

THE RISKS OF LAND FRAGMENTATION OVER THE QUALITY OF LIFE IN RURAL AREAS IN ROMANIA

Lucica DOBRE, Dorina Nicoleta MOCUȚA

University of Agronomic Sciences and Veterinary Medicine of Bucharest,
59 Marasti Blvd, District 1, Bucharest, Romania,

Corresponding author email: dorinamocuta@yahoo.com

Abstract

Agriculture, as the basic branch of the economy and as biological branch of the material production, is an economic sector of national priority. We aim to capture aspects related to risk management in agriculture, in the dynamics determined by the lack of coherent agrarian, economic, social, unitary policies, complementary to the reality on the spot, and to facilitate the merger of agricultural lands in Romania. Through a comparative analysis, we show the perspective of specific Romanian trends, leading to perpetuation and development of several major risks with a significant impact on the performance of Romanian agriculture, as well on the quality of life in rural areas. Is there a pattern that leads to an inertia of agricultural activities? How can the negative effects can be overcome? What needs to be changed in order to generate performance and economic progress in agriculture? The methodology used is based on NIS, Eurostat results, documenting broader perspectives described in specialized literature through which we illustrate the general picture of the quality of Romanian agriculture, namely the merging of agricultural lands.

Key words: land merging, risk management, technology, agriculture, globalization.

INTRODUCTION

In a broad sense, risk and its effects cover vast areas of action, with concrete, pragmatic manifestations at all levels of social, economic, political life, etc. The notion of risk refers to the existence of uncertainty, to a possible danger, to the possibility of occurring events, random, unforeseen events, even damages that have or may have the effect of disrupting the activity of the field in which it operates. It is a sure thing that the only thing we know is that we do not know for sure the subsequent evolution of the actions and events that take place.

From this perspective, it is wise to always act by taking precautionary measures for possible risks that may arise due to malfunctions or disturbances in the dynamics of things.

In terms of risk management - an area that includes all rigorously planned and organized activities, whose role is to manage and assess the dynamics of change and calculate the risks and margins between which they may occur - the notion of risk is integrated, as a central element, in the analysis of the probability of occurrence of possible changes often perceived as dangers, minor or major damage.

Effective risk management involves working as a working hypothesis in researching and calculating the risks of any type of activity, such as: "If the variable event, unforeseen X happens, then the results will generate possible damage Y". "If the results are Y, then the activity I carry out is a risky one in itself." Therefore, in order to validate one or more presumptions, as many working hypotheses as possible must be generated, including presumptions that are based on common sense arguments, but not exclusively on them, because the critical apparatus of thought leaves room for confusion. "Assuming X is true, and then Y happens." Effective thinking, thinking about consequences, i.e. that which takes place through a chain of reasoning that leads to predicting solutions, anticipating further effects, is considered by us, an essential part in assuming a management of calculated risks. Obviously, there will always be calculations that may escape us, the so-called human errors, and calculation errors. To a large extent (calculated) the possible risks, mistakes, and dangers, assumed or not, are really beneficial, they generate innovative effects throughout the field of activity. In fact, a responsible, responsible

risk is a proactive behavior, it is, in fact, a plenary manifestation of courage. Extending, we can say that a risk taken is a natural act on: *What we must do?* - As an act transferred to the possible future.

Hence, a long-term, courageous, sustainable thinking about the effects that an assumed risk can generate. It is also a structural change of mentality, a revolution, a trial-and-error process, the removal of false security - a reality in which the Humankind (as humanity in itself) is an effect, an effect that generates innovation.

Through the analysis of risk factors and risk reduction strategies in agriculture, we try to obtain a broader understanding of them, an understanding that will lead us, on the one hand, to the correct identification and assessment of factors, risk-generating processes, and ameliorating the negative effects by adopting preventive measures by decision-makers at both the global, macroeconomic and social higher levels, as well as at the intermediate, microeconomic, local levels.

The calculation of the costs involved in a particular activity, specific to a wider field and how these costs are managed, so that the activity undertaken is sustainable, self-generating, largely depends on the environment, the context of socio-political and economic stability carried out by that activity. Every activity bears the imprint of the one who generated it, whether we are talking about the individual himself or a community or society as a whole. Agriculture, as the basic branch of the economy and the biological branch of material production, is an area of national priority.

Not a hundred years ago, the main occupation of the population, both in the western and in the eastern areas, was centered on agriculture, the way of life being organized in close connection with agriculture, with tillage work.

