work?	Yes, to the city – 40% Yes, abroad – 20% No – 40%
	10. Your family's main source of income	Agriculture – 30% Earnings in the city – 25% Entrepreneurship (local business) – 15% Social assistance / pension – 20% Other – 10%

III. Perception of changes in the rural environment	11. How do you assess the impact of urbanisation on your village?	Positive – 10% Rather positive – 25% Rather negative – 30% Negative – 20% I cannot rate it – 15%
	12. Has the development in your area changed in the last 10 years?	New residential buildings appeared – 45% Commercial or industrial facilities appeared – 20% Territory remained unchanged – 15% Old buildings were demolished / dilapidated – 20%
	13. What issues are relevant to your community? (You can choose several)	Youth outflow – 60% Lack of work – 50% High prices / low incomes – 40% Bad roads – 35% Unavailability of medical services – 30% Environmental pollution – 25% Lack of Internet or digital services – 20%
	14. Do you feel that your village is becoming 'urban' in nature?	Yes, to a large extent – 20% Partially – 50% No, it remains rural – 20% Hard to say – 10%
IV. Open questions	15. How do you think urbanisation has affected the way of life in your village?	Market access and trading opportunities have improved – 30% A sense of social cohesion and tradition is being lost – 25% Living expenses (rent, utilities) increased – 20%
	16. What changes would you like to see in your community in the future?	Improvement of roads and transport links – 40% Creation of new jobs – 35% Development of local infrastructure (schools, hospitals) – 25%
	17. What do you think needs to be done to improve living conditions in rural areas?	Invest in the development of schools and educational programmes – 45% Repair and maintain roads and bridges – 30% Support local businesses and agribusinesses – 25%
	18. If you have any other comments on the topic of urbanisation, please indicate them	Concerns about environmental pollution – 20% Nostalgia for the 'old' rural lifestyle – 15% Need for Internet coverage and digital services – 10%

Source: compiled by the authors.

On open-ended questions, the most common answers were: improved market access and trade (30%), concerns about the loss of public cohesion (25%), and rising living expenses (20%). Residents most frequently indicated the need for the development of the transport network (40%), creation of new jobs (35%), and modernisation of social infrastructure, particularly schools and hospitals (25%). Among the key recommendations are investments in educational programmes (45%), road repairs (30%), and support for local businesses and agricultural enterprises (25%).

In summary, quantitative data (55% population decline; reduction of agricultural occupation to 30%) and qualitative assessments (mostly positive attitude to infrastructure changes, but with caution about social cohesion) show that urbanisation in rural areas of Albania has a dual effect. On the one hand, improving infrastructure and market opportunities contribute to improv-

ing living standards; on the other hand, demographic outflows of young people, an ageing population, and the erosion of traditional social ties create new challenges. Therefore, balanced development requires comprehensive measures that will combine infrastructure investment and support for public activism, create jobs directly in rural areas, and develop educational and medical services. This approach will slow down demographic depletion, strengthen the social fabric of rural communities, and harmonise urban-rural relations. A comparison of two types of rural communities – those that are located within a radius of 15 km from urban centres (periurbanised) and those that are more than 50 km away is shown in Table 2.

Table 2. Comparison of key indicators in Kamza and Pukë municipalities

Indicator	Kamza (periurban)	Pukë (remote)
Population change 2011→2023, %	-7.7%	-43.8%
Share of employees in the agricultural sector 2022, %	18.5%	52.2%
Change in the built-up area 2011→2022, ha	+1,250 ha	+150 ha
Number of schools per 1,000 inhabitants in 2023	0.45	0.25
Outpatient clinics/ Primary medical stations per 10,000 inhabitants in 2023	1.8	0.8
% of households with Internet access 2022	78%	42%

Source: compiled by the authors based on Eurostat (2025), INSTAT (2025), World Bank (2025).

As a result of the comparison, it can be seen that in the periurbanised municipality of Kamza, the demographic decline is much milder (-7.7% over 12 years) and is accompanied by a significantly lower share of those employed in agriculture (18.5% vs. 52.2%), while in remote Pukë, the population loss is sharp (-43.8%), but agricultural employment remains the main one. The area of built-up areas in Kamza increased by 1,250 hectares, which is 8 times higher than in Pukë. The availability of schools and medical facilities in Kamza is almost twice as high, and the Internet connection level is 36 percentage points higher. This clearly illustrates that spatial contrasts in these parameters reflect uneven rural development under urbanisation pressures and require differentiated support policies.

Practical recommendations for the balanced development of infrastructure, economy, and social services in rural Albania

Thus, based on an in-depth comparative analysis of demographic, socio-economic and spatial indicators of periurbanised and remote rural communities in Albania, an extensive system of recommendations was formulated, each of which combines a strategic long-term perspective and practical implementation steps.

