

URBAN PARADOX: AN ANALYTICAL PERSPECTIVE RETHINKING SUSTAINABLE LAND AREAS

Gabriela BANADUC, Cornelia BAERA, Anca DRAGHICI

Politehnica University of Timisoara, 2 Piata Victoriei Street, Timisoara, Romania

Corresponding author email: gabriela.banaduc@student.upt.ro

Abstract

The paper aims to characterize the urban - rural areas relationship in the context of actual urbanization effects. Cities are marked by several social inequalities. These polarized opportunities of the urban environment which are often mirrored in contrast to the rural environment, as patterns of inequality in cities vs rural localities are considerable and generally more widespread. Facing these challenges, accompanied by the determining phenomena of the rapid growth of the urban population, led to extensive debates that had a significant impact on the local development strategy. Thus, a strong movement was generated to reach the clean natural environment, which is called the urban paradox. In the current research, the complex phenomenon of urbanization will be approached from three perspectives: (1) the capacity of cities to open up for including rural landscape as an opportunity to expand sustainable infrastructure; (2) the government ability to promote greener, more sustainable living; (3) the ability to share and provide all urban and rural residents with access to a more sustainable environment (related to the Sustainable Development Goals).

Key words: funds, inclusion, rural area, sustainable development, urbanization.

INTRODUCTION

Nature is experienced as an environment where people can rest and recover from daily stress. There is a growing need for nature as a source of relaxation and recreation (Health Council of the Netherlands and Dutch Advisory Council for Research on Spatial Planning, Nature and the Environment, 2004). In recent years, urban areas have experienced a decline in the quality and quantity of their green spaces. Due to the growth of urbanization and a densification policy, more people are facing the prospect of living in a residential environment with fewer green resources.

Throughout history, rural historical background life in Europe developed amidst a uniquely polycentric pattern of urban structures that emerged in the early Middle Ages (Zonneveld & Stead, 2007). Europe slowly transformed from a largely rural agricultural community into a large urban community: more than half of the European population lived in an urban area by 1950 (United Nations, 2018). In contrast, over 80% of those living in Africa and Asia in 1950 lived in rural areas. While the rhythm of urbanization on these two continents subsequently accelerated, in 2015 their populations, Africa (59.6%) and Asia (51.8%),

continued to live in rural areas. These different levels of urbanization show that, globally, only in the last decade the total number of people living in urban areas has exceeded that of the population living in rural areas (Kotzeva & Brandmuller, 2016).

According to statistical data processed throughout the world (United Nations, Department of Economic and Social Affairs, Population Division, 2018) 70% of global GDP is generated by economic activities located in the urban area and 53% of the total world population lives in the urban area. Moreover, it is estimated that by the year 2050, approximately 70% of the world's population will live in cities (Grimm et al., 2008). Thus, it was recognized that a process of structural transformation of urban areas due to the appearance and expansion of metropolitan areas is being registered worldwide.

The phenomenon of urbanization in Romania, as it is reflected at the level of our country, shows that the rural population in our country is decreasing, while it is estimated that the population in the urban environment will increase considerably, so that by 2050, 70% of the population will be urban. Romania's population will live in the urban environment (United Nations, 2018). An indisputable fact is

that generations to come will be born in cities, generating a huge decrease in rural population (Figure 1 and Figure 2).

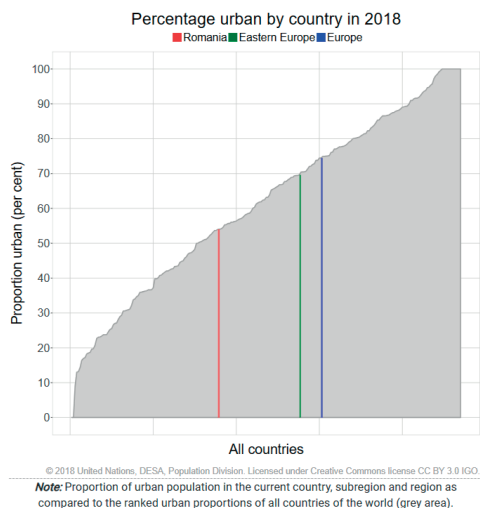


Figure 1. Urban population evolution in Romania, Eastern Europe and Europe in 2018 (by percentage)

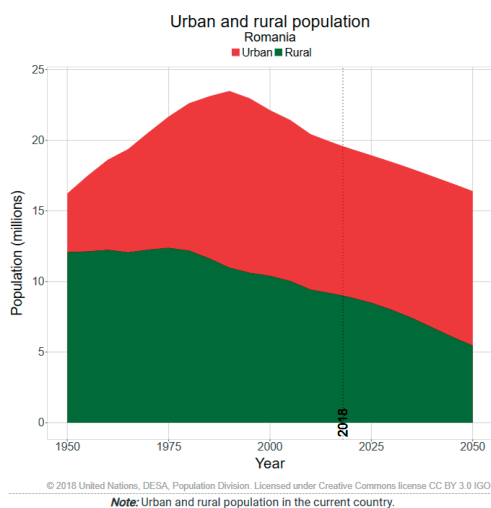


Figure 2. Urban and rural population in Romania in 2018

Most of the literature conceptualizes urbanization as a process of change over time in the size, density, and heterogeneity of human settlements (Cyril et al., 2013).

