
Agricultural landscape as a Public Environmental Good and its Protection in the New Common Agricultural Policy

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Abstract:

Purpose: The purpose of this study is to identify, review and assess the nature of public goods, the services they provide and functions they fulfil, as well as the instruments and support measures aimed at agriculture and farmers. These include instruments that directly or indirectly implement or strengthen landscape protection, especially in agricultural production areas.

Design/methodology/approach: The analyses and assessments were based on the cause-and-effect analysis method and methodological elements belonging to institutional analysis. The research problem that serves as the starting point for the study is formulated as follows: assessing the spectrum of public goods generated by agriculture with reference to landscape protection and indicating the major threats regarding changes in the cultural landscape of rural areas, presented in relation to the instruments of the Common Agricultural Policy, which are designed to shape and protect the cultural landscape.

Findings: The study reveals that spectrum of public goods generated by agriculture with reference to landscape protection is wide and covers both environmental and social goods. They are provided to the rural areas, but also to society as a whole, and require public support. Moreover, the results indicate the main threats regarding changes in the cultural landscape, as well as a types of pressure on the environment.

Practical Implications: The findings highlight the need for a more in-depth and critical examination of instruments proposed in the Strategic Programme for the Common Agricultural Policy for 2023-2027, which are responsible for the landscape protection by agriculture and individual farmers as well as present some offer of environmental services, tasks and benefits which farmers perform voluntarily and free of charge by participating in the CAP, and those which they can and should perform to receive additional budget transfers.

Originality/Value: The research findings highlight the significant contribution of public environmental goods to cultural landscape.

Keywords: Environmental services, landscape agro-protection, ruminants' grazing, CAP.

JEL code: Q01, Q50, Q57, Q58.

Paper type: Research article.

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1. Introduction

Societies that successfully meet their nutritional needs perceive in a very subjective way the value criteria offered by unlimited access to food. This includes a broader spectrum of assessments regarding the goods that can be obtained from agriculture. The resources at their disposal are being re-evaluated, as their functions are valuable and have both current and deferred value, and can be obtained through conscious human activity.

These goods are important both for farmers themselves, especially when they have commercial references, but also for the state, as agriculture, and now especially agribusiness, is an important player not only on the domestic market but also internationally. Special focus is placed on those functions of agriculture that are valued today, but were previously unappreciated and underestimated, relating to the provision of various public goods to society.

This is a direct and indirect result of the impact of agriculture on the space in which it is organised and in which agricultural production takes place and also people live their everyday lives (Koreleski, 2009). Public property in the traditional sense is characterised by non-competitive consumption and at the same time, the impossibility of exclusion from consumption.

Moreover, it is provided to every potential recipient, regardless of whether they derive direct benefits from it in a given period (Małżewska and Wąs, 2015). Public property created by agriculture can be treated as creating non-market goods, which are usually in conjunction with rather than an alternative to private property (Atkinson and Stiglitz, 1980).

In addition to numerous commercial goods that serve to meet the needs of their households, farmers have an impact on the production of increasingly valued non-market public goods. The concept of public goods can be applied both to specifically publicly available resources and to services related to their use, without payment for use (Małżewska, 2016). This is to say that using these goods does not entail any extra expenses, and potential consumers cannot be deprived of them easily.

The aim of the study is to identify, review and assess the nature of public goods, i.e. the services they provide and the functions they fulfil, as well as the instruments and support measures aimed at agriculture and farmers. These include instruments that directly or indirectly implement or strengthen landscape protection, especially in agricultural production areas. The analysis covers the objectives, instruments and budget transfers for its protection.

The study also covers the essence of landscape protection by agriculture and farmers, particularly the instruments proposed in the Strategic Programme for the Common Agricultural Policy for 2023-2027.

Moreover, the paper presents some offer of environmental services, tasks and benefits which farmers perform voluntarily and free of charge by participating in the Common Agricultural Policy (CAP), and those which they can and should perform to receive additional budget transfers. This concerns both the so-called conditionality principle and direct area payments, which constitute a significant financial benefit.

The requirements that farmers must meet to apply for other mandatory payments, as well as optional payments for participating in activities that combine pro-environmental social objectives and their economic interests, have also been identified. On the one hand, we have private economic operators, i.e., farmers who pursue their own economic goals, including commercial or conservation (self-sufficiency) agricultural production, and more sophisticated goals, such as activities aimed at protecting the so-called 'theatre of nature'.

In such performance farmers are at the same time creators, actors, consumers and spectators, as well as service providers and recipients of nature and landscape protection. The analyses and assessments were based on the cause-and-effect analysis method and methodological elements belonging to institutional analysis (Malinowski, 2019).

2. Cultural Landscape as a Public Good Generated by Agriculture

Public goods shaped by agriculture still constitute an open set of diverse services that were once treated with indifference, but over time have become more visible, understood and appreciated. Their analysis and evaluations are somewhat outside the mainstream of economics and are usually considered a scientific contribution to interest group theory, common goods theory or institutional economics. They are also related to rent-seeking mechanisms, and at the same time observed in the field of social and economic policy (Brelík, 2015; Musiał, 2024).

Currently, the cultural landscape is gaining importance among public goods. It is valued in various ways for scientific analysis or institutional projects, including those related to interventionism in agriculture. The cultural landscape can be defined as the space in which people live and which they perceive. It is an asset shaped by nature, history, civilisation and culture, but one which is constantly undergoing various changes (Małżewska, 2015; Brelík, 2015).

The delimitation, but also the valuation of these assets in relation to agriculture, i.e. their commercial management from the point of view of agricultural producers, varies greatly depending on the approach to the issue. These assets, especially land, which is usually privately owned, are confronted with common assets that are jointly owned by society (Wilkin, 2010). While private goods are subject to competitive management, production and consumption, therefore exclusive due to their physical and economic availability, public goods are not subject to significant competition.