The development of the transport network should be considered not only as laying or repairing roads, but also as creating a comprehensive mobility system. It is necessary to introduce regular inter-municipal bus routes with flexible schedules, ensure the operation of a 'social taxi' for vulnerable groups — the elderly and people with disabilities, and deploy bicycle-sharing points in community centres. The integrated approach involves coordination with district road administrations, attracting public-private partnerships to finance emergency bridge repairs, and revising passenger fares to make them accessible even under the limited budget of local councils.

The expansion of social services should include not only the construction of new primary medical stations and schools, but also the training and motivation of personnel of the programme of long-term scholarships for graduates of medical schools and pedagogical institutions with the obligation to work for at least five years in rural institutions; remote advanced training courses for teachers

and doctors using telemedicine platforms; the creation of mobile educational and medical teams that can travel to the most remote settlements (Ilieva, 2017; Fedenko et al., 2025). In addition, it is necessary to establish partnerships with specialised non-governmental organisations (NGOs) and international organisations that have experience in building a 'hospital in a container' or 'school on wheels' – this will allow quickly responding to the needs of communities in peripheral areas.

Support for local entrepreneurship should become multidimensional, in addition to grant competitions and soft loans, it is important to introduce mentoring programmes with experienced businessmen and agricultural experts, organise visits of 'exchange delegations' to successful agricultural cooperatives in other regions and countries, and create regional startup hubs where young entrepreneurs can gain basic skills in financial planning, marketing, and brand development (Moskalenko et al., 2025; Shahini & Shahini, 2025). It is also necessary to consider the infrastructure component, the arrangement of joint processing shops for milk, fruits, and vegetables, the construction of cheese factories and mini-lines for packaging products will allow farmers to increase the added value of their own raw materials.

Building digital infrastructure requires not only a technical deployment of the network, but also an information campaign and training, it is worth implementing digital literacy programmes for different age groups – from the basics of using a smartphone to advanced courses in programming or web design (Bulatov et al., 2024; Nesprava et al., 2025). Simultaneously, it is necessary to develop partner platforms with universities and information technology (IT) companies to launch real projects for software development or remote consulting for local farmers on the basis of rural coworking centres. This approach will create magnetic points of development that will attract young people and encourage them to stay in the community.

In an environment of intergenerational social interaction, the creation of 'living libraries' should be encouraged, where older residents share memories, traditional knowledge, and crafts with young people. Organising quarterly folk craft festivals and local cuisine festivals will not only preserve cultural heritage, but also turn communities into tourist centres (Burlakovs et al., 2020; Ivashko et al., 2020). It is important to support the 'art in the village' initiatives – art residences, wood carving or ceramics workshops that combine creativity with social inclusion.

In general, a unified regional policy should provide for regular monitoring and transparent feedback, it is necessary to update the digital dashboard with key indicators (demographics, employment, infrastructure, education, health, internet coverage) annually, publish reports in the public domain and hold quarterly meetings of working groups with the participation of representatives of communities, donors, local authorities, and experts. Such coordination will ensure dynamic strategy adjustments, prompt problem solving, and genuine involvement of residents in the transformation of their communities.

Discussion

Urbanisation is a key factor in the transformation of rural areas, causing both positive changes in infrastructure development and threats to the ecological balance, social structure, and traditional way of life. Changes in land use and the demographic structure of rural areas were most noticeable. These findings are also consistent with European territorial research indicating that rural regions located near urban centres often experience faster economic diversification and infrastructure development, whereas remote rural areas remain more vulnerable to demographic decline (ESPON, 2020; OECD, 2025). However, proximity to urban centres should not be considered

the only determinant of socio-economic differences between rural communities. The results indicate that development outcomes are also shaped by additional factors, including the effectiveness of local governance, investment policies, institutional capacity, and the cultural and historical characteristics of specific regions. These factors may significantly influence the ability of rural communities to adapt to urbanisation pressures and benefit from emerging opportunities.

The results are consistent with Athukorala et al. (2021), who recorded a significant reduction in natural ecosystems due to urban pressure on the environment. The study, conducted in Sri Lanka, showed how urbanisation caused the degradation of swamp ecosystems and the deterioration of the water balance. Similar changes were found in transformed rural landscapes, where urban influences changed the structure of land use, displacing agriculture. The impact of urbanisation on the socio-economic development of rural communities was consistent with the estimates given by Chen et al. (2021), who described the integration of the latest urbanisation strategies with rural revival policies in China. The researchers showed that with the right strategic approach, urbanisation can contribute to increasing employment, income, and access to educational and health services in rural communities. In the context of the study, similar trends were identified in villages located near large cities – infrastructure modernisation and the growth of consumer demand in the urban environment contributed to the development of local entrepreneurship.

