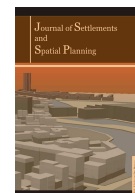




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Agricultural Mountain Areas in Bulgaria. Problems, Challenges, Decisions

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ABSTRACT

Mountain areas occupy a significant portion of the territory in Bulgaria. They are very diverse in its natural characteristics, which puts their mark on the overall profile and effectiveness. Agriculture, which in most cases is the main economic activity here, is highly dependent on the restrictions imposed by the geographical environment in the mountains. The study provides an analysis of current realities in the development of the agricultural sector in mountain areas. We have identified the main spatial and organizational problems and challenges this sector is facing. There are indicated some solutions which could preserve the mountain scenery and unique cultural landscapes for the utilization and sustainable economic development in these areas.

1. INTRODUCTION

Bulgaria covers a relatively small area, but boasts a very wide variety of natural conditions. They are related to geography, to the characteristics of the environment components, particularly topography, climate and soil. As a result, many areas are identified, which combine a range of natural factors of various extents, for the development and organization of agricultural production.

Mountain and foothill areas in the country are not quite small areas, but they have a complex structure and features related to morphology. The various components of the natural environment, resources and their particularities are the result of complex interplay of geotectonic, abiotic and biotic factors over millions of years.

Hills of an altitude of 200 to 600 m occupy 42.8 percent of the country, moderately high mountains of 600 to 1500 m altitude - 22.5%, and high mountains over 1500 m altitude - 3.7%. This means that almost

two thirds of the territory of Bulgaria is hills and mountainous.

There are 1,714 villages located in the mountain areas in Bulgaria, or in 38% of the country's territory. In other disadvantaged areas, the number of settlements is 568 or about 10 percent of the country. A total of 2,282 villages fall into the list of disadvantaged areas (Less-favoured areas defined by a decree of the Council of Ministers № 30/DV 20 of 2008).

In the division of the territory of different taxonomic units different approaches are used, some of which apply in geography, as well. However, disadvantaged areas are shaped mainly from the administrative perspective, particularly the boundaries, which coincide with those of municipalities and villages.

The geographical taxonomic logic requires that these areas be considered agri-environmental areas. The reasons for this are that each of them has to be distinct based on several major agricultural natural features such as: relief, altitude, density of the river network module and flow rate, population etc. Agro-

ecological regions are formed in accordance with major geographical features, but basically counting on climate and soil characteristics in their territory.

For years, agriculture has been more than a major occupation in the Bulgarian lands and mountains. It was both a tradition and a lifestyle. Very often the development and characteristics of the farm has decided not only the fate of individuals, but sometimes of the whole families.

Nowadays, things are not the same. There are jobs, which bring more financial profit than agriculture, and people in Bulgaria have long been aware that the ratio of labour input and income is very rarely in favour of the farmer.

Currently, fewer Bulgarians are actively involved in agricultural activities. The trend, associated with a very fast pace of desertification of fertile land in mountain and hill regions, evolves with even greater force. We must note the fact that people who are still engaged in agriculture are progressively aging.

The aim of this project is to examine the basic *spatial and organizational* problems of agriculture in mountain areas and current challenges in this sector, subsequently suggesting possible solutions for the sustainable development of their area.

2. DEFINING THE MAIN PROBLEMS AND CHALLENGES

Various factors may adversely affect the development of agricultural activities and income of farmers in disadvantaged areas. They can be classified into categories like: natural, economic, political, organizational, technical and technological.

Therefore, *high altitude* has a substantial adverse effect on the results of agricultural activity. This is due to the deteriorating weather conditions for the development and cultivation of crops, as well as because of lower temperatures and less sunlight, shorter growing season, increasing the probability of more frequent frost, etc. Hence, these climatic conditions restrict:

- the possible cash crop farming in mountain areas;
- opportunities to make full use of agricultural land that is already insufficient.

