

**DIRECTIONS OF DEVELOPMENT FOR AREAS  
WITH UNFAVOURABLE CONDITIONS  
FOR AGRICULTURAL PRODUCTION, AN EXAMPLE  
OF THE PODLASKIE VOIVODESHIP (POLAND)**

Kazimierz Niewiadomski

Politechnika Białostocka

**Abstract.** This paper is dedicated to the directions of development of rural areas, primarily agricultural areas of the Podlaskie voivodeship, which in light of current criteria has been qualified almost entirely as problem area (ONW). Results presented are culmination of research related to issues of problem areas primarily in the area of the Podlaskie voivodeship by the author of the herewith paper during last few years. In conclusion to the results of the research it can be said that the primary direction of the development of rural areas in the Podlaskie voivodeship will be modern, large-scale farms able to adjust to current conditions, in particular environmental and soil conditions. In problem areas these will be mostly farms focusing on production of cattle and milk, developing production based on very high share of grassland areas. Complementary role in relation to conventional agriculture will be fulfilled by farms developing organic farming and agro-touristic farms. More intensive development of conventional tourism in rural areas can be expected once new tourism products and services have been developed. Assessment of the current economic development parameters of the Podlaskie voivodeship does not point at the convergence with other regions and possibility of decreasing the distance between the Podlaskie voivodeship and average results for Poland in the near future. However, some positive trends in terms of convergence with other regions in Poland can be observed in agriculture, primarily due to relatively good results in production of cattle and milk.

**Key words:** agro-tourism, coherence, diversification, Less-Favored Areas (LFA), model of farms, organic farms

## INTRODUCTION

Nature has endowed unevenly different areas of geographic space, which includes also conditions for growth in agricultural production and agriculture in general. Varied is the quality of Polish agricultural space. The area of the Podlaskie voivodeship, which is one of the 16 regions in Poland as per NUTS 2<sup>1</sup> classification, has the worst conditions among all regions in Poland for development of agricultural production. According to the numeric classification of IUNiG<sup>2</sup> in Pulawy (Poland), the quality of the environment and the soil was classified with 55.0 points (Poland – 66.6 points). According to the legislation [Rozporządzenie Rady Ministrów... 2004] in force in Poland, the area of the Podlaskie voivodeship almost entirely can be classified as area with unfavourable conditions for agriculture. It is therefore a good test object for analysis of problems in areas<sup>3</sup> of this category.

The objective of this paper is to determine the directions of development of areas with unfavourable conditions for agricultural production. The presented content includes the most significant findings related to these areas carried out in recent years by the author of this paper. Therefore, explanation of theoretical issues and arguments arising from the research was limited only to such an extent as to assure continuity of the discussion on the issues taken<sup>4</sup>.

Many earlier studies as well as research tools were used to solve the various issues related to the presented subject. In particular, it is worth indicating the usefulness of the methods clustering as well as correlation and regression. Various source materials were used as well. Specifically, statistical data published by the Central Statistical Office of Poland in Warsaw (GUS), but also data from farms preparing accounting financial statements from the area of the Podlaskie voivodeship.

Structure of this paper reflects its general purpose and in the chapters to follow aims to answer question asked in the introduction section. First chapter outlines nature of the areas with unfavorable conditions for agricultural production. Then, the diversity of the rural areas in the Podlaskie voivodeship is being assessed. Third chapter describes the model of a farm currently forming in problem areas. Further chapters are dedicated to the assessment of organic and agro-touristic farms as complementary activities to traditional forms of agriculture, as well as conventional tourism in rural areas. Last chapter evaluates convergence of the basic parameters describing development of agriculture and the related sectors in the Podlaskie voivodeship in comparison to other voivodeships in Poland, as well as national average measures.

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<sup>1</sup> NUTS – Nomenclature of Territorial Units for Statistics.

<sup>2</sup> IUNiG – Institute of Soil Science and Plant Cultivation.

<sup>3</sup> According to the classification of the Central Statistical Office (GUS), rural areas include territory outside urban areas. Rural areas constitute 93.2% of the total area in Poland [Rocznik Statystyczny... 2005, s. 70]. They are dominated by agriculture and thus mostly associated with it.

<sup>4</sup> Those who are interested in these issues may refer to the complete papers; the sources are provided in the footnotes and bibliography.

## NATURE OF AREAS WITH UNFAVORABLE CONDITIONS FOR AGRICULTURAL PRODUCTION

In literature and practice, you can meet a variety of concepts describing areas with unfavourable conditions for agricultural production that are often called problem areas due to the cumulative effects of adverse events that form under these conditions huge burden to overcome [Bański 2000]. The most generic and at the same time the earliest definition from the available literature of a phrase “problem areas” was defined by Hoover [1962] who said we have to do with problem areas if there are “difficulties” in a given territory (a region or country). Simultaneously he pointed out three categories of problem areas:

- 1) “Backward” areas, which do not keep pace with economic development
- 2) “Retreating” areas, showing a decrease in the share of industry in the economy and labour productivity, as well as a decrease in demand
- 3) “Inhibited” urban areas.