In the historical vein of the Romanian people, the occupations related to the work of the land have imprinted the essence of the Romanian psycho-social and cultural profile. In *"The Psychology of the Romanian People"* Rădulescu-Motru makes a fine analysis of the soul of the Romanian people to whom he finds a series of qualities and defects: *"The Romanian is persevering in something. At the agricultural work that if he starts, he never leaves. As a landowner he is able not to part with his lot even*

if he has a small gain, which does not even ensure his subsistence. The Romanian does not like company; he wants to be on his own, absolute master he at home, with a small part of the property, but his own. Because of this, he leans a little towards anarchy. The lack of commercial spirit among Romanians is also due to the ignorance of the exchange value of goods, which are known only by their subjective value of use, and free competition as it appears in the "bourgeois" states of the West and which considers man as an anonymous wage force - it is not yet assimilated by the morals of our people. For the Romanian, time does not mean money, he bargains for hours for nothing" (Rădulescu-Motru, 1998).

MATERIALS AND METHODS

Our research has a transdisciplinary documentation base. From a transdisciplinary perspective, in addition to quantitative methods and statistical-mathematical techniques, we consider and pay more attention to the field of interdisciplinary, because it provides us with inclusive models that coherently bring together various theoretical models from various scientific fields. Research in the field of risk management, INS statistics, Eurostat reports as well as established economic and sociological theories (Bădescu et al., 2003) are the basis of analysis for the research we carry out and bring to light here (<https://insse.ro/cms/ro>; <https://ec.europa.eu/eurostat/statistics-explained/>; [https://ec.europa.eu/eurostat/statisticsexplained/index.php?title=File:Key_indicators_%E2%80%94%94_share_in_EU-28_total_2013_\(%25\)_YB16.png#file](https://ec.europa.eu/eurostat/statisticsexplained/index.php?title=File:Key_indicators_%E2%80%94%94_share_in_EU-28_total_2013_(%25)_YB16.png#file), <https://ec.europa.eu/eurostat/statistics-explained/>; <https://ec.europa.eu/eurostat/statistics-explained/>).

In a global context, the functioning of society is mainly determined by the way in which social changes act at the level of the social structure and the social system. *"Man's ability to participate intelligently in the evolution of his own system depends on his ability to perceive the whole"* (Wallerstein, 1974).

The dynamics of the social reality present in Romania, but also anywhere in the world,

presupposes equally both the knowledge and description of the components of the parts of the whole, as well as the understanding of the social reality itself, a reality that is always changing. In this sense, the significant landmarks of the past can be reinterpretations of reality in the form of present perspectives that would constitute sketches for future projections. Overcoming an excessive descriptivism resulting from the meanings of theoretical-methodological technical analyzes, can also be done by moving to transdisciplinary, in-depth analyzes, in which the capital resource – *the Man* – is in its multidimensional relationship: with the group to which it belongs, with work in the community, in the region / area, with the environment in which they integrate, with the way they communicate and understand to set their priorities.

RESULTS AND DISCUSSIONS

The land is an invaluable asset, the main natural resource on which agriculture as a field of human activity depends.

Land - as the main element of agricultural capital, in complementarity with other natural resources that participate and facilitate human activity - water, climate, forests, plants, animals, soil and climate factors, etc. - unreproducible, indivisible resource whose complex role is economic, functional, material, is the main condition of human labor.

Not being a good directly produced by man or with similar characteristics of other goods, the land is defined according to the elements with which it enters into a relationship, elements which grants the character of a multidimensional good.

At the same time, the land is a living organism, which contains other resources, either on the surface or in the soil, which in turn are natural, depletable goods, and which are also not directly the product of human labor or activity.

Natural land resources, although vast, actually have a low potential for use in the cultivation and agricultural production of major crops. This is mainly due to natural factors - agriculture being the economic sector with high economic risk due to the fact that it depends to a large extent on naturally unpredictable conditions.

Political, economic and social factors, which are constantly changing, also contribute. Globally, of the world's agricultural area of about 4.152 billion hectares, arable land is between 1.524-1.804 million hectares (Figure 1).

An important indicator, not to be neglected in the overall picture, is the distribution of land location, with a stronger concentration in developing countries, and whose population is about three quarters of the world's population (Figure 2). Most of them are in India, China, Russia, which own more than half of the cultivated area - 723.5 million hectares. By 2050, amid global population growth of 7.5 billion to as much as 11 billion, statistical forecasts show that food demand will increase by 70%. This trend will be particularly accentuated by developing countries as the demand for food will double.