The second factor with an adverse affect is the *degree of slope*. It has substantial influence and leads to:

- reducing the productivity of machine-tractor units and increasing fuel usage;
- increased losses in case of grain harvesters;
- restrictions in using universal equipment;
- increased costs of agricultural production because the prices of construction and specialized equipment are significantly different from those of the universal ones;

- increased costs of agricultural production because of the processing of slopes with technological equipment;

- most of the agricultural farms in mountain areas are family businesses with high degree of financial risk;

- increasing soil losses due to the high degree of erosion.

The combination of *high altitude and inclination*, even in lower levels also has a negative impact on agricultural activity due to expected higher production costs, reduced productivity of specialized machines and the shortened growing season.

The group of political and organizational factors, the agrarian reform and the consequences of its impact have a very important place in agrarian relations of the studied area. The restoration of the ownership of land sought to target landowners in the production of agricultural products and to accelerate the formation of private farms. Nevertheless, in the first years after the start of the agrarian reform it is found that this process is not implemented in the aimed direction and extent. The reasons for this were brief: unfavourable economic conditions, lack of legal regulations for the development of private farming, lack of money, difficulties in using and marketing etc. Besides giving back the land to its owners today we have not yet created enough motivational prerequisites for the realization of its individual ownership.

The available material and technical base (MTB) of private farms in mountain areas is insufficient in quantity and in quality, whereas technical capability seriously confronts the natural specific conditions. The MTB in the possession of private farms is more than 50 years old and it is totally inadequate for modern technology. This determines many unfavourable working conditions which are not attractive especially for the younger generation. Progress cannot be expected in agriculture in the mountains under these conditions, if preferential conditions for the development of the industry are not created. Underdeveloped private MTB and farms determine the products with which they come to the market. Almost 90% of the private farmers only produce, without processing agricultural products. This means that when selling the final product there is a transfusion surplus product of private farms in trade and other sectors.

In mountain areas the adverse conditions for agriculture are added to factors like: the private agricultural land, the remoteness from urban property, and the poor road accessibility to agricultural property. This insurmountable barrier for many of the owners of agricultural land is complemented by several other barriers of economic and organizational nature - the lack of any machinery, farm buildings, equipment and other means of production, market production of access to credit and others.

By thoroughly analyzing agriculture, we must underline a very important factor, namely - man and the conditions for his development. Sustainable development of mountain areas focuses on the need to broaden opportunities for human development. The large differences between the living conditions in mountain and lowland areas decreased motivation to live and work in the mountains and threatened the sustainable development of these territories. The unfavourable conditions for human development have defined the mountains as an unattractive place to live and work, especially for the young people.

Today we must cope with significant new challenges, in the present and future, and with the strengthening of economic competition, especially in a global crisis, demographic transition, climate change and others. While these challenges relate to all areas, their impact is more acute in the mountainous areas and therefore requires specific answers.

Most of the policies pursued in these areas are sectoral in nature and often carried out without the particularities of the geographical environment. There is a tendency to hack public policies devoted to mountain areas, to be equivalent to those in other areas and less to take into account their specificity. However, European and national public policies are increasingly directed towards areas of comparative advantages which should be encouraged to achieve sustainability in their development.

Despite their importance, both on European and national levels, the mountain areas are known to suffer from marginalization policies at regional levels. Furthermore, there is an apparent lack of serious recognition of their significant potential to contribute to the growth of the country and the Union as a whole and diversity through a number of local applications of innovative approaches.

An exceptional survival challenge to current and potential future sustainability of the sector in the surveyed areas is the strong reduction of the stock character of the farm. Naturalism in agrarian production in the mountain has both its objective prerequisites and some subjective reasons. Small production volumes due to the limited geographical environment are at the heart of the predominantly natural character of family farms.

The natural self-sufficient farms for wage labour outside of agriculture unit reduce the amount of labour use in farm and remained constant or increased work outside it.

Sustainability of work motivation in the agriculture of this type of household is determined by assessing the amount of income from agriculture of two positions: the position of the appropriateness of the position and the possibility of obtaining higher income non-agricultural activity. The main part of the other natural farms is the sustainable motivation to work in agriculture.