Urban development strategies are important documents that present the steps towards a more sustainable urban-rural future. It includes

sustainable objectives such as planning for land use and open space for transport coordination (including ITS/TIC systems, electric buses, or electric vehicle charging stations), planning for a better green compact city, controlling green infrastructure, and most importantly preserving agricultural land and promotion of local production. The global development of transport based on internal combustion engines has led to a significant increase in the consumption of fossil fuels produced by the extraction of crude oil from well depths and the refining of it (Simion et al., 2022).

Urban land consumption clearly affects the urban-rural linkages, being one of the biggest challenges of peri-urbanization. The urban network within the city has always formed an important factor in shaping the peri-urban area and the surrounding regions.

The peri-urban interface is formed by complex links of landscapes that cannot be called urban nor rural, but it has features of both and it is in continuous expansion. Much of the rural population depends on the urban area as it provides hospitals, government services, and education. There is a strong positive synergy between rural population and urban population as well as a negative one. The expansion of urban centers because of population growth, influences agricultural land. The peri-urban area is in continuous transformation, and in this transformational process, most of the time the poorest are the most affected. Local decision-making can help avoid neglecting forward and backward links between agriculture services and manufacturing, managers need a coherent, systematic, and scientific approach to sustainable development management (Negulescu et al., 2022). It can also negotiate and regulate the use of natural resources by rural and urban inhabitants and enterprises, otherwise they can become a major cause of conflict (Tacoli, 2003).

An aspect that becomes more and more a certainty is that urbanization is a complex process of change of rural lifestyles into urban ones in Europe (Antrop, 2004). It occurs near cities and in rural areas. It is considered a wave of spread of changing lifestyles, controlled mainly by changing access to places that offer new opportunities.

Urbanization causes space polarization by changing population density, economic activities, and mobility. In addition, cities are often characterized by a number of social inequalities, and it is common for people to enjoy comfortable lives living in close proximity to others who may face considerable challenges, such as housing, poverty, or crime. These polarized opportunities/challenges of the urban environment are often mirrored in strong contrast to the rural environment, as the patterns of inequality in cities versus rural localities are considerable and generally more widespread than those observed for countries.

Cities are recognized by both political factors and public opinion for their significant contribution to wealth creation and human well-being. In the early stage of industrialization and urbanization among developing countries, it is common that rural areas offered support to urban areas. The imbalance between urban and rural leads to serious problems like rural poverty and environmental destruction, which affects the whole environmental and economic development.

Urbanization is also a challenging process for sustainable development of rural territories. One of the most threatened by urbanization pressures is agriculture. The impact consequence of urban expansion generates an increased competition for natural resources in the peri-urban and rural areas where agriculture is the main occupation. This peri-urban zone is associated with the transition from urban structure to that of a rural specific and involves shifts into, out of and across it from both sides, this makes it a priority in understanding the broader regional context and dynamics across the urban-rural environment. Thus, a major challenge for urban planning future is developing the public spaces for an increasing number of people and preserve urban areas sustainable without creating any unnecessary pressure, 'an interconnected network of green spaces that helps stop the loss of biodiversity and enable ecosystems to deliver their many services to people and nature' (Benedict & McMahon, 2012).

Having said this, the search for sustainability involves twin efforts both in cities and in the countryside. The concept of urban-rural areas relationships is discussed both in the academic literature and policy and programming

documents. The concept is being traced back in time (Davoudi, 2002) and mirrored in the present time as cities and villages are two systems that depend on each other, integrate with each other and complement each other (Ji et al., 2019) each deriving different benefits or negative/positive impacts.

Urban-rural relationship can take many different forms but each one enhances urban-rural synergies in a specific way.

The rural areas are not always included in the development processes as it cannot provide a stable income or employment. On the other hand, it provides natural resources, unique natural landscapes and cultural values essential for urban development. In the last years, the linkages between the rural areas and functional urban areas were greatly boosted by structural funds especially in the field of sustainable mobility, public spaces infrastructure, agriculture. These investments are foreseen in the regional, EU Cohesion policy, and echoes in the improvement of communication, social services and economical attractiveness of the rural landscape, strengthening the rural - urban relationship and promoting a smart, sustainable and inclusive growth (Crescenzi & Giua, 2014). Urban-rural partnerships at the European, national, regional level crosses challenging times. To address these challenges the vitality of rural areas due to urbanization development is under decline owed to depopulation and agricultural lack of interest. On the other hand, urban area faces pollution, congestion, and a very intensive development. Also, urbanization has been boosted by large support from rural areas especially natural resources such as energy and food (Kelly-Reif & Wing, 2016) while the rural areas were affected by economic, social and environmental pressure.

In this respect, the paper aims to characterize the urban - rural areas relationship in the context of actual urbanization effects as cities are marked by several social inequalities. The need for structural changes regarding the European policy about funding is in progress.