This means that the consumption of non-rivalrous goods by one person does not significantly reduce or limit their consumption by others. This can be illustrated by the example of numerous tourists visiting a national or landscape park (Brelík, 2015). In rural areas or agriculture, we often have access to the so-called numerous impure goods, which are a mixture of public and private property.

The value of a cultural landscape can be considered on many levels and based on various criteria. It includes both the values that Królikowski (2019) assesses in the category of the sacred and those assessed as profane, although the boundaries between these two seem to be quite fluid.

These are therefore symbolic values, and this category includes both special natural forms, such as mountains and individual stones, as well as man-made crosses, shrines and temples. Their common feature may be culturally shaped symbolism, beliefs, myths and images that describe them and are widely recognised.

A great similarity in symbolic values in landscape gradation can be found in its historical value. Here, however, this value may have double connotations. It may be the value of memory, e.g., of places and times of battles, glory, defeat and various other events preserved in the memory of the local population or recognised by wider social circles. It may also refer to the history of nature, i.e. animate and inanimate nature, especially that which changes over time (through the centuries).

The social value of the landscape is most often revealed when there is a need to save it, which may give rise to the mobilisation of specific groups (e.g. ecologists, historians or the local population). For example, even a private forest, being a natural and economic asset, can also be treated in Poland as a social asset, where people seek respite, rest and isolation from others. Ethical values, although more deeply rooted in the philosophy of nature, are derivatives of the emotional values of the landscape.

Emotional values are associated with personal experiences of their value, attachment, memory, loss after its transformation, and joy from its preservation or loss. They may be linked to the artistic values of the landscape or treated separately. The sphere of aesthetics, with its subjectivity and subtlety, does not usually fall within the field of economic observation, although many connections, analogies and even links can be found here.

This is, first of all, a field of relativism, but when we subject it to social evaluation, it is also a field of objectivity, expressed by the simplifying statement that if the majority considers something to be beautiful, then it becomes beautiful. Finally, the landscape, as a complex creation usually composed of many diverse natural and man-made elements, also has artistic value and falls within the realm of 'artistic inspiration'.

It can also be the background for a description, a representation of reality, an artistic view of its entirety or individual details. It is therefore a product, or even a commodity, that is multifaceted and complex, which creates various difficulties in its study and evaluation, especially when carried out in the field of economics.

In the economic assessment of landscape value, we take into account the benefits associated with its uniqueness or resulting from its commonness, but above all, these are benefits resulting from the preservation of its characteristic features. It may be a public good that is unregulated or partially regulated (club), but also privately commercialised.

For example, a building plot is always situated in a natural and infrastructural (as well as legal, political and economic) environment, but what may come to the fore in its assessment is the cultural landscape in which it is located. It consists of, among other things, the terrain, vegetation, local buildings, surrounding businesses, settlement network and infrastructure (road and rail). Ultimately, the landscape assessed as an economic value may not only be an asset (and therefore a carrier of value), but also a so-called 'anti-asset', especially in dynamic terms.

Its prior destruction may result in a drastic reduction in the value of a given asset (e.g. real estate) and other assets, or even cause a slowdown in economic development, residential construction, etc. Its destruction may also result in an extremely low valuation of various individual assets, which becomes apparent when we want to sell or exchange them. This means that although the owner of a given asset is the state treasury, various legal entities or private individuals, the shaping, use, and maintenance of the landscape or various cultivation activities also bring measurable benefits of a public nature.

Farmers, in addition to their agricultural production, also provide environmental services free of charge or supported by public funds (e.g. under the Common Agricultural Policy). This includes landscape protection, including cultural landscapes, biodiversity protection (flora and fauna) and the protection of farm animal welfare while maintaining their breeding. It is farmers who observe and try to reduce external pollution on a daily basis and often become guardians of water, protecting it from pollution from external sources (although they themselves can also contribute to groundwater pollution).

They also protect the soil from water and wind erosion, which is particularly important in areas with a highly varied landscape. They can also contribute to air protection by maintaining (usually unintentionally) open spaces, i.e. arable land and permanent grassland, which form specific ventilation channels, and protect the natural environment and climate by using modern agricultural machinery and tools meeting the higher environmental requirements, which for example prevent soil erosion (Andrzejczuk, 2013).

Among the public goods provided by agriculture to rural areas, and therefore to the combined agricultural and non-agricultural population, but also to society as a whole, are those, which are not necessarily obvious or easily discernible. To maintain their sustainability and accessibility, there is required a public support (Figure 1).

With regard to environmental goods, including those related to climate protection, which are provided either involuntarily or intentionally by farmers who, as a result of their work, cover the surface of their fields with dense vegetation classified as cultivated, fertilised and sometimes irrigated species. Plant production, assessed in terms of its function, is part of the agricultural calendar, including the phenological calendar, and is carried out in a repetitive manner.

By maintaining crop rotation, but also the natural local diversity of vegetation (copse, permanent grassland, ponds, arable land), the landscape as a whole is shaped. Plants also absorb carbon dioxide and produce oxygen.