However, not all results corresponded to positive scenarios. A number of negative socio-cultural effects were recorded, in particular, the erosion of the identity of rural communities, the loss of cultural heritage and intergenerational ties. Such observations were consistent with the findings of Dong and Chunlai (2023), who in their review of rural transformation research highlighted the threat of standardisation of cultural practices under the influence of globalised urban culture. Similarly, Bera et al. (2023) noted that urbanisation, while providing infrastructure modernisation, is accompanied by increased social inequality and environmental degradation. From an ecological standpoint, urbanisation has led to a reduction in biodiversity and a decline in ecosystem services in rural areas. This is also supported by Blasdell et al. (2022), who found that urbanisation increases the risk of zoonotic diseases due to changes in animal habitats. Rural areas where uncontrolled suburban growth was observed were particularly vulnerable. These findings align with the work of Berlow et al. (2021), who showed the impact of an urban landscape on the microbiomes of living organisms, which may indirectly affect the health of rural residents through changes in food chains.

The study examined the economic aspects of transformation, in particular, the growing role of agrotourism, the redistribution of labour, and changes in the employment structure. In this context, the results were consistent with de Bruin et al. (2021), who interpreted urbanisation as a catalyst for the transformation of food systems and the development of rural entrepreneurship. The researchers pointed out that the growth of urban agglomerations creates new markets for agricultural products, stimulating technological renewal of agriculture and diversification of economic activity. On the other hand, in terms of environmental sustainability, the results showed a limited adaptive potential of rural areas to urban pressure. These findings are consistent with Hu et al. (2022), who developed a framework for assessing sustainable agricultural development in the context of urbanisation in the Beijing-Tianjin-Hebei region. Their research showed that sustainable development was possible only under the conditions of government intervention, environmental monitoring, and long-term planning. Regarding the impact of urbanisation on rural climate conditions, the results confirmed the trends recorded by Li et al. (2022), who investigated the impact of urbanisation and climate change on the heat regime in Africa. It was found that urbanisation not only changes the local climatic conditions in cities, but also affects the surrounding rural areas – in particular, due to an increase in the temperature background, a violation of the wind regime

and changes in humidity. In addition, spatial features of the environmental impact of urbanisation were compared with the findings of Liu et al. (2020), who investigated the spatial effect of urbanisation on environmental pollution in China. The researchers showed that the impact is prolonged and expansive, and urbanisation in one region provokes environmental consequences in adjacent rural areas. This spatiotemporal inertia of urbanisation pressure was also confirmed in the results of the study.

The process of changing land use, in particular, the transformation of agricultural land into residential and industrial development, proved to be significant. This was confirmed by the conclusions of Shabu et al. (2021), who, studying the situation in Nigeria, recorded an intensive absorption of rural areas by urban infrastructure, which led to a decrease in the area for agricultural production. Similar processes were observed in other regions, particularly in Shandong province, China, where Qu et al. (2021) investigated the phenomenon of 'population decline with expansion of development' in rural settlements. The results obtained confirmed the existence of such an imbalance in the dynamics of human and land resources. Demographic changes were mainly represented by the migration of young people to urban centres, which led to an ageing rural population and a decrease in labour resources. This was consistent with the results of the study by Rao (2022), who considered the concept of 'urbanisation in situ' through the socio-economic restructuring of rural areas in China. It has been shown that in the absence of integration policies, population outflow increased the marginalisation of remote rural communities. A similar pattern was observed in the framework of the study. Changes in the functional structure of rural areas were reflected in the emergence of new economic activities related to tourism, logistics, trade, and serving urban consumers. This was consistent with the findings of Muñoz et al. (2020), who studied the impact of urbanisation on Austria's carbon footprint and concluded that urban growth causes a reorganisation of the regional economy, often aimed at serving growing urban demand. This transformation was also noticeable in rural areas, which were drawn into new economic ties through the development of transport infrastructure.

Another significant consequence of urbanisation was the increase in energy consumption and pressure on natural resources. The study of this aspect coincided with the findings of Yu et al. (2020), who examined energy demand within the Yangtze River economic belt. The researchers found that urbanisation even indirectly affected the rural environment by changing energy consumption patterns, creating an additional burden on ecosystems. In the context of the study, there was a similar increase in the infrastructure burden on natural resources, especially in suburban areas. The identified ecological effect of urbanisation was confirmed by Moazzam et al. (2022), who recorded a significant increase in surface temperature due to the urban heat island effect. A similar temperature increase was recorded in rural regions bordering urbanised zones, which indicated the spread of urban climate effects outside cities. Similar changes were observed in the vegetation cover, according to data from Zhang et al. (2022), who showed the direct and indirect impact of urbanisation on vegetation growth in various climatic zones of the world. In rural areas, where urbanisation transformation has been observed, there has been a reduction in green spaces and degradation of the local ecosystem. The results also confirmed the negative impact of urbanisation on the ecological efficiency of territories, which coincided with the data of Yao et al. (2021). The study showed that the growth of the urban population and the expansion of urban borders led to a decrease in resource efficiency and an increase in pollution. The results confirmed that similar processes occurred in rural areas that were involved in urban infrastructure without proper adaptation of waste and water management systems. Negative changes in the air environment of rural areas were also confirmed by the results of the study by Sahoo and Sethi (2022), who an-

alysed the impact of urbanisation and innovation on the environmental footprint in industrialised countries. An increase in urban density was found to correlate with an increase in $PM_{2.5}$ levels even in neighbouring rural areas, which increases public health risks.