Farms in mountainous areas have a commodity nature, marketing over 50% of their output. There is evidence that the amount of income is an important factor for the content of motivation. Low amounts of economic income lower self-esteem, and through this - the motivation for entrepreneurship as well. Economic confidence is not automatically a guarantee for entrepreneurial activity, but it is an absolutely necessary condition for it. Income through its economic size influences the confidence in it and the motivation for entrepreneurship, development of the farm, to develop itself as a producer and organizer of production and marketing of production, which is very essential for a modern and efficient agriculture, especially in the extreme conditions of the mountain.

The fact that the size and structure of incomes of $\frac{3}{4}$ of the households in mountainous and hilly regions have a strong negative effect on the content of motivation must be seriously attended. It is and will continue to be narrow. It is missing and will continue to lack motivation for entrepreneurship. Employees in the industry are moving towards the production that allows small year-round employment and income and avoids activity related to the restoration of soil fertility, reproduction of elite animals and seeds, establishment of plantations, the implementation of environmental industries, non-traditional industries with good prospects marketing, investment in production infrastructure and technological innovation.

Analyzing income as an important motivator, we generally say that the specifics of agricultural production systems in mountain communities and territorial forms of activities in the sector and define the nature of the motivational system and motivating environment of employment in agriculture. Agricultural production system is characterized by the following motivational features:

- scarcity of land resources, particularly in areas with high bonitetni and economic assessments;
- significant meteorological conditions on the formation of production results, which brings an element of chance in the spatial and temporal aspect;
- the role of biological processes in shaping the productivity of crops and animals;
- the possibility of limiting the contingencies by implementing appropriate farming practices and technology consistent with soil conditions;
- realization of agricultural production in large spatial scale and greater inertia caused by the presence of biological systems and natural resources and specific conditions which vary slowly compared to other sectors of the economy. An important feature of the agricultural sector is the long-term turnover of capital.

The elements of unpredictability, uncontrollability of the production system, the longer turnover of capital in agriculture, coupled with unfavourable marketing, financial credit and legal environment today determined the dominant

motivational system, the bulk of employment in agriculture in mountainous areas. The centrepiece of this system takes negative motivation for security in all aspects of economic activities.

One thing that must be noticed and overcome is the separation of people from their rural identity. People determine their living conditions as serious and find their place in the new economic and social order. There is a faded spirit of cooperation and mutual trust, weakening the role of households as a medium for social interaction.

Opportunities, which are created for agricultural development in mountain areas as a result of current national and European policy, can be summarized as follows:

- the European Union Treaty brings economic and social cohesion as one of the three pillars of European construction on a par with economic and monetary union and single internal market - Art. 158 of the Treaty establishing the European Community, as amended by the Treaty of Lisbon;

- good practice in Europe in terms of sectoral policies relating to agriculture (17 countries): CEE Directive 75/268 on the mountains and disadvantaged areas, the EU Directive 950/97 on improving the efficiency of agricultural areas; EU 1257/1999 maintenance and Rural development by the European guarantee fund, European Parliament resolution of 23 September 2008 on the situation and prospects of agriculture in mountain areas (2008/2066 (INI));

- sectoral policies in agriculture are often associated with the environment (13 countries) and rural development (13 countries). In Ireland, Hungary, Portugal and Slovakia, this policy is directed specifically at agriculture, environment and tourism;

- initiation and implementation of sectoral agricultural policy for mountain areas plays an important role in the General Assembly of European Association of elected representatives of mountain communities and regions (AEM), a global, the most active role in global initiatives such as mountainous regions WSSD (World Conference on Sustainable Development), whose result is the creation of the Mountain Partnership (MP) in 2002;

- in our country these European documents are its practical implementation program mainly through rural development and agri-environmental programs in Bulgaria.

Development policy for mountain areas in Bulgaria is conducted in accordance with a number of laws that reflect the problems of these disadvantaged areas. For example, the Law on Regional Development defines areas for targeted support: underdeveloped mountainous areas, etc.), for which special support from the state regional policy is provided.