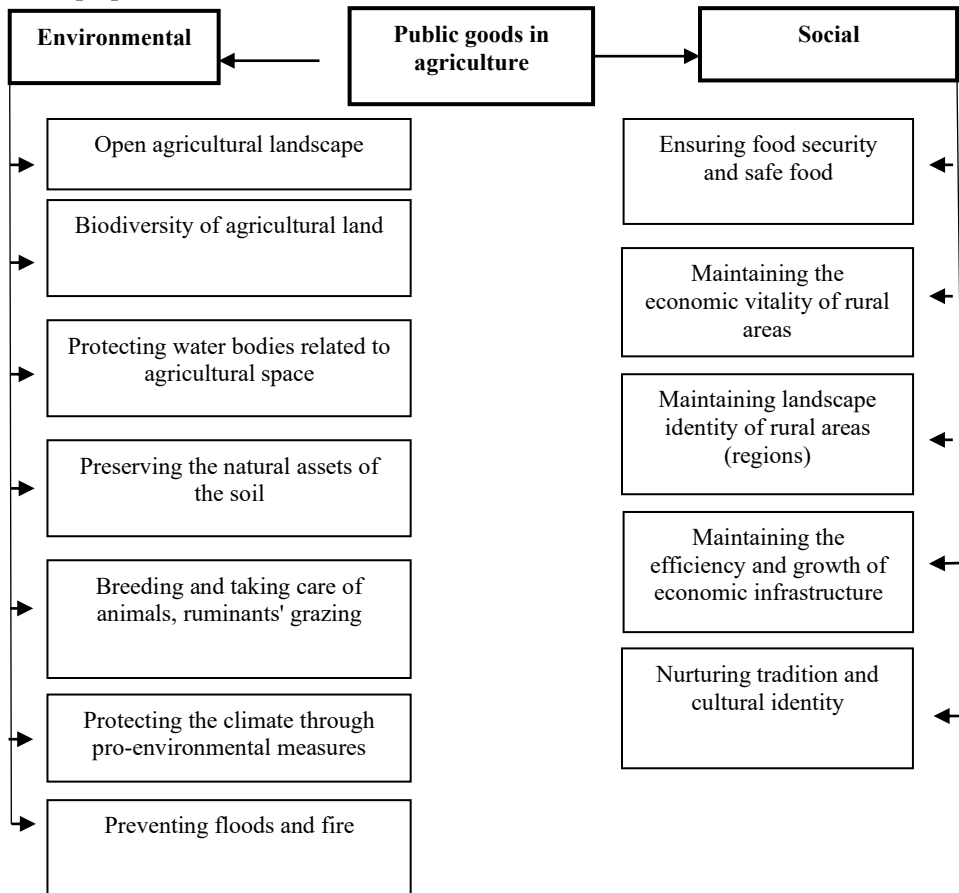
When agricultural production is carried out in a sustainable manner, which at the farm level usually means the production of cash crops, animal feed and animal husbandry, mainly based on feed produced by the farm itself, there are additional benefits in terms of enriching the biodiversity. Livestock farms using permanent grasslands, and growing fodder crops, including legumes, enrich the flora and fauna on the arable lands.

Reasonably organised agriculture contributes in various ways to the conservation of water resources. It can do so by rationalising cultivation on arable land, e.g. by leaving cover crops for the winter or not ploughing up post-harvest residues. It can also create or preserve small inland reservoirs or ponds and field margins.

Permanent grasslands can be used as production areas for green fodder, including hay, and as environmentally valuable floodplains and flood prevention areas. Maintaining and managing permanent grassland means grazing animals or harvesting green fodder when it is useful for feed. An alternative is to allow grass and herbs to dry out in autumn, exposing fields and human settlements to naturally occurring or man-made fires. These can have measurable negative and even tragic consequences for society and nature.

Among the various social public goods generated by agriculture, its role in ensuring food security is undoubtedly at the forefront. Food, being an indispensable good in everyday life, should be produced (currently with an increasing share of the agri-food industry) in such a way that it is not only physically but also economically accessible. This means an adequate price for society, a varied range of products, and good quality and nutritional value.

Figure 1. Spectrum of public goods generated by agriculture with reference to landscape protection



Source: Małżewska (2015), and the author's own work.

Maintaining agricultural production through structurally diversified agriculture, including in terms of area, and the creation of market production, added value and income by this sector continues to be an important, although often additional, source of income for a significant part of the population, supplementing the income from non-agricultural work and budget transfers that currently dominate in rural areas.

Approximately 10% of the farmers still make their living exclusively from agriculture. A significant proportion of farms, usually small in size, also engage in diverse agricultural and horticultural production for their own household needs. Small farms, although no longer being important food suppliers in Poland, as their functions have been taken over by larger farms, nevertheless constitute a kind of bulwark of food security produced on a small scale and in a dispersed manner. This means that they can become important and even the only suppliers of food in the event of local or regional disasters.

In Poland, farms still dominate the spatial and economic structure of rural areas, and the economic and even social position of farmers depends (albeit to a limited extent at present) on their land area, production volume and assets, and therefore their material capital.

The identity and character of rural areas are still largely based on land and, therefore, on agriculture. Even when their livelihoods are no longer dependent on agricultural production, rural residents still identify with agriculture to some extent and often defend its economic and political interests. In a situation where the number of farmers is declining and agriculture is weakening or even becoming economically marginalised, many rural residents often no longer have any reason or motivation to remain in rural areas, especially those far from larger cities.

This gives rise to the problem of migration, ageing communities and, over time growing depopulation of some regions. As a result, we can perceive a chain of economic and social degradation in rural areas.

The following sequence of events is a good example: young people go to school in cities and do not return to the countryside or young farmers abandon agriculture and emigrate or migrate back and forth or permanently – the demographic and social fabric deteriorates (schools and shops close) – municipal tax revenues fall – there is a lack of funds for infrastructure reconstruction – finally appears a widespread belief that such villages should be ‘escaped’ from. This entails numerous threats, including to the cultural landscape, and this is happening at a rapid or slow pace, but in most cases irreversibly (Musiał, 2008).

3. Main Threats to Agricultural Landscape

Considering the cultural landscape of rural areas with a predominantly agricultural function, it is necessary to analyse in greater detail the threats we are facing (Table 1). These are, in fact, very diverse and numerous, and are usually directly related or interdependent.

When we consider this problem from the point of view of agricultural economics in relation to the agricultural production systems used (conventional, integrated, organic), the agrarian structure and the intensity of agricultural production, the spectrum of our considerations broadens. Here, it can be argued that the strong commercialisation and economisation of agriculture and farms are at odds with sustainability in the organisation and technology of production (Biernat-Jarka, 2016).