MATERIALS AND METHODS

The methodological approach applied to study the phenomenon of characteristics of the

urbanization phenomenon in a rural environment consists of three steps (Figure 3). In the first step, the regional territory is classified based on the typology of urbanization pattern from peri-urban and rural areas such as the capacity of cities to open for the inclusion of the countryside as access to city infrastructure (road tolls and integrated public transport systems, reducing pollution, promoting the use of cleaner or renewable fuels, encouraging cyclists/pedestrians or introducing more green spaces). Second, the capacity to foster a greener and more sustainable life living. Third, the capacity to share and provide for the rights of all urban and rural residents, access (to opportunities, places), their capacity to foster a greener, more environmentally sustainable world, to all current and future residents according to the 17 Sustainable Development Goals (SDG) as shown in Figure 3.

RESULTS AND DISCUSSIONS

At EU level, pressure on the EU agriculture resources have increased due to demographics changes as Figure 4 suggestively shows. Furthermore, the growing pressure on the use of natural capital is a reason to increase agriculture productivity in the best sustainable way by involving both urban and rural actors (Figure 5).

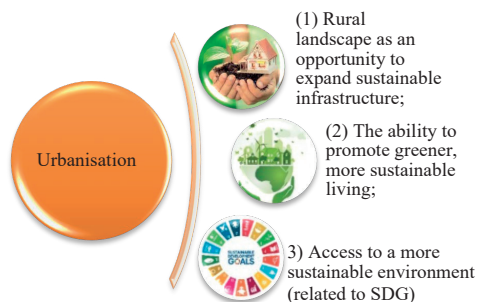
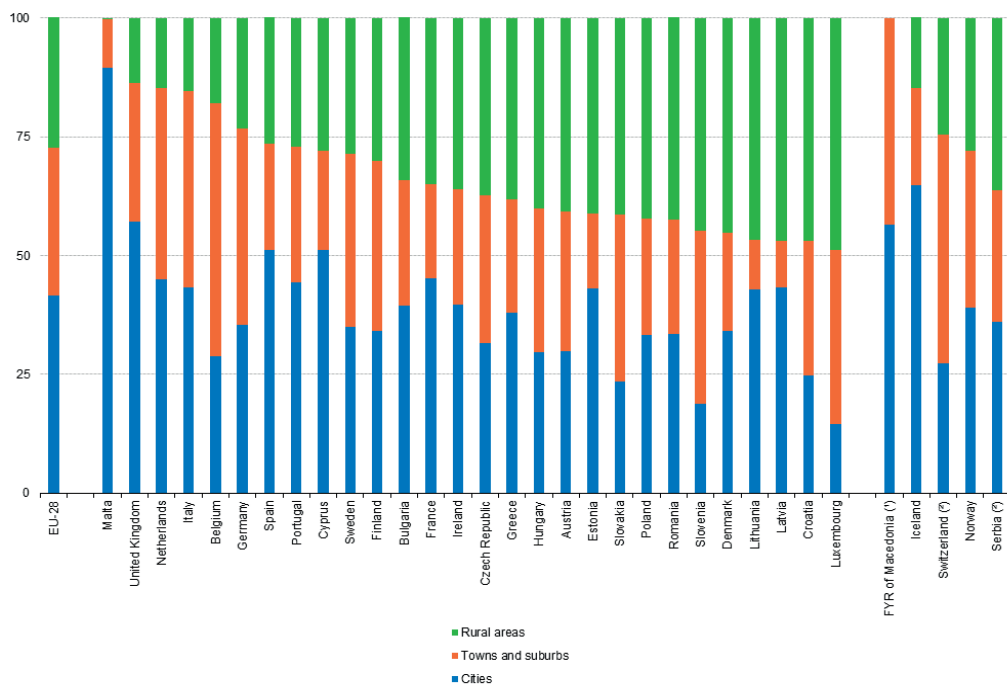


Figure 3. Methodological approach



(*) 2011. Rural areas: low reliability.
 (*) 2013.

Figure 4. Population distribution by degree of urbanization, 2014 (% of total population) (Eurostat online data code: ilc_lvho01)

Rural development is influenced by climate change, high food prices, and endangered biodiversity. Also, there are many changes due to the existing gap between urban-rural area vs. rural-rural areas (limited access to care services, public transport, etc.). The reduction of rural poverty and improvement of rural environment is a process of enhancing the common development of urban and rural areas, and as result, eliminates the imbalance between urban and rural. It is significant to sustainable development, and essential to explore a new urban-rural cooperation mode to address the dual polarization phenomenon (Ji et al., 2019). Common Agricultural Policy (CAP) for 2023-2027 period address the Sustainable Development Goals (SDG) by introducing measures (SDG) as shown in Table 1. These goals support sustainable agriculture, sustainable management of natural resources,

climate action and balanced territorial development, with the aim of conserving nature, such as green payment, focusing on rural areas with anticipated impacts on semi-natural habitats and wild species throughout Europe (Concepción et al., 2020). Rural development is "the set of activities and actions of various actors that, taken together leads to progress in rural areas" (Shepherd, 1998). Details are given in Table 2.