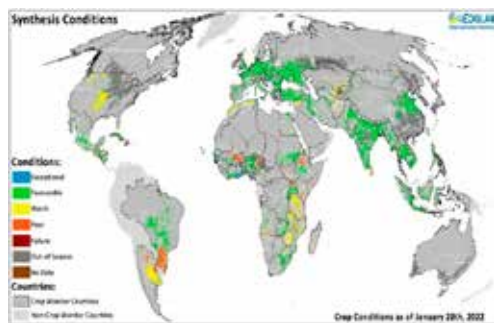


Figure 1. The map of global production/crops (<https://cropmonitor.org/index.php/crop-conditions/classification-systems/>)



Figure 2. World map of arable land: agriculture land arable land, pastures/hayfields (<https://www.everythingconnects.org/arable-land.html>)

By comparison to the other nations, we can say that Romania occupies a relative favorable

place, in terms of the ratio of the owned land and the number of citizens.

At European level (EU28), Romania occupying the 9th place, i.e. 5.33% as a surface. The essential changes of the last five to six decades, which have taken place in social dynamics, in relationships and interactions between people, between communities, nations, but also mechanization, technology, increasing demand for agri-food products have led to the development of production methods in which, through an intensive, mechanized and chemicalized agricultural system, the main word is *overproduction*.

Ensuring global food production depends to a large extent on a rational, efficient and sustainable management of the land, and in general on everything involved in organizing and planning the economic system in which agriculture remains, not only in theory, an important field of economic activity and a primary sector of the economy.

Following the global trend and the shortcomings that endanger the existence and balance of the ecosystem itself, the aim is a reorientation of agricultural policies by implementing environmental policies that respect and protect the environment.

This involves not only what we cultivate but also, especially, how we cultivate, so that the crops are of quality, healthy and sustainable, without exhausting the natural resources at our disposal.

According to Eurostat statistics, Romania has a total area of rural areas of 207,522 km (20,752,200 ha), i.e. 87.1% of 238,398 km (23,839,700 ha) total area (https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Main_Page).

Out of a population of 19,476,713 inhabitants in 2018, approximately 8,995,201 inhabitants, i.e. 46.18% is represented by the rural population.

Although it has significant development potential, it is underused. At European level, the share of agricultural land shows a picture with significant differences between the number of agricultural holdings and the agricultural area actually used in agriculture (Figure 3).

According to NIS statistics, compared to 2010 when the agricultural area used was 13,306 million ha, it decreased to 12,502 million ha in 2016. Of this area, arable land is 63.47%,

pastures and hayfields 33.44% and 2.34% permanent crops (Figure 4.) Compared to 2010, the total number of agricultural holdings decreased in 2016 by 11.3%, being 3,422,030, which represents 32.7% of the number of agricultural holdings in the EU.

72% of the total registered holdings, i.e. 2,480,770 holdings, fall into the segment of up to 2 ha.

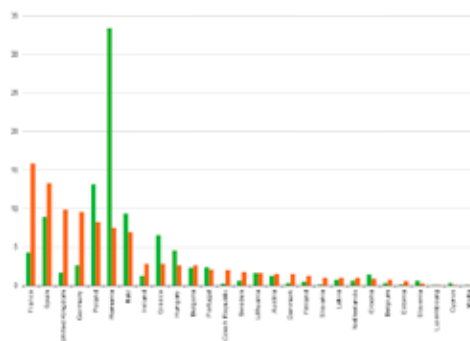


Figure 3. Number of agricultural holdings vs utilized agricultural area UAA

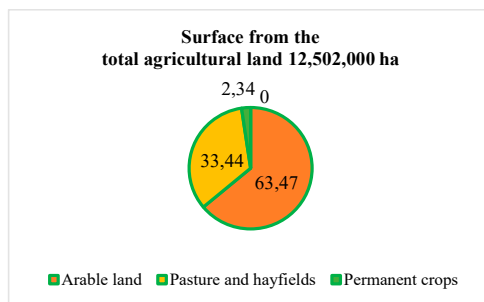


Figure 4. Agricultural land use by categories (<https://data.consilium.europa.eu/doc/document/ST-14282-2020-ADD-21/ro/pdf>)