However, agricultural economists and technologists have a different perspective on the transformations and growth of agriculture, focusing more on production and economic efficiency, and environmentalists, who prioritise the protection of the cultural landscape and its effect on the environment, have a different outlook

(Andrzejczuk, 2013). Increasing the size of farmland and simplifying crop rotation, i.e., limiting the number of plant species cultivated, can significantly change the cultural landscape of a subregion.

An example of this is the large share of relatively new crops, such as maize (*Zea mays*), in the agricultural area, which sometimes dominates the landscape in the second half of the Polish summer. This may be accompanied, although not necessarily, by the elimination of ecological corridors, which are indispensable for the migration of wild fauna and flora.

For commercial agricultural production, it is important to have smooth and unhindered access for large machinery, which may involve the removal of various obstacles such as individual trees, field enclaves, ponds or periodically flooded or marshy areas.

Table 1. Major threats regarding changes in the cultural landscape of rural areas

Threatening actions	Main sources and types of pressure
Soil erosion	Natural processes, climate change, and improperly shaped agricultural plots on slopes.
Elimination of peculiar terrain forms	Expansion of intensive agriculture, infrastructure construction.
Rock and earth handling	Construction of road and rail infrastructure, industrial and residential construction.
Drying peat bogs and marshes	Expansion of intensive land use systems, disregard for legal regulations, and infrastructure construction.
Regulating rivers	Construction of retention reservoirs for the population and industry, and expansion of road infrastructure.
Destroying and eliminating forest, scrub and other communities	Expansion of intensive agricultural systems, removal of invasive vegetation (there is a possible counter-risk of an invasive nature).
Elimination and fencing of ecological corridors	Road and railway construction, construction of industrial halls and densely built-up housing estates, intensive and large-scale agriculture.
Reduction of the share of natural and semi-natural ecosystems	Climate change, intensive agriculture, expansion of invasive vegetation, afforestation of arable land and grasslands.
Elimination of field and riparian trees	Road construction, water management, intensive agriculture, and concentration of plant production
Expansion of urban structures into rural areas	Easy conversion of agricultural land, sale of land for new construction, and expansion of suburban construction.
Deagrarianisation of agricultural production areas	Abandonment of agricultural production on arable lands and permanent grasslands, high fragmentation of agricultural plots
Extreme extensification	Declining interest in commercial production, abandonment of production on some agricultural plots, and expansion of forests.
Extreme intensification	Strong commercialisation of production and disregard for

Threatening actions	Main sources and types of pressure
	environmental protection, high concentration of crops and animals, groundwater pollution, and odour nuisance.
Deanimalisation	No free-range livestock, but also livestock kept in small pens, deproductivisation of grasslands.
Abandonment of farm habitats	Demographic collapse, depopulation of rural areas through migration, deproductivisation and degradation of residential and farm buildings, expansion of ruderal plants, scrub encroachment.
Other threats specific to local environments	Excessive tourist traffic, pressure on residential construction, including residential buildings, and poorly executed land consolidation.

Source: *Solon et al. (2015), and the authors' own work.*

With the significant agricultural fragmentation characteristic of southern Poland, a large number of relatively small agricultural plots per farm is actually the norm, which can create a rich mosaic of diverse crops. However, such fragmentation makes the economic justification for such cultivation less valid, which may lead to the opposite process, i.e. the abandonment of agricultural use and, consequently – deagrarianisation.

A similar pattern can be observed in animal production, where both its concentration and the elimination of animal husbandry - the latter is called deanimalisation, can lead to changes in the structure of landscape. In the case of high animal concentrations, large farm buildings appear, leading to the so-called brutalisation of the landscape.

On the other hand, abandonment of the animal production or significant reduction in animal husbandry, also generate numerous problems, in relation to changes in the landscape. As a rule, animals grazing on permanent grassland disappear. There is also a problem with abandoned and, over time, increasingly degraded buildings, especially cowsheds and barns. An increasing problem associated with deagrarianisation, the ageing of the rural population and depopulation is the abandonment of farmsteads.

When this process is progressive, changes in the landscape become increasingly visible, especially when the field of observation and assessment is reduced (assessed from a short distance). This results in a lack of spatial order, including neglected farmyards, collapsed roofs of cowsheds and barns, broken and unkempt trees and ornamental shrubs.

Although land consolidation is, in principle, intended to lead to the reorganisation of land distribution and improve spatial management, it can, at least temporarily, lead to significant changes in the cultural landscape. It can also lead to local neighbourhood conflicts and be a direct or indirect cause of the decline of the local economy and the well-being of the local population.

The historically shaped cultural landscape, referred to as pastoral, is maintained through grazing practices of herbivorous animals, mainly ruminants. Farms keeping livestock support various environmental and social public goods generated by the agriculture. Thanks to grazing, grass communities are enriched with valuable fertilisers, which also contributes to the proper maintenance of micro-ecosystems that provide a habitat for numerous invertebrates, as well as birds and small mammals.

Pasturage of ruminants, through the grazing of turf, also helps to preserve many species of herbs and dicotyledonous plants in the meadow and pasture vegetation, which, despite their lack of significant feed value, contribute to the enrichment of local biodiversity. The efficiency of sheep farming is not considered to be particularly high, but its importance in the protection of the cultural landscape cannot be overestimated.

This is expressed in the form of extensive grazing, which is possible thanks to the modest environmental and food requirements of these animals, giving them significant non-productive value (Niżnikowski *et al.*, 2017). As a result, grazing corresponds to numerous environmental public goods in agriculture, such as the aforementioned preservation of biodiversity and open semi-natural landscapes. The use of sheep in landscape management, especially in protected areas, has been developing in Poland for some time now, and it seems that poorer grasslands also fit well into this model.

