

Integrated Approach to Assessing the Sustainable Performance of Regional Agricultural Holdings

Ovidiu Andrei Cristian Buzoianu¹, Roxana Sarbu², Florin Dobre³, Andreea Ligia Drugau-Constantin⁴ and Raluca Iuliana Georgescu⁵

¹⁾²⁾³⁾⁴⁾⁵⁾ *Bucharest University of Economic Studies, Bucharest, Romania*

E-mail: ovidiu.buzoianu@man.ase.ro; E-mail: sarbu.roxana@ase.ro;

E-mail: florin.dobre@cig.ase.ro; E-mail: andreea.drugau@amp.ase.ro;

E-mail: raluca.georgescu@infinitum.com

Please cite this paper as:

Buzoianu, O. A. C., Sarbu, R., Dobre, F., Drugau-Constantin, A. L. & Georgescu, R.I. (2026). Integrated approach to assessing the sustainable performance of regional agricultural holdings. In C. Vasiliu, D.-C. Dabija, A. Tziner, D. Pleșea, & V. Dinu (Eds.), *Proceedings of BASIQ International Conference on New Trends in Sustainable Business and Consumption, 12th Edition* (pp. 112-120). Editura ASE.

DOI 10.24818/BASIQ/2026/12/015

Abstract

This study assesses the sustainability performance of agricultural holdings in Romania's North-West Region through a quantitative multi-criteria assessment model structured around three dimensions: ecological sustainability, social sustainability and economic sustainability. The empirical analysis uses data for 2024–2025 collected from INSSE statistical records, DADR Cluj data and field-based observations, with Cluj County used as a representative reference case for the regional assessment. The model assigns equal weights of 33.3% to each of the three sustainability dimensions and evaluates selected indicators on a 1–10 scoring scale, subsequently aggregated into an overall sustainability score.

The results show that agricultural holdings in the analysed region do not yet reach the minimum sustainability threshold proposed by the model. The total score obtained is 42 points, compared with the minimum reference threshold of 70 points required to classify agricultural holdings as sustainable. The weakest areas are related to livestock diversification, genetic heritage monitoring, farmers' association capacity, income level and professional training. By contrast, relatively stronger results are identified in financial autonomy, direct valorisation of production and rural quality-of-life conditions. The findings indicate that the North-West Region faces significant structural and functional limitations that reduce the capacity of agricultural holdings to comply with sustainability requirements and European agricultural policy objectives.

The study contributes to the literature by proposing an operational sustainability assessment framework that integrates ecological, social and economic indicators into a single regional evaluation model. From a practical perspective, the framework can support policymakers, regional authorities and farm managers in identifying priority intervention areas, improving resource allocation and designing targeted measures for the modernization and sustainable development of agricultural holdings. Future research should extend the model to other Romanian regions, refine the indicator weighting procedure and test the framework on larger farm-level datasets.

Keywords: Sustainable agricultural performance, regional agricultural holdings, sustainability assessment, integrated evaluation framework, rural development sustainability.

DOI: 10.24818/BASIQ/2026/12/015

Introduction

The concept of sustainability involves taking into account the impact of human activity on natural resources and the need to conserve them. Globally, agriculture occupies approximately 40% of the land surface, while in Romania it covers approximately 62% of the territory (INS), highlighting the essential role of agricultural activities in the sustainable development of land.

Sustainable development can be defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Farrell, 1957).

For this reason, public authorities are constantly interested in sustainable agriculture, supporting research and studies on this topic (Binder, Feola & Steinberger, 2010).

Sustainable agriculture must be economically viable, ecologically “healthy” and socially equitable (Bossel, 1999). Thus, sustainable agricultural holdings must simultaneously meet these three objectives, taking into account their territorial context and the particularities of their own agricultural system.

One of the main challenges is measuring the sustainability of agriculture and agricultural holdings. The variables that could synthesize the three objectives of sustainability are difficult to define, and the specialized literature highlights numerous gaps in the development of assessment and monitoring instruments for the different components of sustainability (Buzoianu et al., 2024). Moreover, definitions of sustainability differ when production systems are analyzed at local, regional or national level (Rădulescu et al., 2025).

Recent research focuses on the development of indicators that allow the estimation of the components of sustainability in agriculture. Although studies on these indicators cannot be generalized, they provide valuable knowledge of the phenomenon and contribute to useful expertise for both farmers and society.