On holdings of up to 2 ha, 12.24% of the total utilized agricultural area (1.53 million ha) of agricultural land owned is used to obtain goods for own consumption, without carrying out market-oriented economic activities. Also, of the agricultural area used, a percentage of 28.7% belongs to farms in the segment up to 5 ha in a total number of 3,420,030, of which farms smaller than 5 ha - 3.14 million (91.8%), respectively holdings on the segment 2-5 ha, numbering 660,000. On the segment of farms larger than 5 ha, the number of farms is

decreasing, as follows: the number of farms between 5-50 ha is 262,930 (7.7%), the segment 50-100 ha, with a number of 6,010 (0.17%) and the segment of holdings over 100 ha with a number of 12,310 (Figure 5).

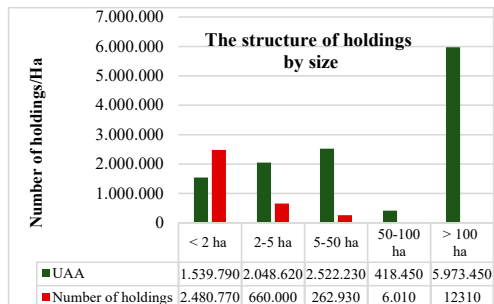


Figure 5. The structure of Romanian agricultural holdings

In 2019, SAPS payments were made for an area of 9,748,666 ha and a number of 796,021 farmers, compared to 2016 when the number of farmers was 901,507, SAPS payments being for an area of 9,177,354 ha agricultural units (Table 1).

Table 1. Number of farmers/areas SAPS/APIA 2016

Category of areas	Number of beneficiary	Precent	Areas	Precent
No SAPS areas	58.312	6.47%	-	-
< 5 ha	63.465	70.82%	1.491.648	16.25%
Between 5 și 50 ha	184.654	20.48%	2.205.069	24.03%
Between 50 și 100 ha	8.018	0.89%	569.856	6.21%
Between 100 și 300 ha	7.644	0.85%	1.292.933	14.09%
Between 300 și 500 ha	1.987	0.22%	766.333	8.35%
Between 500 și 1000 ha	1.559	0.17%	1.091.857	11.90%
Over 1.000 ha	868	0.10%	1.759.656	19.17%
Total	901.507	100%	9.177.354	100%

From the data analysis, the decrease in the number of farmers indicates that associative structures have been created; however, the inertia with which the land amalgamation process takes place is evident (Figure 6).

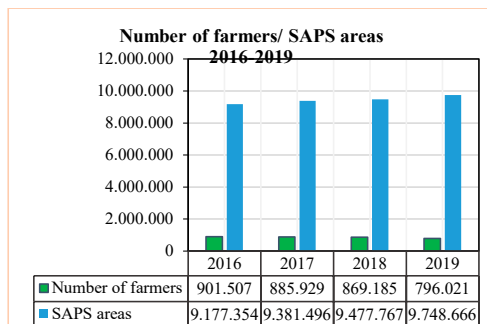


Figure 6. Number of farmers/SAPS areas 2016-2019

In the Romanian rural areas, after more than three decades since the removal of the communist regime, the peasants-farmers look with suspicion and reserve at the initiatives of organization by association that would favor and carry out the process of merging agricultural lands. As the data presented in this study show, the largest share of land is represented by small farms under 5 ha, 2-5 ha. (The few exceptions of land consolidation and the existence of associative structures of some agricultural producers, show the productive efficiency and the lucrative level of these structures). The fragmentation of land, the large number of small isolated lots, along with the land acquisitions made by foreign investors, made against the background of lack of legislative coherence, represent two major risks in agriculture.

The 2006 draft law on the reorganization of agricultural land states that the purpose of merging agricultural land is to create operating structures that allow the formation of commercial production units, and in compliance with the rules on soil and environmental protection. The agrarian policy actions, after 1989, materialized by the ownership, the establishment of the property right - according to the Law 18/1991 and 1/2000 - the non-restriction of the sale-purchase of agricultural lands, as well as the division of the land fund through donations, inheritances etc. are some of the causes fragmentation of the existing land fund, which affects not only the economic level of production, but also the property as such (<https://agrromania.manager.ro/docs/lege-masuri-stimulare-comasare-terenuri-agricole.pdf>).