Native sheep breeds are best suited to such habitats, as they are well adapted to harsh environmental conditions and at the same time constitute a valuable element of genetic diversity. As a result of grazing, plant biomass is reduced and the soil is loosened, which also improves conditions for the development of thermophilic vegetation.

The preservation of the natural values of soils is also an environmental benefit resulting from the grazing of small ruminants such as sheep and goats. These animals thrive on steep slopes, in extreme temperatures and humidity, grazing selectively and not pulling up clumps of vegetation.

Grazing such animals can also facilitate the reintroduction of old breeds to their former habitats, while helping to maintain various types of grassland communities.

In Poland, for several decades, increasing attention has been paid to this form of landscape management and the preservation of elements of flora and fauna diversity, an important part of which is cultural and cultural-commercial grazing in mountain areas, which is associated with protected areas.

This is justified by the fact that sheep have played an important role in this respect for thousands of years, even though this is done, as it were, 'incidentally' to

production-oriented and commercial breeding, by providing products of value to humans. The advantages of using them for landscape management stem from the fact that sheep can process large quantities of roughage with relatively low quality requirements. This makes it possible to use pastures located on poor soils and at high altitudes, where grasslands are poorer and difficult to access (Musiał, Kasperczyk, 2013).

Furthermore, grazing, and thus landscape management by sheep, does not require large investments. Therefore, cultural grazing, in addition to its important ecological functions in protected mountain areas, also provides employment and income for the local population, thereby contributing to the vitality of rural areas and the preservation of traditions and cultural identity, and thus constitutes a social public good in agriculture.

From the point of view of agriculture, economics and, above all, ecology, grazing can be viewed from many angles. Grazing helps manage different types of grasslands, which, once grazing stops, go through succession and turn into climax communities, typical of our climate.

The maintenance of grasslands is important because they provide high-quality and cheap feed for ruminants and are also extremely important for the preservation of biodiversity in a given region.

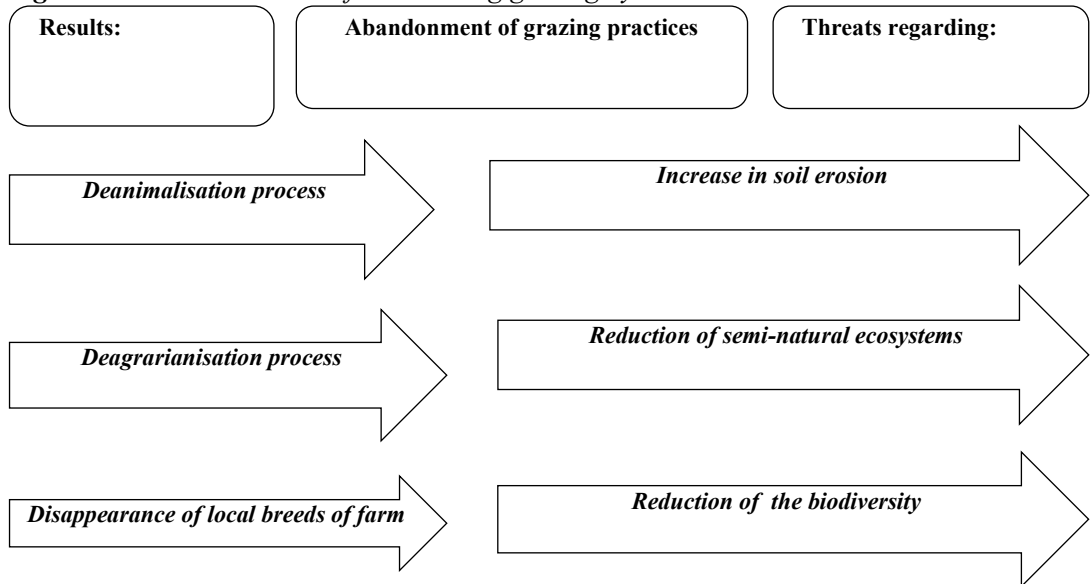
However, in recent decades, mountain areas in southern Poland, including the Eastern and Western Carpathians, have been affected by a tendency to maintain small sheep populations, and cattle breeding is also declining. Hence, the resulting decrease in grazing is connected with various threats to the agricultural landscape, as increasing soil erosion, reduction of semi-natural ecosystems and generally reduction in the biodiversity (Figure 2).

Moreover, small-scale farming of these animals is currently unattractive due to various economic and cultural problems in rural Poland. This is linked to the abundance of food products available on the market, especially in chain stores, which has led many farms to gradually abandon such production.

This is a relatively new problem for mountain regions in Poland, where the tradition of consuming one's own food and respecting the land has been cultivated for centuries.

Cultural sheep grazing in mountain national parks enables the production of Polish regional products such as the *Podhale bryndza*, *oscypek* and *redykolka* in shepherd's huts, i.e., directly on the mountain pastures and meadows where sheep are grazed, thus fulfilling a special culture-forming function, preserving old native sheep breeds and at the same time protecting the landscape.

Figure 2. Results and risks of abandoning grazing by ruminant animals



Source: Musiał and Musiał (2020), and the authors' own work

4. Instruments of the Common Agricultural Policy Are Designed to Shape and Protect the Cultural Landscape

Since the establishment of the European Economic Community in 1957, the problems of agricultural development have become a priority and, at the same time, a major challenge given the continuing quantitative and qualitative deficit in the food balance. Hence, the emphasis of this policy was on increasing production, which was effectively achieved through intensification, including both labour-intensive (as there was a large surplus of labour after the war) and capital-intensive measures.

Agricultural productivity was also increased through the rationalisation of production organisation and the introduction of advances in breeding, technology and organisation. The very process of economic integration of the economically diverse countries of the Community, including in terms of agricultural structures, encountered various economic problems, especially market-related, but also social ones. New machinery was introduced into production, rapid progress in plant and animal breeding was made, and thus productivity increased.