The ordinance adopted by Decree № 30 of 2008 (SG. 20 of 2008) establishes the criteria for

disadvantaged areas and their territorial scope. Disadvantaged areas are divided into two types: mountain areas and areas with environmental restrictions, other than mountains. Under the "special priority areas" the feasibility of specific measures related to the development of mountain areas is provided.

The Programme of Rural Development, 2007-2013 was a special measure aimed at supporting agriculture in mountain areas (*in a mountainous area under the Program for Rural Development, covered the lands of the settlements, which meet at least one of the following criteria and indicators: an average altitude-min. 700 meters, an average slope – min. 20% average elevation - min 500 W in combination with an average slope-min. 15% homogenise or group of villages lands that have a min. 90% common border with the mountain villages*) - **Measure 211** Payments to farmers for environmental constraints in mountain areas. The financial support under Measure 211 provides financial assistance to farmers engaged in agriculture in extremely harsh natural conditions and unattractive.

Maintaining the land in a good agricultural state, maintenance of landscape and biological diversity, rational use, conservation and sustainable management of land and other natural resources, reduces the risk of land because of unfavourable agroclimatic and soil resources abandonment is supported through these payments. By 2009, mountain disadvantaged areas receive 90 euro's / ha for areas up to 50 ha and 40 euro's / ha for areas 50 to 100 ha. *With the approval of the experts of the European Commission (EC) payments for mountain disadvantaged areas increased by 22 %.*

Within the investment programs of the State Fund "Agriculture", "Crop growing", "Livestock and Agricultural Engineering" three regional support programs take place for agricultural development: An Agenda for the Development of alternative agriculture in the Rhodope Mountains, Northwest Regional Programme for Bulgaria and Programs Development of Agriculture and Rural Strandzha - Sakar.

Development of mountain areas has been included in other programming documents and laws, albeit not targeted at any one of them: the National Strategy for Regional Development, Law on Local Government and Local Administration, Law on Spatial Planning, Law on Protected Areas Forest Law, Law on Restitution of forests and lands of forest fund, and others.

Conducting development policy for mountain areas in Bulgaria is carried out by governmental and nongovernmental organizations and institutions: Council of Ministers, Ministry of Agriculture and Food Association of mountain municipalities in Bulgaria, environmental groups and others.

3. NECESSARY PRACTICAL MEASURES AND MANAGEMENT DECISIONS

Legal and organizational:

- development of a package of special legislation and a series of strategic planning documents for the mountain areas;

- making a contemporary geographical identification, classification and mapping of mountain areas, based on criteria reflecting the real all natural features and constraints, and the extent of their direct or indirect impact on the socio-economic processes and phenomena;

- developing programs for regional and local development of different types of mountain areas, the policy must be holistic, while the examination of the problems of the agrarian sector must be in the context of economic, social and cultural issues at all levels;

- developing and implement social practice in a package of services of general economic interest related to improving the accessibility and communication in mountain regions, providing the necessary infrastructure, especially in terms of passenger and freight transport, professional education and networking knowledge economy;

- to extend the rights and responsibilities of municipalities to adopt in their development plans on measures related to expanding and improving conditions for local agribusiness, and build units responsible exclusively for the implementation of good practices and absorption of EU funds and programs to implement these practices with the active partnership of business, NGOs and local communities;

- development, financing and implementation of priority national programs for retaining and attracting young educated people in areas defined as a mountain.

Social and demographic:

- creating targeted financial instruments and programs for compensatory payments in the field of basic social services - education, health, welfare etc.;

- additional financial incentives and tax relief for young families living permanently, or settled in mountain areas;

- introduction of the lower targets for the number of children in kindergartens and students in classes in mountain communities, the provision of targeted subsidies for the maintenance of school buildings in mountainous areas, higher norms for the maintenance of a student in the mountain municipalities etc.;

- specialized training of professional staff with secondary education, through the restoration of agricultural schools - high schools and technical colleges (for training executives) in the sector;

- support for additional higher education, specialized training in specific disciplines in higher education institutions related to development of the

multisectoral mountain economy through a system of preferences for students from mountainous areas with specialization in agribusiness (scholarships, dormitories etc.);

- organization and support centres for permanent training, free courses and other forms of lifelong learning;

- disclosure of information centres and laboratories within the mountain areas.