Also, the temporary or permanent removal from the agricultural circuit of some lands, as a result of the demarcation of the demarcation lines, the boundaries between the plots, as well as the lack of a coherent and unitary cadastral policy to manifest in the sense of clarifying the location, destination use and sizing of plots, but also the decrease of the economic value, and of the patrimony of the properties with a high degree of scattering, are as many sources of deepening the confusion and the anomie of the agricultural policy.

The cadastral program 2015-2023 is realized, on 31.01.2022, as follows:

- out of the total of 9.54 million ha of agricultural lands that are the object of APIA subsidies, 6.27 million ha (66%) were registered in the integrated system of cadastre and land book.

- out of the total of 3,181 ATUs in Romania, systematic registration works were completed in 129 ATUs (of which in 122 ATUs in full and in 7 ATUs partially), as well as in cadastral sectors, with a total area of 3,566,059.11 ha.

- completed systematic registration works in 2 ATUs (of which one full ATU and one partial ATU), as well as in cadastral sectors, with a total related area of 19,836.64 ha

- systematic registration works are underway in 1,999 ATUs, with an estimated area of 4,909,347.62 ha (https://www.ancpi.ro/pncf/documente/NOTA_privind_activitatea_ANCPI_la_data_de_31.01.2022.pdf).

In terms of risk management, the indicators listed above have effects and have a direct impact on the quality of life in both rural and national economies.

At the organizational level, on practical, concrete action, the land merger is not only a strict problem of agriculture or related to the countryside, because it involves, on the one hand the act of will and decision of the owner, and, on the other hand implies a more accentuated level of involvement of the State, through its mechanisms of stimulation, social action and control and the organization of agrarian policy measures.

It is unlikely that the land merger process could still have the collectivist character specific to the communist regime.

In a democratic society, with a free market economy, the need for merger is imposed as a

condition and an action of the utmost importance without which economic progress is not possible, otherwise agriculture is permanently under the spectrum of precarious potential.

In a speech given at the Academy of Economic Studies on the topic of merging agricultural lands in Romania, prof. univ. dr. Constantin Anghelache claimed that, in fact, the Law 18/1991 was more a reclaiming of possession and less an agrarian reform, the fragmentation of the territory, agriculture as a whole, through its factors of progress - mechanization, chemicalization, irrigation - being far below the level since 1989.

The law had to ensure the possession of the old owners under certain conditions, for example, maintaining for 5 years the existing cooperative structures in order to facilitate the transition to individual farms, in conditions of sufficient productive potential, and not only to "check out an activity" or animated by the feeling of immediate justice (Istudor et al., 2017).

Legislative inconsistencies have an overwhelming impact on the reform process, which, of course, was well thought out by some ministerial teams, but which, out of a concrete desire for modernization and progress, did not fully align with EU requirements, nor with the reality on the ground, which had a relative impact on the quality of life in rural areas.

For example, through PNDR 2014-2020 out of a total of 6,202 contracted projects, amounting to EUR 355.1 million, payments of EUR 174.6 million were made (<https://www.pndr.ro/situatia-proiectelor-depuse-2014-2020.html>).

30.9% represented investments to create, expand and the improve of local services as well as the necessary infrastructure, namely 23.6% were investments allocated to micro-enterprises with non-agricultural activity and 17.3% investments in the development and modernization of agricultural holdings. Although the support for young farmers had the purpose into attracting more active people in agriculture and encouraging the sustainable economic development of agricultural activities, on a small-scale, the level of depopulation has shown an upward trend, but overall, the progress of development is not yet being felt.

CONCLUSIONS

Contrary to optimistic expectations, Romania's integration into the EU has led to a slowdown in the land merger process, one of the reasons being the granting of direct payments to beneficiaries, which has led to higher land prices and rent, farmers of previous generations since 1989, not being interested in leasing or selling to young investors.

This attitude has directly affected the performance and development of a rational agriculture, planned and organized on a modern scientific basis.

The essential role of agriculture is to participate in economic development and growth, agriculture evolving in proportion to the specificities of economic and social structure, as well as the degree of industrialization of each nation.

Agriculture, as a specific socio-economic system, requires, unlike other fields, "an organic production process, while in industry the production process is mechanical. This implies another method of work and a special role of human labor - said V. Madgearu. *It is possible to mechanize agriculture, but the conditions for evolution and growth change*".

The new clothes of modernity do not always seem to be suitable for Romanian rurality. Even the continuity of rurality worldwide, in the current conditions of modernity, over-technology and globalism, can make the evolution one that leads to a differentiation even within the rurality, and, in some areas, even to a diminution of the borders between rural and urban.