The use of antibiotics, hormones and pesticides in plant production became widespread. Over time, the social problems of rural areas were overcome, and agriculture became efficient, modern, intensive and concentrated. Environmental protection issues were, for agriculture and especially for farmers, an external problem, less important and often marginalized.

Consumers, satisfied with the expanding range and economic availability of increasingly processed food, were also not particularly interested in special environmental protection by farmers. The public goods they produced, which were not yet fully defined at the time, were also outside their area of interest.

The issue of protecting the natural environment by farmers, arose after the EU countries gradually achieved a balance between agricultural production and consumption, and especially after the emergence of production surpluses. Although surplus food production could potentially be an attractive offer for Eastern Europe, which was still suffering from food shortages, and for starving Africa and parts of Asia, it was too expensive and uncompetitive on the world markets.

In subsequent planning periods (usually six-year cycles), structural problems hindering the development of agriculture and the economisation of agricultural production, especially the fragmentation of farms and land, were increasingly emphasised. The opportunity for change in agriculture was perceived in the gradual departure from agriculture and agricultural production, especially among older people and those running small farms.

Attention was also drawn to the need for young farmers and rural schoolchildren to make a conscious choice to become farmers. This meant that the rural population was to remain in the agricultural profession (which was undergoing rapid professionalisation) consciously and by choice, rather than out of a sense of duty towards their parents or for various other non-economic reasons (e.g., sentimental ones).

In this way, traditional agriculture, generally referred to as peasant agriculture, underwent gradual change. The introduction of a priority for rural development into European Union documents encountered various obstacles, as it generally meant a partial abandonment of strongly preferential support for agricultural markets. However, environmental and landscape protection policies had already been part of the agenda since the 1990s.

Until 1992, the need to support sustainable agriculture, including various agri-environmental measures, became an open offer to farmers, but it was to be implemented mainly independently by individual Member States of the European Community. It was not until the agricultural policy reform known as the Mac Sharry Plan, that accompanying measures to the Common Agricultural Policy (CAP) were proposed, i.e., various measures to protect the environment and the landscape (Musiał, 2008).

The resulting reduction in income or additional costs incurred by farmers was to be compensated by various forms of compensatory payments (most often area-based). The regulations introduced at the level of the regulation allowed for the adaptation of measures for the protection of the environment and landscape to the specific natural

and structural conditions of individual Member States, including at the regional level. The adopted legal regulations referred, among other things, to an institutional (formalised) programme to support the afforestation of mainly low-value agricultural land and to support organic farming (Duczkowska-Małysz, 1998).

In the public consciousness and the regulations of the Community's decision-making bodies, agri-environmental objectives became increasingly important and strongly supported by various 'green' parties in the Member States. However, in the subsequent planning period known as Agenda 2000, agri-environmental objectives remained an important but not decisive component of the reformed CAP. Council Regulation (No 1257/99) defined objectives that have a direct link to the natural environment and landscape (Musiał, 2008).

These objectives included encouraging farmers to undertake various efforts to secure economic support for their farms, subject to numerous additional requirements, and thus to organise production in such a way as to make sure that:

- agricultural land is used in accordance with the principles of natural resource conservation, landscape protection and biodiversity conservation;
- an extensive production system is supported, especially on permanent grasslands;
- farmers are encouraged to focus more on protecting the environmental assets of the areas of high natural value, but problematic in terms of production;
- traditional agricultural landscape with its historical features (e.g., in the mountains) is protected;
- pro-environmental planning is used in agricultural practice (Figure 3).

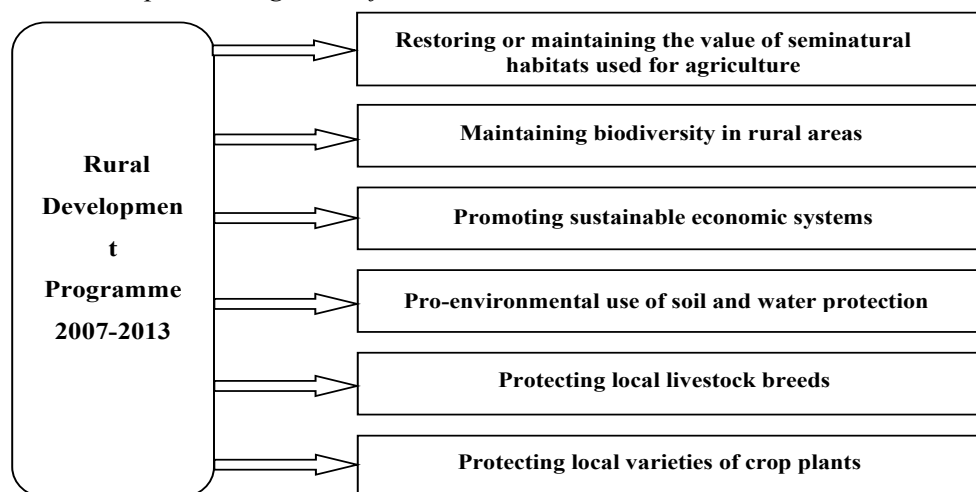
The concept of good agricultural practice was also introduced, meaning pro-environmental farming activities that protect the environment and landscape, are usually carried out by farmers in an unusual way and have been practised for years, do not generate additional costs and are part of the broader agricultural culture.

Subsequent CAP planning proposals introduced numerous new agri-environmental packages relating to organic and sustainable production. Particular attention was paid to the natural value of permanent grasslands and the protection of water and soil. The requirements for farmers to receive payments were also clarified. The CAP focused on Natura 2000 areas, where the emphasis was on maintaining biodiversity and protecting endangered natural habitats and birds.