Figure 5. Process of achieving urban/rural sustainable development

Table 1. CAP for 2023-2027 period address sustainable development goals by introducing measures for every sustainable development goal (SDG) (United Nations, 2015)

SDG	Objective	Measures
SDG 1	Ending poverty in all its forms	Reducing inequalities between territories and people
SDG 2	Ending hunger, achieve food security and improved nutrition and promote sustainable agriculture.	Supporting agricultural productivity of small-scale farms, equal access to land, knowledge, farm employment, financial services
SDG 4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	Enhancing innovation, encouraging research, strengthening advisory services.
SDG 6	Ensure the availability and sustainable management of water and sanitation for all.	CAP strategic plans to reduce nutrient losses and pesticide use by 50% by 2030, thereby protecting water resources
SDG7	Ensure access to affordable, reliable, sustainable and modern energy for all.	Various measures to increase the production of renewable energy, e.g. biogas.
SDG8	Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all.	CAP promotes income, value-added services, and employment in rural areas.
SDG9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.	Improving internet access. Access to government access to information and communication technology services and infrastructure.
SDG12	Ensure sustainable consumption and production patterns.	CAP helps to reduce food loss and waste.
SDG13	Take urgent action to combat climate change and its impacts.	The CAP supports carbon storage and contributes to the prevention and reduction of GHG emissions. GHG emissions from agricultural production decreased from 483 million tons in 1990 to 382 million tons in 2020.
SDG15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	Organic production has increased in the last decade. Organic farming contributes to the promotion of more sustainable farming practices and environmental protection and to the improvement of animal welfare in response to specific consumer demands for sustainable food products.

Table 2. Objectives and results of sustainable agriculture

No.	Objective	Result
1.	Assuring the resilience of agriculture sector.	Long term food security, support family farm income and economic, social and environmental agriculture sustainability
2.	Focus on innovation and research.	A smart productive future farm and a digitalized rural/urban market.
3.	Ensuring a sustainable future for European farmers.	Improve farmer's status developing
4.	Promoting sustainable energy.	Greenhouse gas emission and carbon reduction
5.	Reducing chemical dependency.	Promote sustainable development of natural resources and reducing chemical product in industrial agriculture (biocides, herbicides) synthetic fertilizers.
6.	Preserving habitats and landscapes.	Enhance ecosystem services, reversing biodiversity loss (replanting trees,
7.	Sustainable economic development for the rural areas.	Encourage and support young farmers, new farms, attract new investors.
8.	Promote social inclusion and local development.	Encourage women's participation in rural economic development, gender equality, employment.
9.	Maintain societal needs on food and health.	Encourage high-quality, healthy food produced in a sustainable way, avoiding food waste or animal welfare.
10.	A modern agriculture in rural areas.	Fostering innovation and digitalization, improved access to knowledge, innovation and research, trainings.

Following the methodological approach applied to study the characteristics of the urbanization phenomenon over rural environment, we keep in sight that:

1. Sustainable Infrastructure in Cities Capacity for Inclusion of Rural Areas

Today, human activities have significantly amplified land degradation in both the rural and urban areas. Living standards for the rural population are mostly determined by access to natural resources such as fertile soil or water quality, very affected by urban expansion and associated desertification in the long term (Abu Hammad & Tumeizi, 2012).

Industrialization led to rural land abandonment because of increased cultivation costs, decreased profits, and changes in trade regulations between countries (Atis, 2006), and also, at the same time, the local job market in rural areas connected both to agriculture and tourism became less due to land degradation (urban expansion leading to associated desertification and environmental degradation in time) and land availability, reduced production of the annual harvest.

Rural emigration is probably the most evident example of off-site effects of large-scale urban expansion and socioeconomic development on land degradation (Borrelli et al., 2018).

Socioeconomic development, rural migration, rural land abandonment, and soil erosion are factors that increase the risks of windstorms,

floods, landslides, or other environment deterioration and fully affect rural areas (Seifollahi-Aghmiuni et al., 2022). Different forms of land degradation can affect soil quality and productivity and limit the services of soil ecosystems in certain environmental systems.

Sustainable management and mitigation of land degradation, especially in areas where environmental vulnerability is already a challenge, can improve soil health and structure, support food production and resilience to climate change and human pressures, and provide a regional buffer against climate change and human pressures (Colantoni et al., 2015).

From the perspective of the triple development of urbanization, namely, from the point of view of population, land and economy (Figure 6), the gap between urban and rural areas is easily identified as the degree of influence of population urbanization, industrial urbanization, and land urbanization on the gap between the social economic systems. The living system of residents between urban and rural areas is increasing.

Along with the development of urbanization, the gap between urban and rural financial investments, the remuneration of labor production, the quality of life, and the ability to pay by means of transport will narrow. The key implication of these findings is that relevant future measures and policies should be formulated in the operation of local conditions

to promote the implementation of rural economic development. Urbanization is seen as a double-edged sword, with positive or negative impact on rural development. In addition, different periods or degrees of urbanization will have different mechanisms for developing urban-rural relationships.