This is consistent with the trends identified in air quality degradation in urban expansion zones. Infrastructure changes in rural areas, in particular, the renewal of the road network, the development of communications, access to digital services, were observed in the context of the synergistic effect of urbanisation, which was partially confirmed by the conclusions of Yanbo et al. (2021). The paper showed that the gradual renewal of rural settlements can contribute to sustainable development, but only if the ecological balance and social structure were maintained. This idea was also confirmed within the framework of the data obtained: where there was a balanced interaction of urban and rural processes, the transformation showed signs of constancy.

The effectiveness and long-term sustainability of the proposed development measures may vary significantly depending on the type of rural territory. In periurban areas, where infrastructure, market access, and investment flows are relatively stronger, interventions such as transport development, digitalisation, and support for entrepreneurship are more likely to generate rapid and cumulative effects. In contrast, in remote rural communities characterised by limited accessibility, ageing populations, and weaker institutional capacity, the same measures may require longer implementation periods, additional public support, and adaptation to local conditions. This suggests that a differentiated, context-sensitive approach is necessary to ensure the sustainability of rural development policies.

At the same time, the results of the study indicate that the implementation of development measures aimed at improving infrastructure and stimulating rural transformation may be associated with a number of unintended long-term effects. In periurban areas, improved accessibility and investment inflows may contribute to processes of gentrification and land speculation, leading to increased land and housing prices and potential displacement of local residents. Infrastructure expansion and intensification of economic activity may also generate additional environmental stress, including land fragmentation, increased resource consumption, and pressure on local ecosystems. Furthermore, uneven distribution of investment and development opportunities between periurban and remote communities may reinforce existing social and spatial inequalities, contributing to processes of social stratification. These findings suggest that development policies should be carefully adapted to local conditions and supported by regulatory mechanisms that mitigate potential negative effects, ensuring the long-term sustainability of rural transformation processes.

Conclusions

The analysis showed significant demographic depletion of rural areas: the total rural population of Albania from 2000 to 2023 almost halved – from 1,800,000 to approximately 972,000 (-46%). In terms of age, the proportion of people over 60 increased from 12% in 2000 to 25% in 2020, while the proportion of young people (18-35 years old) decreased from 40% to 22%, which indicates a significant ageing of rural communities. Kamza and Pukë municipalities were used to compare the two types of affected areas – periurbanised and remote. In Kamza, the population declined by 7.7% from 2011 to 2023, while in Pukë, the decline reached 43.8%. The share of people employed in agriculture was 18.5% in Kamza and 52.2% in Pukë; changes in the built-up area indicate an increase of 1,250 ha and 150 ha, respectively, for the period 2011-2022. The qualitative results of the study confirmed that in periurbanised communities, the institution of civic engagement

and social support was significantly higher: 70% of households in Kamza had access to two or more educational institutions, increased Internet coverage (78% of access), while in Pukë there were only 0.25 schools per 1,000 inhabitants and 42% of households were covered by the internet.

Based on the data obtained, practical recommendations were formulated focused on road infrastructure and mobility of local residents; development of healthcare and educational network with a focus on telemedicine technologies and distance learning; support for agribusiness, creation of business hubs, and training for farmers; expansion of the digital network and improvement of digital literacy for different age groups; cultural and social inclusion through intergenerational platforms; implementation of regional policies with a transparent budget and independent monitoring. These recommendations allowed for the formulation of a step-by-step action plan and criteria for evaluating success based on verified digital indicators.

Practical limitations include limited access to online INSTAT data, high aggregation by municipality, and poor detail of spatial indicators. A theoretical limitation is that social processes can be nonlinear and multifactorial in nature, which goes beyond the time frame of static analysis. The number of respondents in the sociological part, although representative, did not allow the study to distinguish significant groups by individual indicators.

Further research may focus on more detailed spatial analysis of rural transformation processes, including the use of additional territorial and statistical data, although this may require enhanced analytical resources. Future studies may also expand the survey component, particularly by focusing on specific groups such as young people, women, and business representatives, in order to better understand adaptation mechanisms. Another important direction is the evaluation of the proposed recommendations in pilot regions to assess their effectiveness in different types of rural communities.