Definitions of problem areas found in the literature emphasize primarily:

- underdeveloped regions of the country where the standard of living is much lower compared to the national average; such regions require active socio-economic policies [Secomski 1987],
- areas socially and economically underdeveloped, in which one can observe forces hindering or preventing their correct functioning [Więckowicz 1989],
- areas characterized by abnormality of individual elements that hinder development. Those may be difficulties arising from the environmental risks, adverse demographic conditions or general processes related to the development of agriculture [Bański 2000],
- areas with high unemployment, large agrarian overpopulation, lack of economically strong, modern farms and located peripheral to large urban centers [Rosner 2002].

The framework for eligibility criteria of areas with unfavorable conditions for agricultural production within the European Union is set out by the EU Council Regulation [1999]. Countries of the European Union set specific criteria in this regard. For agricultural areas, in the case of lowland areas (not mountain), such criteria are primarily: soil quality, crop plants, livestock density, the share of grassland in the structure of agricultural land, the share of land leased, the length of growing period and the share of income generated in agriculture unit of work compared to the national average [Comite.. 1998].

In the process of adjusting Polish legislation to the EU requirements the following qualification principles and criteria were established to identify areas with unfavourable conditions for agricultural production (ONW) or Polish Less-Favoured Areas (LFA):

- a) Lowland zone I including:
  - communities for which the valorization of agricultural production space indicator (WWRPP)<sup>5</sup> reaches values higher than 52 points and does not exceed 72.5 points,
  - geodesic pieces of land, where the value of WWRPP indicator does not exceed 56 points,

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<sup>5</sup> Index of adjustment of agricultural production space (WWRPP), developed by IUNG in Puławy.

- b) Lowland zone II that includes communities and geodesic pieces of land where the value of WWRPP indicated does not exceed 52 points.

In lowland areas, in addition to the criterion of quality of agricultural production space, two other parameters were also adopted:

- density of population up to 75 persons per km<sup>2</sup>,
- share of population working in agriculture sector in the community of at least 15%.

According to the annex to the quoted regulation of Polish Council of Ministers from April 14, 2004, almost all communities in the Podlaskie voivodeship were classified as ONW areas, including 60 communities included as ONW I area (rural communities, rural areas and rural municipalities) and 42 communities as ONW II area<sup>6</sup>.

### DIVERSIFICATION OF RURAL AREAS OF PODLASKIE REGION

Assessment of diversification of the area of the Podlaskie voivodeship based solely on the criteria established in Poland to identify areas of unfavorable conditions for agricultural production does not take into account several factors that shaped the area in the historical process of its development. This fact justified further analysis of the area of the Podlaskie voivodeship that included wider variety of factors. As result, all rural communities and rural municipalities (105 objects) were analyzed according to 68 variables [Niewiadomski 2005] included in the research that characterized:

- natural and environmental conditions,
- socio-professional and demographic situation of the population,
- structural and organizational factors of agriculture and farms,
- factors characterizing the level of development of infrastructure,
- productivity and economic results of agriculture.

Ward's method [Nowak 1990, Filipiak and Wilkos 1998, Herink and Peterson 2004] was used to separate groups of communities in terms of the analysed factors. All researched variables were substantively and statistically verified before they were included in the model. Finally, 31 factors were selected for the cluster analysis. The results of such a grouping of communities have been illustrated in Figure 1.

Grouping of communities by cluster method (Fig. 1) allowed to identify three different groups of communities: group I – 8 communities, group II – 29 communities and group III – 68 communities. Communities in group I – 8 units, in light of the criteria commonly used to describe regional characteristics should be included as problem communities with a far-reaching exclusion of the production functions of agriculture.

Geographically, communities with extremely unfavourable of unfavorable conditions for agricultural production (communities in groups I and II) are located around Białystok and further to the East, along the Polish/Belarus border. Second cluster of

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<sup>6</sup> ONW criteria were not met by only three communities (including the entire are of one community – community Czyzew Osada, in one community only one village was included as ONW II – Szepietowo community and in one community, out of 46 villages in total, 7 parts of villages were included as ONW I and 14 parts of villages to ONW II – Juchnowiec community).