How to narrow the gap between urban and rural areas? Strategic documents are the first to predict the step forward a more sustainable urban development (Banaduc et al., 2023) The landscape dynamics are influenced by the polarization territory between urban, rural and accessibility aspects. Urbanization processes are dynamic, multifunctional, and complex; it affects not only cities, but also smaller settlements and remote villages. A detailed inventory of landscape conditions and monitoring is essential to obtain reliable data to fund good decision making.



Figure 6. Triple development of urbanization

The relationship between the city and the countryside is strongly influenced by the transportation infrastructure. Urbanization processes affect main cities but also smaller settlements and even remote rural villages.

2. *The Capacity to Foster a Greener and More Sustainable Life Living*

Since 2007, Romanian farmers could benefit of some similar rights with European farmers (according to the Romania's accession to the European Union <https://eur-lex.europa.eu/EN/legal-content/summary/the-accession-partnership-with-romania.html>). An important role was played by the funds addressed to agriculture and rural development, an important component of these funds being the allocations financial measures of the National Rural Development Programme (PNDR) 2014-2020. PNDR 2014-2020 represents the programmatic document, in the sense of art. 6 of

Regulation (EU) no. 1305/2013, which provides for the measures and amounts allocated to Romania from the EAFRD, which are approved by the European Commission by decision. From 2021, begun the transition period to the new Community Agricultural Policy (CAP) 2021-2027, and the implementation of a National Strategic Plan. The European model of agriculture is based on competitiveness, such as protecting the environment, offering more convenient residential settlements for the rural population, and the integration of agriculture with the environment and forest. CAP focuses on integrated development of the rural economy and protecting the environment. The EU's rural development policy helps rural areas in the EU to meet the wide range of challenges and opportunities that face them in terms of economic, environmental, and social development. CAP supports the dynamism and economic viability of rural areas through funding actions that support rural development. Sustainable development of rural areas stands up for agriculture by boosting competitiveness of all branches of agriculture, natural resource management, promote food supply chain, restoration, conservation, and development of ecosystems linked to agriculture, social inclusion, and poverty reduction, encourage knowledge transfer and innovation in agriculture to balanced development of rural areas. These objectives are achieved with the help of the European Agricultural Fund for Rural Development (EAFRD) as shown below. The EAFRD budget for Romania the period 2014- 2020 was 12.051.034.359 € out of which were spent 10.150. 481.429 € from the state budget (Figure 7).

Common Agricultural Policy pays more and more attention to rural sustainable development, but in order to formulate appropriate policies and assure the effectiveness of the policy measures, the need to understand these territories is mandatory, and even so, sometimes it is not enough.

Investments in agriculture have a particular impact on the rural economy in general, given that agriculture continues to remain the most important activity in rural areas and an essential source of income for households. The Common Agricultural Programme funds farm activities that improve competitiveness. It points out the

experience of other agricultural systems, from other member states or from other countries that faced the same challenges (political, economic, or environmental).

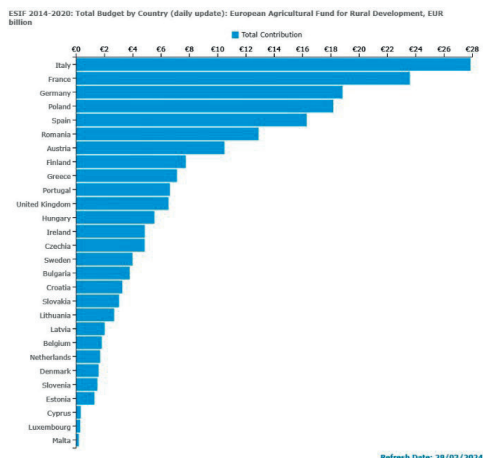


Figure 7. ESIF 2014-2020: Total Budget by Country (daily update): European Agricultural Fund for Rural Development, EUR billion. Retrieved from <https://cohesiondata.ec.europa.eu/funds/eafrd/14-20>

The local landscape change can only be understood when situated in its general geographical context and with all its related dynamics. The patterns of change are different for the countryside near major cities, for metropolitan villages, and for remote rural villages. Planning and designing landscapes for the future requires that geographical context to be understood.

3. Access to a More Sustainable Environment

To maintain and avoid depopulation and degradation of rural communities, it is essential to encourage sustainable rural development and follow the local development strategies step by step. Informed authorities will ensure biodiversity conservation agriculture resilience, innovation and promote sustainable ways of producing energy. Land abandonment related to depopulation changes the vertical and horizontal fuel structure in ecosystems and landscapes, increasing fire hazards (Sil et al., 2019). Abandoned landscapes tend to exhibit higher fire, especially when occurs in conservation areas (Chivulescu et al., 2023).

Adequately planned, sustainable infrastructure projects have developed in the recent years a

governmental proactive promotion of new roads and sanitation, water and electricity supplies, and other types of projects, which contributed greatly to increasing income equality between the poorer and wealthier regions, narrowing the gap between urban-rural economic developments (Ministerul Agriculturii si Dezvoltarii Rurale, 2024). Cultivation of agricultural products, including harvesting, milking, breeding of animals and keeping them for agricultural purposes, maintaining an agricultural area in a condition that makes it suitable for grazing or for cultivation, without any preparatory action that goes beyond the framework methods and usual agricultural machinery (minimum activity), in compliance with the rules of eco-conditionality, represent a proven path on the way to sustainable development or as in the urban-rural migration (Davis, 2011).