This article aims to present the premises for the development of a model for the management of sustainable agricultural holdings in Romania, as well as the assessment of the sustainability of agricultural holdings in the North-West area of the country. The model is based on established methods for developing sustainability indicators, such as the IDEA method (Indicators of Agricultural Sustainability), created in 2000 and revised in 2003, and the IDERICA method, an adaptation of the IDEA method to the specifics of French statistical records (Coelli et al., 2005).

Romanian policies regarding the structure of agricultural holdings should aim, on the one hand, to create employment opportunities in non-agricultural sectors and, on the other hand, to support and increase the viability of holdings. Intensive agriculture has only partially solved the problem of food security and ensured the well-being of producers, but only through costly agrarian policies. The particularities of agricultural production and the long time to restore natural capital imply large intervals between cause and effect (Hansen, 1996; Hayati, Ranjbar & Karami, 2010). In order to achieve this objective, the article is structured as follows. The first section reviews the scientific literature on sustainable agricultural performance and integrated assessment models, with emphasis on economic, ecological and social dimensions. The second section presents the research methodology, including the data sources, the structure of the sustainability indicators, the scoring system and the multi-criteria assessment approach used to evaluate regional agricultural holdings. The third section presents and discusses the empirical results obtained for the North-West Region, highlighting the main strengths and vulnerabilities identified across the three dimensions of sustainability. The final section summarizes the main conclusions, outlines the theoretical and practical implications of the study, and proposes directions for future research.

1. Review of the scientific literature

The concept of sustainable performance in agriculture has evolved significantly over the past decades, shifting from productivity-oriented evaluation toward multidimensional assessment frameworks integrating economic, environmental, and social dimensions. This transition reflects the broader paradigm of sustainable development introduced by the Brundtland Report (Marchand et al., 2014) which emphasized balancing economic growth with environmental protection and social equity.

Early approaches to agricultural performance assessment focused primarily on economic efficiency and productivity indicators. Studies such as Latruffe et al. (2016) laid the methodological foundation for efficiency measurement through frontier analysis, later expanded in agricultural economics using Data Envelopment Analysis (DEA) and stochastic frontier models (Coelli et al., 2005). While these models provided valuable insights into technical and allocative efficiency, they largely neglected environmental externalities and social outcomes.

The integration of sustainability into agricultural evaluation gained momentum with the development of agri-environmental indicator systems. Pretty (1997). argued that agricultural sustainability must be assessed as a system property rather than through isolated indicators. Similarly, the importance of ecological intensification and sustainable farming practices that maintain productivity while reducing environmental degradation.

A major advancement in sustainability assessment emerged through indicator-based frameworks. The work of Bossel (1999) and later the FAO's Sustainability Assessment of Food and Agriculture Systems (SAFA) guidelines (FAO, 2013) proposed comprehensive indicator sets covering governance, environmental integ-

ity, economic resilience, and social well-being. In the European context, agricultural sustainability assessment has been strongly influenced by the Common Agricultural Policy (CAP) reforms, which increasingly link financial support to environmental performance and rural development outcomes.

Van der Ploeg et al. (2009) demonstrated how multifunctional agriculture contributes simultaneously to economic viability, rural employment, and ecosystem preservation. Similarly, Buzoianu et al (2022) developed composite sustainability indicators for farm-level assessment, showing that integrated measurement tools improve decision-making at both farm and policy levels.

Recent literature emphasizes integrated and multi-criteria approaches. Binder, Feola, and Steinberger (2010) reviewed sustainability assessment methodologies and concluded that multi-criteria decision analysis (MCDA) provides a suitable framework for combining heterogeneous sustainability indicators. Marchand et al. (2014) further showed that participatory indicator selection improves the relevance and applicability of sustainability assessments in agricultural systems (Buzoianu et al., 2024).

Another important research direction concerns regional disparities in sustainable agricultural performance. Studies by Latruffe et al. (2016) highlight how structural characteristics, access to innovation, and policy support influence farm sustainability outcomes across regions. Moreover, more articles underline that sustainability assessment must consider local socio-economic and ecological contexts to avoid standardized but unrealistic evaluation models (Burlacu et al., 2025).

Despite substantial progress, the literature identifies several persistent gaps. First, many studies analyze sustainability dimensions separately rather than through integrated models. Second, there remains limited consensus regarding indicator weighting and aggregation methods. Third, regional-level operational frameworks applicable to agricultural holdings are still underdeveloped, particularly in transition and emerging rural economies.