Can the phenomenon of globalization transform the essence of the rural environment and diminish the specific Romanian ethos?

As a complex social structure, the village is (more) free from the constraints imposed on the structure and the specific urban organization.

The interdependence is one that comes from the city to the village and not the other way around. The modernization of the villages does not result from a relationship of dependence on the city, because the villages by their very structure and form can subsist by themselves.

The modernization of villages is reflected in a different level of organization through the emergence of economic, administrative and political mechanisms and levers that participate

in the functioning of the system and structures of a state, of a nation, as a whole.

In one of our previous article (Dobre and Mocuta, 2021) we analyzed, from the perspective of the 17 objectives of sustainable development, some major problems existing in the Romanian rural environment and which affect the quality of life - such as poverty, marginalization and social exclusion, lack of infrastructure, population decline and aging in rural areas, as well as the human development index - HDI composed of three important indicators: life expectancy, education index (expressed by school employment rate) and GDP / capita.

To these we add the risk generated by the delay of the merging agricultural lands process and – as consequences- the unfavorable influence over the quality of life in rural areas.

"I have said it before and I repeat it: the only solution is to return to tradition and get out of this modern society, little by little, so easily. Let us return to the old habits of our ancestors, to cultivating a piece of land, because nature itself will come to our aid. The nature of the Romanian can only be falsified with great difficulty, because our man has a very healthy and strong fiber" said Father Iustin Pârveu in an interview (www.atitudini.com) about the current state of Romanian society.

The question is: do we, the Romanians, remain the eternal villagers of history? If we look not too far in recent history and in the very letter and spirit of the (agricultural) legislature, this attitude is preferred.

It seems that the mental structures that contribute to the overall modernization of the most important possible sector of a nation's economy, agriculture, do not yet have the unitary resources to complete a work of national importance.

Is this running around in circles in terms of land merging process a sign of the Romanian peasant's resistance to the modern and current changes of the globalized society, resistance which undoubtedly belongs to the historical and cultural profile given by the consciousness of "eternity", and of its permanence on the Romanian land?

"The problem of merging, in our opinion, is much more difficult and will face a resistance that is difficult to defeat on the part of the

peasants. The proof is the little we have achieved so far in this direction" said the agricultural economist N.D. Cornăţeanu, 70 years ago (Cornăţeanu, 1943).

From the perspective of the objectives of the Europe 2020 Strategy and the analysis of the quality of life in rural areas, there is no doubt that a significant indicator is the level of poverty associated with a community.

An objective of the utmost importance is to reduce the number of people at risk of poverty or social exclusion, in this regard Romania aiming to reduce it from 4.99 million in 2008 to 4.41 million in 2020, a target yet unattainable (http://europedirectbucuresti.ier.ro/wp-content/uploads/brosura_europa_2020_8mb.pdf).

An important progress factor in increasing the quality of life, the Local Action Groups (LAGs) have helped to raise European quality standards by including measures to support the integration of minority communities, as well as measures - identified at the local level - to promote forms of economic association.

The phenomenon of poverty has a geographical distribution that requires careful management of resource allocation so as to reduce discrepancies between different areas, both in rural and urban areas, especially given that the socio-economic-cultural status of some villages changed and they received the status of city.

Practically, a risk added to the list of shortcomings faced by the rural population and which essentially creates social and economic distance in relation to developed areas.

Poverty is not just about the lack of financial resources to facilitate an easier way to live a decent life, such as, to have a decent home, clothing, to have enough food for a satisfactory, normal level of health.

The social phenomenon of poverty also involves aspects related to intellectual, moral, ethical health that can significantly contribute to increasing the quality of life in general.

For example, in order to attain the EU objectives, through the implementation of European programs, to access European funds, the use of modern, computerized, technological services, can be just as many obstacles in creating a sustainable infrastructure, due to in part to the high costs, but especially the biases and ignorance of their benefits and advantages (even if some services are free).

Continuing the implementation of European and local policies and intervention programs, as well as streamlining local strategic actions on both the merging of agricultural land for development and progress in agriculture, on the one hand, and the reduction of poverty, social inequality, integration of marginalized communities, on the other hand, build the premises of a more sustainable economic, social, cultural and moral perspectives that would lead to an increase in the quality of life in rural areas.

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