In 2014-2020, the Rural Development Programme and the plan for direct area payments under the so-called First Pillar of the CAP, proposed numerous forms of annual direct financial support to farmers, mainly area-related, which, however, were subject to various additional requirements that had to be met or additional

agrotechnical or livestock welfare measures had to be implemented (Rural Development Programme 2014-2020).

Figure 3. Objectives of agricultural and environmental programmes included in the Rural Development Programme for 2007-2013.



Source: Rural Development Programme for 2007-2013 (Polish Ministry of Agriculture and Rural Development (2011) and the authors' own work.

Each agri-environmental package specified both the requirements imposed on the farm and the specific activity covered by the support, as well as the benefits that could be achieved by farmers meeting these requirements. The agreement was therefore bilateral in nature: the farmer agreed to abandon agricultural practices that have a significant negative impact on the environment, i.e. to pursue socially important environmental objectives.

The state, represented by government agencies, undertakes to clearly and unambiguously define the requirements, the method of documenting pro-environmental measures, the control of their correct implementation, and to pay compensation for lost benefits and additional costs incurred for these purposes.

Referring only to the measures aimed at protecting the environment and landscape in the Rural Development Programme 2014-2020, two of the six priority areas adopted for implementation are indicated in this document, namely 'Promoting resource efficiency, supporting the transition of the agricultural, food and forestry sectors towards a low-carbon and climate-resilient economy'.

The second priority can be strictly related to environmental and landscape protection and is described as 'restoring, protecting and enhancing ecosystem services provided by agriculture and forestry'. The support programme also provides for full financing

of agricultural land consolidation, which may have a leading impact on the condition, aesthetics and preservation of landscape values. The abovementioned support also covered various agri-environmental measures, including those aimed at sustaining agricultural production in mountain areas and other less favoured areas (LFAs).

Pro-environmental support extended to include traditional orchards, valuable plant habitats and endangered bird species (within and outside of Natura 2000 areas). Support was sustained and partially extended to include environmentally enriching farms, as well as those engaged in organic and sustainable production. The support for creating forest areas and afforestation was continued, as defined and implemented in the previous periods of the Programme (Diagnosis ..., 2019; Pe'er *et al.*, 2019).

Broad and environmentally valuable opportunities to support farms were also included in the first pillar of the CAP. A new innovative support measure was introduced in the form of 'greening payments'. This form of support was mandatory in all EU Member States in the period 2014-2020 (+2). To receive 'greening' payments, farmers had to meet the requirements (specified in detailed regulations) in terms of:

- crop diversification (rotation),
- preserving permanent grasslands (with no change in use),
- maintaining diverse ecological areas on farms.

These requirements had to be met by farms with an area of more than 15 ha. It was assumed that smaller farms contribute to landscape conservation by maintaining good agricultural practices. The measures listed in the relevant provisions mostly boiled down to refraining from environmentally harmful agricultural transformation of production areas or undertaking additional (paid) changes in agri-settlements.

The following were considered pro-environmental measures in agriculture, which were included in the list of support areas and related to landscape management:

- preservation of existing terraces in mountain areas,
- maintenance and creation of new hedges, baulks, field afforestation, ponds, rock walls, etc.,
- maintenance and creation of buffer zones,
- establishment of agroforestry systems,
- creation of short rotation coppice (including energy coppice),
- support for catch crops and intercropping,
- support for biodiversity and domestic production of high-protein crops through the cultivation of legumes.

Farmers with more than 15 ha of land were required (as a condition for receiving direct area payments) to allocate 5% of their land to the above-mentioned activities aimed at shaping and protecting the environment. The dominant part of these environmental management instruments was also maintained in the next task- and finance-based plan aimed at implementing the CAP in 2023-2027, i.e., the European Green Deal (Strategic Plan for CAP, 2020).

5. Conclusions

Agriculture in European Union countries, including Poland, has entered a phase of implementing new, previously overlooked or less emphasised functions related to the environmental protection and cultural landscape. These are a response to growing threats to the agricultural landscape inherent in rural areas, resulting from infrastructure development, urbanisation and the expansion of mineral resources.

Human activities that brutally interfere with the environment are numerous and, in relation to the cultural landscape, include river regulation, drainage of wetlands and the construction of massive road infrastructure on agricultural land. The threat to or destruction of the cultural landscape is linked among others to the deagrarianisation process of agricultural production space, and associated with it another recessive process called deanimalisation, as well as to the abandonment of farmsteads and liquidation of farms, and on the other hand, the extreme intensification of agricultural production, expressed in factory farming.

Another risk of declining the cultural landscape is decreasing scale of pasturage, which results among others from the above processes. Moreover, there are many 'threatening actions' and the types of pressure on the environment, that eventually changes the cultural landscape we know at present, like for example: climate changes, intensive agriculture, expansion of invasive vegetation, afforestation of arable land and grasslands.

However, the study reveals that spectrum of public goods generated by agriculture with reference to landscape protection is still wide and covers both environmental and social goods. They are provided to the rural areas, but also to society as a whole, and are not necessarily obvious or easily discernible and require public support. That's why it's so important to be aware of the broad spectrum of public goods generated by agriculture with reference to landscape protection.

They are provided to the rural areas, but also to society as a whole, and are not necessarily obvious or easily discernible and require public support. The latter is provided by the European Union's agricultural policy (CAP), which has evolved over decades to develop increasingly stringent requirements and mechanisms for environmental protection, including the cultural landscape of rural and agricultural areas.

The European Green Deal, currently being implemented, provides for a community of objectives and tasks of a protective nature, but leaves their implementation to the Member States. The Strategic Programme for Agricultural Policy Communities, implemented in Poland since 2023, contains various institutional regulations concerning landscape protection.

These are preventive, aimed at preserving the good condition of the environment, or provide support for the organisation of agricultural production in such a way that it is environmentally friendly and protects the landscape. Among them, conditionality plays an important role, continuing the pro-environmental measures implemented under the CAP until 2022.