Therefore, an integrated approach combining economic efficiency analysis, environmental performance indicators, and social sustainability metrics represents a necessary advancement in assessing the sustainable performance of regional agricultural holdings (Gâf-Deac et al., 2023).

2. Research methodology

The research is based on a quantitative multi-criteria assessment model, rather than on a mixed-methods design. The analysis uses a Multi-Criteria Decision Analysis approach, structured around three main dimensions of sustainability: ecological sustainability, social sustainability and economic sustainability. These dimensions reflect the core pillars of sustainable agricultural development and allow the evaluation of agricultural holdings from an integrated perspective.

The assessment model is constructed by assigning scores to specific indicators included in each sustainability dimension. Each indicator is evaluated on a scale from 1 to 10, where lower scores indicate weak sustainability performance and higher scores indicate stronger performance. The individual scores are then aggregated in order to obtain an overall sustainability score for the analysed regional agricultural holdings.

In this study, equal weights are assigned to the three dimensions of sustainability: 33.3% for ecological sustainability, 33.3% for social sustainability and 33.3% for economic sustainability. This weighting structure is justified by the theoretical premise that sustainable agricultural development requires a balanced interaction between environmental protection, social well-being and economic viability. Giving equal importance to the three dimensions avoids the dominance of a single pillar and reflects the multidimensional nature of sustainability. Therefore, the model assumes that an agricultural holding cannot be considered sustainable if it performs well economically but neglects environmental or social aspects, or if it achieves ecological objectives without ensuring economic viability and social resilience.

The ecological dimension evaluates aspects related to the sustainable development of the production environment, including crop diversity, livestock diversity, genetic heritage and resource management. The social dimension reflects the contribution of agricultural holdings to rural development, quality of life, human capital and local community resilience. The economic dimension assesses the viability and independence of holdings, including income level, financial autonomy and the role of direct support mechanisms.

The use of a multi-criteria assessment model is appropriate because sustainability cannot be measured through a single indicator. Agricultural holdings generate economic, environmental and social effects simultaneously, and these effects must be analysed together in order to obtain a coherent evaluation of sustainable performance. The MCDA framework therefore allows the integration of heterogeneous indicators into a single synthetic score, making it possible to compare the current sustainability level with a reference

threshold. In the present study, the minimum threshold for classifying agricultural holdings as sustainable is set at 70 points, while the analysed region obtains a total score of 42 points, indicating significant sustainability gaps and the need for corrective measures.

3. Results and discussion

The first area analyzed is sustainable development of the production environment (ecological). Indicator 1, regarding the diversity of annual crops, highlights the degree of variety of species cultivated in an agricultural system in a given agricultural year. It can be observed the existence of a moderate diversification of annual crops, but this does not reach a high level that would indicate a well-balanced agricultural system from an agro-ecological point of view. The diversity of annual crops directly contributes to maintaining soil fertility, reducing phytosanitary risks and increasing the resilience of agricultural holdings to climatic or economic variations. In the analyzed case, the crop structure indicates a predominance of a limited number of main crops, which limits crop rotation and implicitly the agronomic benefits associated with it. Therefore, the level of diversity can be considered satisfactory, but not optimal, which is why the indicator is assessed with a score of 5. Indicator 2, on the diversity of perennial crops, reflects the stability and sustainability of the agricultural system in the long term. Perennial crops, such as fruit and vine plantations, play an important role in soil conservation, reducing erosion and maintaining agricultural biodiversity. The analysis of the data in Table 1 indicates a relatively more favorable situation compared to annual crops, with a greater variety of perennial crops and a more balanced distribution of them. However, the diversity is not high enough to indicate a full exploitation of the agroecological potential of the analyzed area. In this context, the score given is 6, which suggests a medium to good level of diversification, but which requires additional measures to expand and diversify permanent plantations (Rădulescu, Burlacu, Bodislav & Bran, 2020).

Indicator 4, which targets the diversity of livestock, highlights the structure and balance of the zootechnical sector at the level of the analyzed county. The synthesized data show an uneven distribution of animal species, with the predominance of certain categories and a significant reduction of others.

Such a structure is considered inappropriate because it reduces the complementarity between the different branches of animal husbandry and limits the use of local agricultural resources, especially feed.