Sectoral and industry:

- development of diversified agro-economy by possibly most completion of cycles of agribusiness - Production of agricultural products from different sub-market production or consumption in the food industry, tourism, sports, pharmaceutical and cosmetic industries;

- creating closed-cycle enterprises producing dairy and meat products - dairy and delicatessen shops for products and pasteurized milk and chilled meat certified for the production of so-called Regional brands;

- preferential conditions for production and purchase of agricultural production, supporting the development of a typical mountain farming activities;

- introduction of protective minimum purchasing prices for milk and meat produced in mountain areas. Providing compensation in mountainous areas of permanent handicaps, and additional costs due to production difficulties;

- special financial assistance for establishing new manufacturing and processing equipment for milk (dairy farms and milk processing plants);

- providing regular financial aid grants for pilot advertising campaigns to promote local agricultural products;

- permanent financial assistance for the provision of concentrated feed for mountainous areas;

- expansion of activities in animal: *horse breeding* for the needs of mountainous timber and mountain tourism, *buffalo breeding and goat breeding*, and focus on the selection of resistance in harsh weather conditions and resistance to diseases;

- establishment and certification of bio-zones in the lands of the settlements, which will overcome the problem of fragmentation of agricultural land in the development of organic farming in mountainous areas;

- providing additional payments for organic farming and extensive grazing, as well as support for investment in livestock facilities, comply with the relevant species;

- simplification of procedures for certification and funding bio-production holdings to realize development and implementation of investment projects and to accelerate the positive economic changes in mountain areas;

- additional incentives from the state of production and marketing of quality local products created by the application of traditional knowledge and

methods of production that can include their certification (protection of geographical indications and designations of origin for agricultural products and foodstuffs and their protection from imitation), e.g. the products of mountain pastures and dairies, and meat quality;

- encouraging the establishment of branch associations and unions of producers for joint marketing initiatives of farmers and cross-partnerships, including in the field of organic farming;

- creating appropriate areas unsuitable for cultivation and farming, to be used for conservation of forests, sustainable hunting, fishing and strengthen those activities;

- definition of mountain farming as subsidized, by creating an ordinance to obtain a subsidy from farmers raising cows 1-2, not only for the market economy, as treated in the Law on livestock. This will really create those conditions that preserve the livestock sector will not only livelihood but also as a way of life and serious social factor for the population of mountain areas in the country.

4. CONCLUSION

The process of depopulation in mountain areas is still not stopping, resulting mainly from adverse socio-economic factors that are associated mainly with low incomes, relatively low quality of life, loss of identity.

With a view to understanding the need to overcome these negative processes required significant efforts and effective measures needed is a coherent national policy for their effective development, planning and conservation.

This policy should be directed to gradually address the processes of depopulation, the faded economic functions and traditional activities of the abandonment of farmland, the irrational use of mountain natural resources, excessive felling of forest violations of landscape and biological balance, reducing water supplies, construction and unjustifiable risk of over-utilization and tourist urbanization of mountain areas.

Negative trends are on the farm in mountain areas and the industry more difficult to adapt to competitive market conditions. There are no targeted national strategies and programs for agricultural development in mountain areas.

There is pressure associated with the tourist attractiveness of these areas, which threatens sustainability in agriculture and the region as a whole is accommodated benefits of civilization that are inappropriate and not in keeping with the unique character of the mountain.

Despite the difficult objective conditions for the development of the sector, there are real

opportunities for development of mountain agribusiness, namely resulting from natural and material resources in mountain areas. There are favourable conditions for development of organic farming and animal husbandry at the maximum utilization of resources of meadows and pastures and limited sources of infection, increased resistance of animals to various diseases. The basis for development of alternative agriculture is set.

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