Urbanization is associated with dramatic changes in land patterns, demographic structure, types of occupation, and aspects of lifestyle and culture associated with the growth of cities (Popkin, 2017), a complex process of change of rural lifestyles into urban ones (Antrop, 2004).

Government at any level is obliged to provide cities and communities in the urbanization process with the necessary resources to engage in the development of participatory, inclusive policies of involved and informed citizens, to promote investments that ensure access to sustainable jobs, basic services needed for daily living, water, sanitation, transport, green energy, clean, efficient waste management, and pollution reduction, as well as public green spaces and community services (Boc, 2017).

Figure 8 is showing the path on the way to sustainable development in agriculture.

The increase of city population led to question the livability of urban areas. The lack of urban food production, the change in climate and water availability produces consequences making important changes for agricultural land use. Therefore, the distribution of green urban areas in multifunctional way is done by means of implementing sustainable strategies. A smart urban space management supports the economy but also the city aesthetic on its way to a self-sustained community.

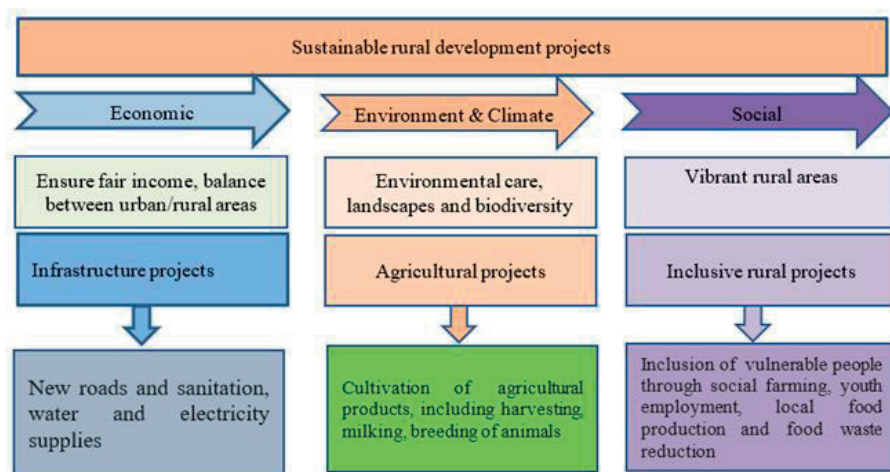


Figure 8. The path on the way to sustainable development

In this respect, the aim of the study is to underline the importance to promote a greener, more sustainable living, shedding light on the importance of smart urbanization. The process follows SDG principles, all under the umbrella of smart governance. The relationship between urban and rural areas, reflected in terms of cooperation and of essential needs as: food, nature, place identity as individual, physical health (Dean et al., 2018) is deepened into the mechanisms of rethinking sustainable land areas, specifically focusing on the potential role of the cities to use every opportunity to expand sustainable infrastructure, sustainable lifestyle and environment. The present study provides insights on sustainable land areas perspectives in accord with SDG 2 (Zero Hunger), SDG 11 (Sustainable Cities and Communities) and SDG 13 (Climate Change), European funds, the dynamic of residential neighbourhoods and green spaces in the context that people are embedded in (Russo et al., 2024; Yu et al., 2024) 2, healthy public spaces (Wood et al., 2017; Jimenez et al., 2021), to promote social cohesion of a healthy resilient city.

The city's capacity for inclusion of rural areas from the point of view of socioeconomic development, industrialization, job market, rural emigration is probably one of the most evident examples of sustainable urbanization. This complex mechanism follows strategic documents (Guvernul Romaniei & Programul Națiunile Unite, 2008) pointing out that conservation and improvement of natural

resources is a priority for increasing economic dynamism of rural areas to maintain social balance through the sustainable development of agriculture, forestry and fishing (Guvernul Romaniei, 2005).

CONCLUSIONS

In recent years, the quality and quantity of green space has declined. Urbanization is a complex process of transforming rural life into urban life. Due to growing urbanization and a policy of spatial planning densification, more and more people are faced with the prospect of living in a residential environment with fewer green resources.

Urban land consumption clearly affects the urban-rural links. Precious land around the city that is used for services and that pollutes the area (waste dumps, treatment plants, etc.), reduces their attractiveness and affects the land market. Natural heritage is misused, valuable natural areas being occupied by aggressive habitation and often incompatible economic functions. The use of the Nature-Based Solutions (BnS) concept proposes the use of nature in addressing urban planning. Most rural populations depend on urban areas because they provide hospitals, government services, and education. Local decision making also negotiates and regulates the use of natural resources by rural and urban residents and enterprises. Cities are recognized by both political factors and public opinion for their significant contributions to the creation of

wealth and human well-being. The impact of urban expansion will result in an increase in competition for natural resources in suburban and rural areas where agriculture is the main occupation.