Table no. 1. Diversity of perennial crops (ha)

Nr. crt	Specification	2024	2025	Difference
1	Alfalfa	63.200	66.500	+3300
2	Clover	18.400	19.100	+700
3	Perennial grasses	41.600	42.700	+1100
4	Other perennials	12.800	13.200	+400
5	Total area occupied by perennials	136.000	141.500	+5500

Source: INNSE

Indicator 5, on the assessment and improvement of the genetic heritage, highlights one of the most vulnerable components of the agro-zootechnical system analyzed. The data show that only a very small proportion of livestock is under official production control, which indicates a low level of monitoring of genetic and productive performance.

The analysis of Table 1 also indicates a decreasing trend in the monitored livestock of certain species, which increases the risk of genetic degradation of animal populations. In addition, in 2025, no species included in the genetic heritage was registered, which highlights a critical situation regarding the conservation of zootechnical genetic resources. Under these conditions, the score given is 1, reflecting an extremely low level of concern for the conservation and improvement of genetic heritage and underlining the urgent need to implement genetic selection, conservation and monitoring programs.

Table no. 2. Effective in official production control

No crt	Effective in official production control	2024-Medium production	2025- Medium production
1	Cattle (l/cap)	4200	4400
2	Pigs (kg/cap)	1200	1500
3	Sheep (l/cap)	90	120
4	Poultry	-	-

Source: INSSE

Indicator 6, on the development of non-agricultural activities, highlights the degree of economic diversification of rural areas and their capacity to generate alternative sources of income, complementary to agriculture.

In the context of Romania's accession to the European Union, the tourism sector has benefited from important financing opportunities through non-reimbursable structural funds, intended to support regional development and reduce economic disparities between regions. In order to capitalize on these opportunities, Romania has developed a series of sectoral operational programs, negotiated and subsequently approved by the European Commission, within which tourism plays a significant role.

An essential instrument in this regard is the Regional Operational Program, whose main objective is to accelerate economic growth in all regions of the country, with particular emphasis on the least developed ones. Within this program, tourism development is approached as a strategic direction aimed at contributing to the revitalization of local economies, increasing regional competitiveness and diversifying economic activities in rural areas.

The sustainable development of regional and local tourism aims, first of all, at the responsible valorization of cultural, historical and natural heritage, so that existing resources are used without affecting the ecological balance or the identity of local communities. At the same time, an important objective is the modernization and expansion of the tourist accommodation and leisure infrastructure, an essential element for increasing the tourist attractiveness of the regions. By improving the quality of tourist services, the aim is not only to attract a greater number of tourists, but also to stimulate local economies by creating new jobs and developing related activities, such as traditional crafts, local gastronomy or recreational services.

One of the fundamental conditions for the development of rural tourism is the existence of an adequate accommodation infrastructure, especially rural tourist guesthouses. These constitute the core of tourist activity in rural areas, offering accommodation, food and leisure services adapted to the local specifics. In the absence of a sufficient network of tourist guesthouses, rural tourism would have limited development, since the capacity to receive tourists would be reduced. For this reason, the expansion and modernization of rural tourist guesthouses is a relevant indicator of the development of non-agricultural activities and the degree of economic diversification of the rural area.

The following table presents the number of rural tourist guesthouses at the level of each tourist region, with their breakdown by county, providing an overview of the territorial distribution of tourist infrastructure and the potential for the development of rural tourism as an alternative economic activity in the rural area. This analysis allows the assessment of the capacity of the regions to capitalize on existing tourism resources and to support sustainable development through non-agricultural activities generating income and employment.

Table no. 3. Rural guesthouses, 2025

The tourist region and related counties	Number of rural tourist guesthouses
North-West Region	894
Bihor	212
Bistrita-Nasaud	113
Cluj	230
Maramures	282
Satu Mare	10
Salaj	47

Source: INSSE, 2025

The number of rural tourist boarding houses in a given area indicates the degree of development of Rural tourism in that area. The regions with the most boarding houses are presented in the following graph:

The second area is the sustainable development of the social environment. In this regard, rural services and human progress are of great importance.

However, this reality coexists with the predominance of subsistence farms, as approximately 77% of individual agricultural holdings produce mainly for self-consumption, and only 23% consistently pursue the marketing of production. In the case of agricultural units with legal personality, the market orientation is more pronounced, with approximately 67% of them producing for marketing, the rest being intended for domestic consumption. Direct valorization contributes to maintaining income within local communities and reducing intermediaries, which is why the indicator receives a high score of 8.