References

Anguelov, K., & Kavaldzhieva, K. (2021). Methodology for determining the socio-economic factors in the performance of Cost-Benefit Analysis for the production of electricity from biomass. 2021 17th Conference on Electrical Machines, Drives and Power Systems, ELMA 2021 – Proceedings. Sofia: Institute of Electrical and Electronics Engineers. https://doi.org/10.1109/ELMA52514.2021.9502978

ASA (1997). *Code of ethics.* American Sociological Association. Retrieved from https://www.asanet.org/about/ethics/

Asabere, S.B., Acheampong, R.A., Ashiagbor, G., Beckers, S.C., Keck, M., Erasmi, S., & Sauer, D. (2020). Urbanization, land use transformation and spatio-environmental impacts: Analyses of trends and implications in major metropolitan regions of Ghana. *Land Use Policy*, 96, 104707. https://doi.org/10.1016/j.landusepol.2020.104707

Athukorala, D., Estoque, R.C., Murayama, Y., & Matsushita, B. (2021). Impacts of urbanization on the Muthurajawela Marsh and Negombo Lagoon, Sri Lanka: Implications for landscape planning towards a sustainable urban wetland ecosystem. *Remote Sensing*, 13(2), 316. https://doi.org/10.3390/rs13020316

Balla, A., Merko, F., Golemi, E., & Biancardi, M. (2023). Sustainable regional development in Albania. *SEER Journal for Labour and Social Affairs in Eastern Europe*, *26*(1), 111–124. https://doi.org/10.5771/1435-2869-2023-1-111

Bashtannyk, V., Buryk, Z., Kokhan, M., Vlasenko, T., & Skryl, V. (2020). Financial, economic and sustainable development of states within the conditions of industry 4.0. *International Journal of Management, 11*(4), 406–413.

Beckers, V., Poelmans, L., Van Rompaey, A., & Dendoncker, N. (2020). The impact of urbanization on agricultural dynamics: A case study in Belgium. *Journal of Land Use Science*, *15*(5), 626–643. https://doi.org/10.1080/1747423X.2020.1769211

Bera, B., Chinta, S., Mahajan, D.A., Sailaja, A., & Mahajan, R. (2023). Urbanization and its impact on environmental sustainability: A comprehensive review. *Journal of Harbin Engineering University*, *44*(8), 1310–1318.

Berlow, M., Phillips, J.N., & Derryberry, E.P. (2021). Effects of urbanization and landscape on gut microbiomes in white-crowned sparrows. *Microbial Ecology*, *81*(1), 253–266. https://doi.org/10.1007/s00248-020-01569-8

BIRN (2023). *Media ownership monitor Albania.* Balkan Investigative Reporting Network Albania. Retrieved from https://albania.mom-gmr.org/en/context/society/

Blasdell, K.R., Morand, S., Laurance, S.G., Doggett, S.L., Hahs, A., Trinh, K., Ngan, P.T., Tan, T.Q., Tran, T.N., Nguyen, T.H., McElhinney, L., & Firth, C. (2022). Rats and the city: Implications of urbanization on zoonotic disease risk in Southeast Asia. *Proceedings of the National Academy of Sciences*, *119*(39), e2112341119. https://doi.org/10.1073/pnas.2112341119

Bock, A., & Krzysztofowicz, M. (2021). Scenarios for EU Rural Areas 2040. Joint Research Centre. Luxembourg: Publications Office of the European Union. https://data.europa.eu/doi/10.2760/29388

Bulatov, N., Uvaliyeva, A., Kassymzhanova, K., Izteleuova, M., & Saukenova, I. (2024). Intelligent Systems for Managing and Monitoring the Collection, Sorting, and Transportation of Solid Waste for Processing. *Evergreen, 11*(2), 938–948.

Burlakovs, J., Jani, Y., Kriipsalu, M., Grinfelde I., Pilecka, J., & Hogland, W. (2020). Implementation of new concepts in waste management in tourist metropolitan areas. *IOP Conference Series: Earth and Environmental Science, 471*(1), 012017. https://doi.org/10.1088/1755-1315/471/1/012017

Chen, M., Zhou, Y., Huang, X., & Ye, C. (2021). The integration of new-type urbanization and rural revitalization strategies in China: Origin, reality and future trends. *Land*, *10*(2), 207. https://doi.org/10.3390/land10020207

de Bruin, S., Dengerink, J., & van Vliet, J. (2021). Urbanisation as driver of food system transformation and opportunities for rural livelihoods. *Food Security*, *13*(4), 781–798. https://doi.org/10.1007/s12571-021-01182-8

Dyomin, M., Ivashko, Y., Ivashko, O., Kuśnierz, K., & Kuzmenko, T. (2021). Development trends and problems of large Ukrainian historical cities in the twentieth and twenty-first century: Case study of urban tendencies and problems of revitalization of an industrial district. *Wiadomosci Konserwatorskie, 65*, 26–36.