This area of requirements includes voluntary measures carried out by farmers free of charge and remunerated with financial compensation for additional costs incurred and benefits lost by farmers.

Conditionality, which is a distinct category of institutional requirements, makes farmers eligible for financial support under the CAP for numerous direct payments, as well as additional financial support for agri-environment-climate payments, afforestation payments and payments for farms located in problem areas.

Analyses and assessments indicate that the standards of good agricultural practice compatible with environmental protection, which are imposed and often contested by farmers, play a key role in landscape protection (GAEC - Good Agricultural and Environmental Conditions Land).

These standards are further reflected in numerous paid agri-environmental measures. The financial resources allocated to support landscape and environmental protection measures are, in principle, commensurate with the additional burdens and costs incurred by farmers. However, they are not indexed to inflation during their implementation period (2023-2027), which will make them increasingly less attractive.

The implementation of measures to protect the environment, climate and landscape by farmers is also burdened by significant and growing bureaucracy, which increases the transaction costs of their implementation.

The paper highlights the need for a more in-depth and critical examination of the instruments proposed in the Strategic Programme for the Common Agricultural Policy for 2023-2027, which are responsible for the landscape protection by agriculture and individual farmers as well as it presents some offer of environmental services, tasks and benefits which farmers perform voluntarily and free of charge by participating in the CAP, and those which they can and should perform to receive additional budget transfers

References:

- Andrzejczuk, W. 2013. Concepts of interaction between man and nature in landscape. The work of the Cultural Landscape Commission (PTG), 20, pp. 9-16.
- Atkinson, A.B., Stiglitz, J.E. 1980. Lectures on public economics: Updated edition. Princeton: University Press.
- Biernat-Jarka, A. 2016. Goods provision through agriculture in the new financial framework of the European Union. *Zagadnienia Ekonomiki Rolnej*, 1(364), pp. 144-154.
- Brelik, A. 2015. Public goods in rural areas as a factor in the development of agritourism activities in Western Pomerania. Warsaw, PWN.
- Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions The European Green Deal. 2020, COM (640 final), pp. 1-28.
- Diagnosis of the social and economic situation of agriculture, rural areas and fishery in Poland. 2019. Warsaw: MRiRW, pp. 1-162.
- Duczowska-Małysz, K. 1998. Agriculture, village, state. Warsaw, PWN.
- Graczyk, A. 2009. Landscape as an economic category. *Architektura Krajobrazu*, 2, pp. 23-28.
- Koreleski, K. 2009. Protection and shaping of agricultural areas in the system of creating a rural landscape. *Infrastruktura i ekologia terenów wiejskich*. Cracow: PAN.
- Królikowski, J. 2019. Landscape as an expression of values. In: A. Drapella-Hermansdorfer, O. Mycak, M. Surma (ed.): *Krajobrazy Europy. Krajobraz jako wyraz idei i wartości*. Wrocław, Politechnika Wrocławska.
- Malinowski, G. 2019. *Logika ogólna*. Warsaw, PWN.
- Małażewska, S. 2015. Environmental public goods in agriculture and rural areas. *Ekonomia i Środowisko*, 1(52), pp. 132-147.
- Małażewska, S. 2016. Determinants of Agricultural Landscape Value on the Example of Góra Kalwaria Commune. *Ekonomia i Środowisko*, 1(56), pp. 64-73.
- Małżewska, S., Wąs, A. 2015. Determinants of value of agricultural landscape as public good. *Roczniki Naukowe Ekonomii Rolnictwa i Rozwoju Obszarów Wiejskich*, 4(102), pp. 26-40.
- Musiał, K., Kasperczyk, M. 2013. Changes in floristic composition of the mountain pasture sward after the abandonment of sheep grazing. *Grassl. Sci. Eur.*, 18, pp. 418-420.
- Musiał, K., Musiał, W. 2020. The role of deagrarisation process in creating threats for the regional economy and nature in selected conservation areas in south-eastern Poland. *Proceedings of 36th IBIMA (International Business Information Management Association)*, Grenada, Spain.
- Musiał, W. 2008. Economic and social problems of rural areas development of the Polish Carpathians. Warsaw, IRWiR PAN.
- Musiał, W. 2024. Institutional structures and rents created in the environment agribusiness. *Zagadnienia Doradztwa Rolniczego*, 4(118), pp. 35-54.
- Niżnikowski, R., Jóskowiak, L., Wójcik, R. 2017. Extensive sheep grazing in environmental protection and landscape conservation. *Wiadomości Zootechniczne*, 2 (55), pp. 92-100.
- Pe'er, G., Zinngrebe, Y., Moreira, F., Sirami, C., Schindler, S., Müller, R., Bontzorlos, V., Clough, D., Bezák, P., Bonn, A., Hansjürgens, B., Lomba, A., Möckel, S., Passoni, G., Schleyer, Ch., Schmid, J., Lakner, S. 2019. A greener path for the EU Common Agricultural Policy. *Science*, 365, pp. 449-451.
- Rural Development Programme for 2007-2013. 2011. Warsaw, MRiRW.

- Rural Development Programme for 2014-2020. 2017. Warsaw, MRiRW.
- Solon, J., Chmielewski, T.J., Myga-Piątek, U., Kistowski, M. 2015. Identification and assessment of Polish landscapes - stages and methods of actions within the landscape audit in the administrative regions. *Problemy Ekologii Krajobrazu*, 40, pp. 55-76.
- Statistics of Poland. 2024. Warsaw, GUS.
- Strategic Plan for the Common Agricultural Policy. 2020. Warsaw, MRiRW.
- Wilkin, J. 2010. The multiple outputs of agriculture from the perspective of public goods theory. In: J. Wilkin (ed.), *Multifunctional agriculture. Research trends, methodological basis and practical implications*, pp. 42-47.