The reluctance of producers towards associative forms, determined by previous experiences and the lack of a cooperative organizational culture, limits their ability to negotiate advantageous prices, access financing or penetrate wider markets. As a result, the score given to this indicator is only 2, signaling a major vulnerability in rural economic development.

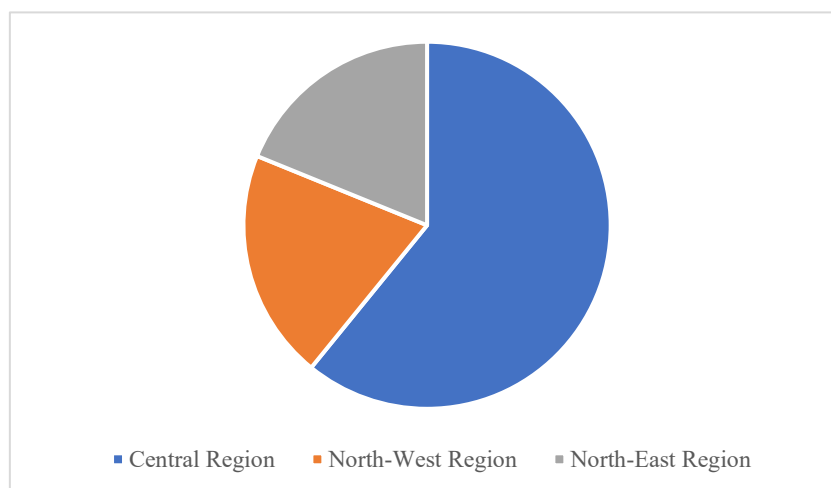


Figure 1. Rural pensions by development regions, Romania, 2025

Source: INSSE, 2025

Vocational training reveals that training opportunities for farmers are limited, mainly limited to introductory courses organized under the auspices of the University of Agricultural Sciences and Veterinary Medicine in Cluj-Napoca, in which participation is low.

The quality of life analysis indicates a relatively balanced situation, despite the predominance of subsistence farms, of which approximately 77% produce mainly for self-consumption. The quality of life, compared to the national average, is considered adequate, due to favorable factors such as the almost complete electrification of the North-West Region, the existence of communication routes that facilitate access to urban centers, the development of mass media and fixed and mobile telephone networks, as well as the presence of health units at the commune level and educational and cultural institutions at the local level.

However, the concrete conditions for carrying out economic activities and the level of income limit the further improvement of this indicator, which is why the score given is 7.

The third area is sustainable economic development. The analysis of the sub-area of economic viability and independence highlights the limited nature of agricultural holdings in the North-West Region in terms of income generation and financial adaptation capacity. Regarding Indicator 27 – Income level, most of the farms analyzed are subsistence type, which means that the income obtained is very low and does not represent a significant source of capital for reinvestment or development.

Regarding Indicator 28 – Financial autonomy, the situation is more favorable. Being subsistence farms, agricultural producers do not resort to external financing or bank loans, which gives them 100% financial autonomy.

This allows them to manage their agricultural activity without dependence on financial institutions, but financial autonomy does not compensate for the low level of income and the lack of resources for investment, which is why the score given is the maximum, namely 10.

However, Indicator 29 – Influence of direct aids underlines the limitations of the government support system. Direct aids granted to agricultural producers have not been provided constantly and rhythmically, being insufficient to cover the price increases generated by the purchase of inputs and resources necessary for the farms. With Romania's entry into the European Union, subsidies are granted strictly according to European norms, which does not guarantee the necessary support for the development and modernization of agricultural holdings.

Overall, the results show that the North-West Region cannot yet be considered a sustainable agricultural system according to the proposed assessment model. The main weaknesses are related to livestock diversification, genetic heritage protection, producer association, income generation, professional training and the limited modernization capacity of agricultural holdings.

These findings suggest that sustainability gaps are not isolated, but structural, affecting the ecological, social and economic functioning of agricultural holdings simultaneously.

From a theoretical perspective, the study contributes to the literature by operationalizing sustainability through an integrated multi-criteria framework that combines ecological, social and economic indicators. Unlike approaches focused only on productivity or economic efficiency, this model allows a broader evaluation of agricultural sustainability at regional level.

From a practical perspective, the results can support policymakers, regional authorities and farm managers in identifying priority intervention areas, especially in relation to farm consolidation, support for producer associations, professional training, ecological technologies and the diversification of rural economic activities.