ESPON (2020). European Shrinking Rural Areas Challenges, Actions and Perspectives for Territorial Governance (ESCAPE). European Spatial Planning Observation Network. Retrieved from https://archive.espon.eu/escape

Eurostat (2024). Urban-rural Europe – Introduction. Eurostat. Retrieved from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Urban-rural_Europe_-_introduction

Eurostat (2025). Database: Main population indicators. Eurostat. Retrieved from https://ec.europa.eu/eurostat/web/population-demography/demography-population-stock-balance/database

Fedenko, S., Lavrentii, D., Borysiuk, I., Barabanchyk, O., & Terekhov, Y. (2025). Financing the Healthcare System: A Study of Mechanisms and Their Impact on the Quality of Medical Services. *Health Leadership and Quality of Life, 4*, 338. https://doi.org/10.56294/hl2024.338

Fedoniuk, T., Borsuk, O., Melnychuk, T., Zymaroieva, A., & Pazych, V. (2021). Assessment of the Consequences of Forest Fires in 2020 on the Territory of the Chornobyl Radiation and Ecological Biosphere Reserve. *Scientific Horizons, 24*(8), 26–36. https://doi.org/10.48077/scihor.24(8).2021.26-36

Feliu, C. H., & Dijkstra, L. (2025). Trust in EU rural areas Joint Research Centre. Retrieved from https://publications.jrc.ec.europa.eu/repository/handle/JRC144424

GE (*2022).* Albania: Employment in agriculture. The Global Economy. Retrieved from https://www.theglobaleconomy.com/Albania/Employment_in_agriculture

Ge, D., Long, H., Qiao, W., Wang, Z., Sun, D., & Yang, R. (2020). Effects of rural-urban migration on agricultural transformation: A case of Yucheng City, China. *Journal of Rural Studies*, *76*, 85–95. https://doi.org/10.1016/j.jrurstud.2020.04.010

Hrinchenko, H., Trishch, R., Mykolaiko, V., & Kovtun, O. (2023). Qualimetric approaches to assessing sustainable development indicators. *E3S Web of Conferences*, *408*, 01013. https://doi.org/10.1051/e3sconf/202340801013

Hu, S., Yang, Y., Zheng, H., Mi, C., Ma, T., & Shi, R. (2022). A framework for assessing sustainable agriculture and rural development: A case study of the Beijing-Tianjin-Hebei region, China. *Environmental Impact Assessment Review*, *97*, 106861. https://doi.org/10.1016/j.eiar.2022.106861

Ilieva, R. (2017). The Free Movement of Services and The Right to Nondiscrimination. *International Conference Knowledge-Based Organization*, *23*(2), 171–174. https://doi.org/10.1515/kbo-2017-0108

Ilieva, R.K. (2020). Problematics Concerning the Bulgarian Cross-Border Labor Migration. *International Journal of Economics and Management Studies*, *7*(4), 12–14. https://doi.org/10.14445/23939125/IJEMS-V7I4P103

INSTAT (2023). Agriculture statistics. Institute of Statistics of Albania. Retrieved from https://www.instat.gov.al/en/themes/agriculture-and-fishery/agriculture/publication/2024/agriculture-statistics-2023/

INSTAT (2024). Albanian Population and Housing Census 2023. INSTAT. Retrieved from https://www.instat.gov.al/en/publications/books/2024/albanian-population-and-housing-census-2023/

INSTAT (2025). Employment and unemployment from Labour Force Survey (LFS). Institute of Statistics of Albania. Retrieved from https://www.instat.gov.al/en/themes/labour-market-and-education/employment-and-unemployment-from-lfs/

Ivashko, Y., Dmytrenko, A., Paprzyca, K., Krupa, M., & Kozłowski, T. (2020). Problems of historical cities heritage preservation: Chernihiv art nouveau buildings. *International Journal of Conservation Science, 11*(4), 953–964.

Li, X., Stringer, L.C., & Dallimer, M. (2022). The impacts of urbanisation and climate change on the urban thermal environment in Africa. *Climate*, *10*(11), 164. https://doi.org/10.3390/cli10110164

Liu, X., Sun, T. & Feng, Q. (2020). Dynamic spatial spillover effect of urbanization on environmental pollution in China considering the inertia characteristics of environmental pollution. *Sustainable Cities and Society*, *53*, 101903. https://doi.org/10.1016/j.scs.2019.101903

Lubonja, O., & Shehu, E. (2022). Impact of urbanization and economic growth in Albania. *Journal of Educational and Social Research*, *12*(6), 282. https://doi.org/10.36941/jesr-2022-0163

Ma, Q., & Shi, F. (2023). New urbanization and high-quality urban and rural development: Based on the interactive coupling analysis of industrial green transformation. *Ecological Indicators*, *156*, 111044. https://doi.org/10.1016/j.ecolind.2023.111044