The urbanization phenomenon in the rural environment consists of three steps:

(1) The capacity of cities to open up for the inclusion of the countryside as access to city infrastructure (road tolls and integrated public transport systems, reducing pollution, promoting the use of cleaner or renewable fuels, encouraging cyclists/pedestrians or introducing more green spaces), channeled by infrastructure projects for new roads and sanitation, water and electricity supplies;

(2) The capacity to foster a greener and more sustainable life living by environmental care of landscapes and biodiversity through agricultural projects;

(3) The capacity to share and provide for the rights of all urban and rural residents, access (to opportunities, places), and their capacity to foster a greener, more environmentally sustainable world for all current and future residents, inclusive rural projects targeting social farming youth employment, local food production or food reduction according to the 17 SDGs).

The EU's rural development policy helps EU rural areas to address a wide range of challenges and opportunities in terms of economic, environmental and social development. The sustainable development of rural areas (Figure 8), is aimed at strengthening the competitiveness of all agricultural sectors, managing natural resources, promoting food supply chains, restoring, conserving and developing ecosystems linked to agriculture, social inclusion and poverty reduction, encouraging knowledge transfer and innovation in agriculture to the development of balanced rural areas. Urban-rural development is considered one of the key pillars of regenerative development, including the economic, social, and environmental balance.

Also, urban-rural development has been regarded as one of the key pillars in driving regenerative development that includes economic, social, and environmental balance. Cultivation of agricultural products, including harvesting, milking, breeding of animals and

keeping them for agricultural purposes, maintaining an agricultural area in a condition that makes it suitable for grazing or for cultivation, without any preparatory action that goes beyond the framework methods and usual agricultural machinery (minimum activity), in compliance with the rules of eco-conditionality, represent a proven path on the way to sustainable development.

Government at any level is obliged to provide cities and communities in the urbanization process with the necessary resources to engage in the development of participatory and inclusive policies of involved and informed citizens.

REFERENCES

- Abu Hammad, A., & Tumeizi, A. (2012). Land degradation: socioeconomic and environmental causes and consequences in the eastern Mediterranean. *Land Degradation & Development*, 23(3), 216-226.
- Antrop, M. (2004). Landscape change and the urbanisation process in Europe. *Landscape and urban planning*, 67(1-4), 9-26.
- Atis, E. 2006, Economic impacts on cotton production due to land degradation in the Gediz Delta, Turkey. *Land Use Policy*, 23, 181-186.
- Banaduc, G., Taucean, I., & Trunk, A. (2023) Towards the Sustainable Urban Development Goal: A Review of Evaluation Tools. *Proceedings of the MakeLearn&TIIM2023 International Conference on Economic, Social and Environmental Sustainability: The Role of Technology and Political Dialogue*, Valetta, Malta (193-200), ToKnow Press. Available at: <https://toknowpress.net/ISBN/978-961-6914-30-7/46.pdf>. Access on 24-01-2024.
- Benedict, M.A., & McMahon, E.T. (2012). *Green infrastructure: linking landscapes and communities*. Island press.
- Boc, E. (2017). Inovare sustenabilă pentru un oras colaborativ, *Revista Transilvana de Stiinte Administrative*, 40(1), 3-12.
- Borrelli, P., Van Oost, K., Meusburger, K., Alewell, C., Lugato, E., & Panagos, P. (2018). A step towards a holistic assessment of soil degradation in Europe: Coupling on-site erosion with sediment transfer and carbon fluxes. *Environmental Research*, 161, 291-298.
- Chivulescu, S., Cadar, N., Hapa, M., Capalb, F., Radu, R.G., & Badea, O. (2023). The Necessity of Maintaining the Resilience of Peri-Urban Forests to Secure Environmental and Ecological Balance: A Case Study of Forest Stands Located on the Romanian Sector of the Pannonian Plain. *Diversity*, 15(3), 380.
- Colantoni, A., Mavrakis, A., Sorgi, T., & Salvati, L. (2015). Towards a 'polycentric' landscape? Reconnecting fragments into an integrated network of coastal forests in Rome. *Rendiconti Lincei*, 26, 615-624.