However, the study also has several limitations. First, the analysis is based on a regional assessment and does not fully capture the heterogeneity of individual farms. Second, the equal weighting of the three sustainability dimensions is theoretically justified, but future research should test alternative weighting methods, such as expert-based weighting or Analytic Hierarchy Process. Third, some indicators depend on the availability and quality of statistical and administrative data, which may limit the precision of the scoring process.

Consequently, the discussion should emphasize that the aggregate score of 42 points does not only represent a numerical result, but also signals the need for targeted policy measures. The modernization of agricultural holdings, the development of producer associations, improved access to training, support for ecological technologies and better integration of rural development policies are necessary conditions for improving the sustainability performance of the North-West Region.

Conclusions

This study emphasizes that evaluating the sustainable performance of regional agricultural holdings requires an integrated approach that simultaneously addresses economic viability, environmental responsibility, and social well-being. Relying on a single dimension of analysis provides an incomplete picture, whereas a multidimensional assessment allows for a nuanced understanding of the complex interactions between production practices, resource use, and community impact.

Economic sustainability remains a key driver, as profitability and financial resilience determine the capacity of agricultural holdings to invest in innovation, adopt sustainable technologies, and maintain long-term operational stability. At the same time, ecological indicators—such as soil management, water use efficiency, biodiversity preservation, and pollution control—are critical for ensuring that agricultural productivity does not compromise environmental integrity. The social dimension, including labor organization, knowledge transfer, and rural development benefits, underlines the importance of human capital and local communities in achieving truly sustainable outcomes.

The results demonstrate that using a structured set of quantitative and qualitative indicators facilitates objective measurement and benchmarking of agricultural holdings. This integrated framework helps identify specific strengths and weaknesses within individual farms and across regions, enabling targeted policy interventions, resource allocation, and support programs.

Future research should further develop and validate the proposed sustainability assessment framework by applying it to other Romanian development regions in order to compare regional disparities and identify common structural weaknesses. A broader empirical application would make it possible to test whether the minimum sustainability threshold of 70 points is appropriate across different agricultural contexts or whether it should be adjusted according to regional characteristics. Future studies should also use larger farm-level datasets, allowing a more detailed analysis of differences between subsistence farms, semi-commercial farms and commercially oriented agricultural holdings.

Another important research direction concerns the refinement of the weighting procedure used in the multi-criteria assessment model. While the present study assigns equal weights to the ecological, social and economic dimensions, future research could apply expert-based methods, such as the Analytic Hierarchy Process, stakeholder consultation or alternative MCDA techniques, in order to test the robustness of the results. In addition, future studies could integrate dynamic indicators related to climate change adaptation, digitalization, access to European funding, innovation adoption and circular economy practices in agriculture.

Finally, future research should examine the relationship between sustainability scores and concrete farm outcomes, such as profitability, productivity, environmental impact, resilience to market shocks and long-

term investment capacity. This would allow the proposed model to evolve from a descriptive assessment tool into a more predictive and policy-oriented instrument. Such developments would strengthen its practical relevance for policymakers, regional authorities, agricultural associations and farm managers interested in supporting the transition toward more sustainable agricultural holdings.

Generative Artificial Intelligence (GenAI) usage statement:

ChatGPT (version 5.0) was responsibly used for language improvement. After this process, the authors reviewed and edited the content as needed and take full responsibility for the content of the present article