Macrotrends (2023). Albania rural population. Macrotrends. Retrieved from https://www.macrotrends.net/global-metrics/countries/alb/albania/rural-population#:~:text=Albania%20rural%20population%20for%202023,a%202.84%25%20decline%20from%202019

Mikhno, I., Ihnatenko, N., Cherniaiev, O., Vynogradnya, V., Atstaja, D., & Koval, V. (2023). Construction waste recycling in the circular economy model. *IOP Conference Series: Earth and Environmental Science, 1126*(1), 012003. https://doi.org/10.1088/1755-1315/1126/1/012003

Moazzam, M.F.U., Doh, Y.H., & Lee, B.G. (2022). Impact of urbanization on land surface temperature and surface urban heat Island using optical remote sensing data: A case study of Jeju Island, Republic of Korea. *Building and Environment*, *222*, 109368. https://doi.org/10.1016/j.buildenv.2022.109368

Montayeva, N.S., Montayev, S.A., & Montayeva, A.S. (2023). Studies of Montmorillonitic (Bentonite) Clay of Western Kazakhstan as a Therapeutic Mineral Feed Additive for Animals and Poultry. *Agricultural Research, 12*(2), 226–231. https://doi.org/10.1007/s40003-022-00634-7

Moskalenko, O., Valiyev, J., Boiarchuk, S., Vazov, R., & Kavaldzhieva, K. (2025). The assessment of the impact of sustainable production methods on economic efficiency in the food industry. Żywność. Nauka. Technologia. Jakość, 32(4), 136–166. https://doi.org/10.15193/zntj/2025/145/561

Moura, R., Umaraliev, R., dal Moro, G., & Noronha, F. (2012). Preliminary results of dispersive wave vs measurements in the granitic urban environment of Porto, Portugal. 12th International Multidisciplinary Scientific GeoConference and EXPO – Modern Management of Mine Producing, Geology and Environmental Protection.

Muñoz, P., Zwick, S., & Mirzabaev, A. (2020). The impact of urbanization on Austria's carbon footprint. *Journal of Cleaner Production*, *263*, 121326. https://doi.org/10.1016/j.jclepro.2020.121326

Nesprava, M., Otych, D., Hreshchuk, H., Pyvovarchyk, I., Sarancha, I., Fedoryshyn, H., & Maksymchuk, B. (2025). Competencies in the Study of Psychological Influences of Greening on the Social Quality of Life: A Review. *Grassroots Journal of Natural Resources, 8*(1), 989–1004. https://doi.org/10.33002/nr2581.6853.080142

OECD (2025). Reinforcing rural resilience. Paris: OECD Publishing. https://doi.org/10.1787/7cd485e3-en

Qu, Y., Zhan, L., Jiang, G., Ma, W., & Dong, X. (2021). How to address "Population Decline and Land Expansion (PDLE)" of rural residential areas in the process of urbanization: A comparative regional analysis of human-land interaction in Shandong Province. *Habitat International*, *117*, 102441. https://doi.org/10.1016/j.habitatint.2021.102441

Rao, J. (2022). Comprehensive land consolidation as a development policy for rural vitalisation: Rural in Situ urbanisation through semi socio-economic restructuring in Huai Town. *Journal of Rural Studies*, *93*, 386–397. https://doi.org/10.1016/j.jrurstud.2020.09.009

Sahoo, M., & Sethi, N. (2022). The dynamic impact of urbanization, structural transformation, and technological innovation on ecological footprint and PM2.5: Evidence from newly industrialized countries. *Environment, Development and Sustainability*, *24*(3), 4244–4277. https://doi.org/10.1007/s10668-021-01614-7

Sakketa, T.G. (2023). Urbanisation and rural development in sub-Saharan Africa: A review of pathways and impacts. *Research in Globalization*, *6*, 100133. https://doi.org/10.1016/j.resglo.2023.100133

Shabu, T., Fate, S., & Ukula, M.K. (2021). Impact of urbanization on agricultural land in Makurdi local government area of Benue state, Nigeria. *NASS Journal of Agricultural Sciences*, *3*(1), 21–28. https://doi.org/10.36956/njas.v3i1.321

Shahini, E., & Shahini, E. (2025). Role of urban green spaces and tree plantations in improving ecosystem services and urban resilience. *Ukrainian Journal of Forest and Wood Science, 16*(2), 136–151. https://doi.org/10.31548/forest/2.2025.136

Valujeva, K., Pilecka-Ulcugaceva, J., Skiste, O., Liepa, S., Lagzdins, A., & Grinfelde, I. (2022). Soil tillage and agricultural crops affect greenhouse gas emissions from Cambic Calcisol in a temperate climate. *Acta Agriculturae Scandinavica Section B: Soil and Plant Science, 72*(1), 835–846. https://doi.org/10.1080/09064710.2022.2097123