- Concepción, E. D., Aneva, I., Jay, M., Lukanov, S., Marsden, K., Moreno, G., ... & Diaz, M. (2020). Optimizing biodiversity gain of European agriculture through regional targeting and adaptive management of conservation tools. *Biological Conservation*, 241, 108384.
- Crescenzi, R., & Giua, M. (2014). The EU Cohesion policy in context: regional growth and the influence of agricultural and rural development policies. *LEQS paper*, 85.
- Cyril, S., Oldroyd, J.C., & Renzaho, A. (2013). Urbanisation, urbanicity, and health: a systematic review of the reliability and validity of urbanicity scales. *BMC Public Health*, 13(1), 1-11.
- Davis, K. (2015). The urbanization of the human population. In *The city reader*, 43-53, Routledge.
- Davoudi, S. (2002). Urban-rural relationships: An introduction and brief history. *Built environment*.
- Dean, J.H., Shanahan, D.F., Bush, R., Gaston, K.J., Lin, B.B., Barber, E., & Fuller, R.A. (2018). Is nature relatedness associated with better mental and physical health? *International journal of environmental research and public health*, 15(7), 1371.
- Grimm, N.B., Faeth, S.H., Golubiewski, N.E., Redman, C.L., Wu, J., Bai, X., & Briggs, J.M. (2008). *Global change and the ecology of cities science*, 319(5864), 756-760.
- Health Council of the Netherlands and Dutch Advisory Council for Research on Spatial Planning, Nature and the Environment, (2004). *Nature and Health. The influence of nature on social, psychological and physical well-being*. The Hague: Health Council of the Netherlands and RMNO 2004; publication no. 2004/09E. Available at: <https://www.healthcouncil.nl/documents/advisory-reports/2004/06/09/nature-and-health.-the-influence-of-nature-on-social-psychological-and-physical-well-being>. Access on 12-02-2024.
- Ji, X., Ren, J., & Ulgiati, S. (2019). Towards urban-rural sustainable cooperation: Models and policy implication. *Journal of Cleaner Production*, 213, 892-898.
- Jimenez, M.P., DeVille, N.V., Elliott, E.G., Schiff, J.E., Wilt, G.E., Hart, J.E., & James, P. (2021). Associations between nature exposure and health: a review of the evidence. *International journal of environmental research and public health*, 18(9), 4790.
- Kelly-Reif, K., & Wing, S. (2016). Urban-rural exploitation: An underappreciated dimension of environmental injustice. *Journal of Rural Studies*, 47, 350-358.
- Kotzeva, M.M., & Brandmuller, T. (2016). *Urban Europe: Statistics on Cities, Towns, and Suburbs*. Publications office of the European Union.
- Ministerul Agriculturii si Dezvoltarii Rurale (2024). Galerie video - Proiecte de succes. Available at: <https://www.madr.ro/axa-leader/content/65-galerie-video-proiecte-de-succes.html?start=3>. Access on 24-01-2024.
- Negulescu, O.H., Draghici, A., & Fistis, G. (2022). A Proposed Approach to Monitor and Control Sustainable Development Strategy Implementation. *Sustainability*, 14(17), 11066.
- Popkin, B. (2017). Relationship between shifts in food system dynamics and acceleration of the global nutrition transition. *Nutrition reviews*, 75(2), 73-82.
- Russo, C., Romano, L., Spano, G., Theodorou, A., Carrus, G., Mastandrea, S., ... & Panno, A. (2024). Personal dispositions explain differences in physical health benefits of nature exposure: The role of restorativeness and affect. *Frontiers in Psychology*, 15, 1365512.
- Romaniei, G. (2005). Planul Național de Dezvoltare 2007-2013.
- Romaniei, G., & Unite, P.N. (2008). Strategia Nationala pentru Dezvoltare Durabila a Romaniei Orizonturi 2013-2020-2030. Bucuresti available at <http://www.insse.ro/cms/files/IDDT>, 202012.
- Seifollahi-Aghmiuni, S., Kalantari, Z., Egidi, G., Gaburova, L., & Salvati, L. (2022). Urbanisation-driven land degradation and socioeconomic challenges in peri-urban areas: Insights from Southern Europe. *Ambio*, 51(6), 1446-1458.
- Shepherd, A. (1998). *Sustainable rural development*. Bloomsbury Publishing.
- Sil, A., Azevedo, J.C., Fernandes, P.M., Regos, A., Vaz, A.S., Honrado, J.P. (2019). Wildfire is not an ecosystem service. *Front. Ecol. Environ.*, 17, 429-430.
- Simion, A.F., Găman, A. N., Găman, G. A., Drăgoi, I., & Ghiță, C. (2022). Environmental and ecotoxicological risk assessment of pollution with light crude oil for an oil exploitation field. In *MATEC Web of Conferences*, 354, 00071. EDP Sciences.
- Tacoli, C. (2003). The links between urban and rural development. *Environment and urbanization*, 15(1), 3-12.
- United Nations, Department of Economic and Social Affairs, Population Division, (2018). *World Urbanization Prospects: The 2018 Revision*. Available at: https://population.un.org/wup/Country-Profiles/_Access on 12-02-2024.
- United Nations, (2015). General Assembly Resolution A/RES/70/1. Transforming Our World, the 2030 Agenda for Sustainable Development. Available at: http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E Access on 10-02-2024.
- World Urbanization Prospects, (2018). Retrieved from: <https://population.un.org/wpp/> Access on 12-02-2024.
- Wood, L., Hooper, P., Foster, S., & Bull, F. (2017). Public green spaces and positive mental health-investigating the relationship between access, quantity and types of parks and mental wellbeing. *Health & place*, 48, 63-71.
- Yu, C., & Kwan, M.P. (2024). Dynamic greenspace exposure, individual mental health status and momentary stress level: A study using multiple greenspace measurements. *Health & Place*, 86, 103213.
- Zonneveld, W., & Stead, D. (2007). European territorial cooperation and the concept of urban-rural relationships. *Planning, Practice & Research*, 22(3), 439-453.