References

- Binder, C. R., Feola, G., & Steinberger, J. K. (2010). Considering the normative, systemic and procedural dimensions in indicator-based sustainability assessments in agriculture. *Environmental Impact Assessment Review*, 30(2), 71–81. <https://doi.org/10.1016/j.eiar.2009.06.002>
- Bossel, H. (1999). *Indicators for sustainable development: Theory, method, applications; a report to the Balaton group*. International Institute for Sustainable Development (IISD).
- Burlacu, S., Dobre, F., Mateescu, V.-M., & Andrei, I.-V. (2025). From bureaucracy to e-Government: Digital transformation of Public Administration in Romania for a sustainable future. *European Journal of Sustainable Development*, 14(3), 289. <https://doi.org/10.14207/ejsd.2025.v14n3p289>
- Buzoianu, O. A. C., Iacob, O., Mihai Mateescu, V., & Burlacu, S. (2024). Balancing economic, environmental, and technological systems for sustainable agricultural development in Romania. *European Journal of Sustainable Development*, 13(4), 153. <https://doi.org/10.14207/ejsd.2024.v13n4p153>
- Coelli, T., Rao, D. S. P., O'Donnell, C., & Battese, G. (2005). *An Introduction to Efficiency and Productivity Analysis*. Springer.
- FAO (2013). *SAFA Guidelines: Sustainability Assessment of Food and Agriculture Systems*. Food and Agriculture Organization of the United Nations.
- Farrell, M. J. (1957). The measurement of productive efficiency. *Journal of the Royal Statistical Society, Series A*, 120(3), 253–290.
- Gâf-Deac, I., Rădulescu, C.-V., Burlacu, S., Angheluță, S. P., & Uta, F. (2023). Post-pandemic resilience: Revitalizing Romania's agri-food value chains. In *Proceedings of the 17th International Management Conference "Management beyond Crisis: Rethinking Business Performance"* (pp. 150–157). Bucharest University of Economic Studies. <https://doi.org/10.24818/IMC/2023/01.14>
- Hansen, J. W. (1996). Is agricultural sustainability a useful concept? *Agricultural Systems*, 50(2), 117–143. [https://doi.org/10.1016/0308-521X\(95\)00011-S](https://doi.org/10.1016/0308-521X(95)00011-S)
- Hayati, D., Ranjbar, Z., & Karami, E. (2010). Measuring agricultural sustainability. In E. Lichtfouse (Ed.), *Biodiversity, Biofuels, Agroforestry and Conservation Agriculture* (Vol. 5, pp. 73–100). Springer Netherlands. https://doi.org/10.1007/978-90-481-9513-8_2
- Latruffe, L., Diazabakana, A., Bockstaller, C., Desjeux, Y., Finn, J., Kelly, E., Ryan, M., & Uthes, S. (2016). Measurement of sustainability in agriculture: A review of indicators. *Studies in Agricultural Economics*, 118(3), 123–130. <https://doi.org/10.7896/j.1624>
- Marchand, F., Debruyne, L., Triste, L., Gerrard, C., Padel, S., & Lauwers, L. (2014). Key characteristics for tool choice in indicator-based sustainability assessment at farm level. *Ecology and Society*, 19(3), art46. <https://doi.org/10.5751/ES-06876-190346>
- Pretty, J. N. (1997). The sustainable intensification of agriculture. *Natural Resources Forum*, 21(4), 247–256. <https://doi.org/10.1111/j.1477-8947.1997.tb00699.x>
- Rădulescu, C. V., & Buzoianu, O. A. C., Moncea, M., Gombos, C. C., & Coroban, L. (2024). Comparative study on labor management in Romania and Spain. *Revista de Management Comparat International*, 25(2), 263–276. <https://doi.org/10.24818/rmci.2024.2.263>
- Radulescu, C. V., Bran, F., Gâf-Deac, I. I., Burlacu, S., Petrescu, I. E., Popescu, M. L., Dima, C., & Dumitrescu, O. C. (2025). The contribution of short proximity chains to the development of Romania's food and nutritional security. *RIVISTA DI STUDI SULLA SOSTENIBILITA'*, 10(2), 299–318. <https://doi.org/10.3280/riss2025oa21104>
- Rădulescu, C. V., Burlacu, S., Bodislav, D. A., & Bran, F. (2020). Entrepreneurial education in the context of the imperative development of sustainable business. *European Journal of Sustainable Development*, 9(4), 93. <https://doi.org/10.14207/ejsd.2020.v9n4p93>

- Rădulescu, C. V., Gâf-Deac, I. I., Ion, L., & Burlacu, S. (2025). Foreign direct investments in europe: Trends, challenges, and implications for sustainable economic development. *European Journal of Sustainable Development*, 14(3), 249. <https://doi.org/10.14207/ejsd.2025.v14n3p249>
- Sarbu, R., Alpopi, C., Burlacu, S., & Diaconu, S. (2021). Sustainable urban development in the context of globalization and the health crisis caused by the covid-19 pandemic. *SHS Web of Conferences*, 92, 01043. <https://doi.org/10.1051/shsconf/20219201043>
- Van Der Ploeg, J. D., Laurent, C., Blondeau, F., & Bonnafous, P. (2009). Farm diversity, classification schemes and multifunctionality. *Journal of Environmental Management*, 90, S124–S131. <https://doi.org/10.1016/j.jenvman.2008.11.022>