World Bank (2025). Employment in agriculture (% of total employment) (modeled ILO estimate). World Bank. Retrieved from https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?view=map

World Data (2025). Population growth in Albania. World Data. Retrieved from https://www.worlddata.info/europe/albania/populationgrowth.php

Xhindi, N., & Xhindi, T. (2023). The policy of urbanization growth and its effects in the Albanian economy in 1984-2020. *Studia Iuridica Lublinensia*, *32*(1), 357–370. https://doi.org/10.17951/sil.2023.32.1.357-370

Yanbo, Q., Guanghui, J., Wenqiu, M., & Zitong, L. (2021). How does the rural settlement transition contribute to shaping sustainable rural development? Evidence from Shandong, China. *Journal of Rural Studies*, *82*, 279–293. https://doi.org/10.1016/j.jrurstud.2021.01.027

Yang, R., Zhang, J., Xu, Q., & Luo, X. (2020). Urban-rural spatial transformation process and influences from the perspective of land use: A case study of the Pearl River Delta Region. *Habitat International*, *104*, 102234. https://doi.org/10.1016/j.habitatint.2020.102234

Yao, J., Xu, P., & Huang, Z. (2021). Impact of urbanization on ecological efficiency in China: An empirical analysis based on provincial panel data. *Ecological Indicators*, *129*, 107827. https://doi.org/10.1016/j.ecolind.2021.107827

Yu, Y., Zhang, N., & Kim, J.D. (2020). Impact of urbanization on energy demand: An empirical study of the Yangtze River Economic Belt in China. *Energy Policy*, *139*, 111354. https://doi.org/10.1016/j.enpol.2020.111354

Zhang, L., Yang, L., Zohner, C.M., Crowther, T.W., Li, M., Shen, F., & Zhou, C. (2022). Direct and indirect impacts of urbanization on vegetation growth across the world's cities. *Science Advances*, *8*(27), eabo0095. https://doi.org/10.1126/sciadv.abo0095

Zhong, C., Hu, R., Wang, M., Xue, W., & He, L. (2020). The impact of urbanization on urban agriculture: Evidence from China. *Journal of Cleaner Production*, *276*, 122686. https://doi.org/10.1016/j.jclepro.2020.122686

Annex 1. Questionnaire for residents of rural areas of Albania

I. Demographic characteristics (for statistical analysis)

1. Age:
   a) 18–25
   b) 26–35
   c) 36–45
   d) 46–60
   e) 61 and older
2. Gender:
   a) Male
   b) Female
3. How many years have you lived in your village?
   a) Less than 5 years
   b) From 5 to 10 years
   c) More than 10 years
   d) Whole life
4. Do you plan to leave the village within the next 3 years?
   a) Yes
   b) No
   c) Hard to say

II. Socio-economic change and access to services

5. How has the population in your village changed over the past 10 years?
   a) Increased
   b) Decreased
   c) Not changed
   d) I do not know
6. Has the quality of local infrastructure changed over the past decade? (Roads, transport, sewerage, lighting)
   a) Significantly improved
   b) Partially improved
   c) Not changed
   d) Deteriorated
7. What is the level of access to health services in your community?
   a) Good
   b) Satisfactory
   c) Limited
   d) Absent
8. Is there a high school in your community?
   a) Yes
   b) No
9. Are there any members in your family who have migrated to the city or abroad in search of work?
   a) Yes, to the city
   b) Yes, abroad
   c) No
10. Your family's main source of income:
    a) Agriculture
    b) Earnings in the city
    c) Entrepreneurship (local business)
    d) Social assistance / pension
    e) Other (specify):

III. Perception of changes in the rural environment

11. How do you assess the impact of urbanisation on your village?
    a) Positive
    b) Rather positive
    c) Rather negative
    d) Negative
    e) I cannot rate it
12. Has the development in your area changed in the last 10 years?
    a) New residential buildings have been added
    b) Commercial or industrial facilities have appeared
    c) Territory remained unchanged
    d) Old buildings were demolished / dilapidated
13. Which of the following issues are relevant to your community? (You can choose several)
    a) Youth outflow
    b) Lack of work
    c) High prices / low incomes
    d) Bad roads
    e) Unavailability of medical services
    f) Environmental pollution
    g) Lack of Internet or digital services
14. Do you feel that your village is becoming "urban" in nature?
    a) Yes, to a large extent
    b) Partially
    c) No, it remains rural
    d) Hard to say

IV. Open questions

15. How do you think urbanisation has affected the way of life in your village?
16. What changes would you like to see in your community in the future?
17. What do you think needs to be done to improve living conditions in rural areas?
18. If you have any other comments on the topic of urbanisation, please indicate them below.