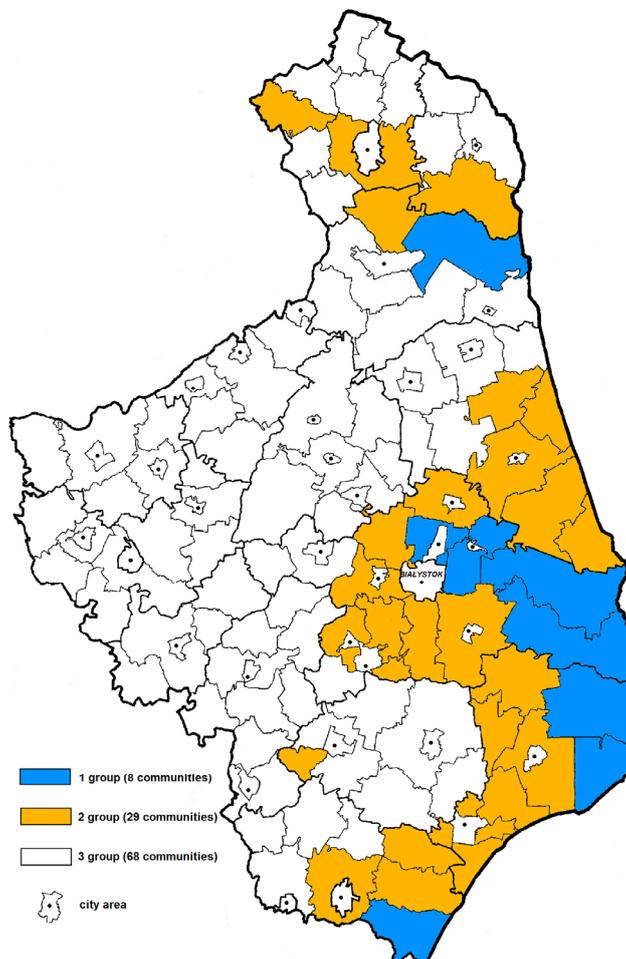


Fig. 1. Groups of communities in the Podlaskie voivodeship separated by the Ward method (based on 31 variables)  
Source: Niewiadomski [2005, p. 105].

Rys. 1. Grupy gmin województwa podlaskiego wyodrębnione metodą skupień Warda (na podstawie 31 zmiennych)  
Source: Niewiadomski [2005, s. 105].

communities included in this group is an enclave in Suwalki/Augustow region. Nevertheless, the most characteristic features from the viewpoint of this paper can be found in group I (8 communities). In the areas of these communities, agricultural production is carried out extensively, and achieved production and economic results are low. WWRPP for this group amounts to mere 46.2 points, and density of the population in this area is also very low – 19.6 persons per km<sup>2</sup>. Two-thirds of the total area of these communities is characterized by natural beauty classified as having special natural values. The main

crops are rye and oats. There is a negligible share of fodder crops on arable land (2.7%). Moreover, there is also a very low density of livestock (cattle only 21.0 pieces per 100 ha of agricultural land – UR), 12.5 cows and only 22.1 units of pigs per 100 ha UR). Farms with small area dominate, mainly up to 1 ha and in the range between 1-5 ha. Income from farming constitutes small percentage of total income and is more of a supplement to other sources of income of the population (income from farming constitutes 30% of total income for 72.0% of farms in this group, and only for 13.8% of farms agricultural production is the source of 70-100% of total income). Surface of land not planted in these communities in more than half of total land (53.7%). One-third of stalls for cattle and half of the space in buildings to grow pigs are not utilized. Farms get very low production of goods per capita per fully employed person and per 1 ha of land and per farm. Registered unemployment is very high (20.8%).

Communities in group III are characterized by the most favorable parameters for development of agriculture. They have great potential and achieve economic production results comparable with other agricultural areas (regions) in Poland. Region II of communities (29 units) is characterized by intermediate features and functions as compared to those mentioned extreme groups of communities.

### **MODEL OF FARMS FORMING IN PROBLEM AREAS**

Financial results collected from farms preparing financial statements under directions of the Institute of Agricultural Economics and Food Markets in Warsaw (IERiGŻ) compared to the above identified groups of communities (production-economic regions) show that in the areas belonging to problem communities (8 communities) operate modern, commodity farms, focused in particular on the production of cattle and milk and achieve high productivity and economic results. Average gross income from agriculture per unit of fully-employed workforce in these farms is almost 43% higher in comparison to the farms from region III (described as commoditized and functioning agriculture) and almost three times higher if compared to the farms from the areas of group II.

Farms preparing financial statements in region I, in comparison to other regions, achieve also far higher level of gross income from agriculture per 1 ha of farmland and 1 PLN invested in the production potential yields more in terms of income from agriculture in comparison to other regions.

Very good economic results of farms located in region I were achieved in objects of relatively large size (41.5 ha of farmland on average for this group of farms), with dominant share of permanent grassland (72.5%), very poor quality soils (with the indicator of grading of just 0.50 points.), relatively good formal level of education of the owners, high value of fixed assets per fully employed person and per 1 ha of farmland, with workforce well equipped in tools and machines and with moderate level of direct consumption (per fully employed person and per 1 ha of farmland). Farms in this region have a high density of large livestock pieces (SD), superior to the one in region III, which is the result of a very high density of cattle overall 130.7 units per 100 ha of farmland, including cows 74.1. Raising of pigs does not play a noteworthy role in terms of farm production in this region, the cast of this species is only 7.2 units per 100 ha of

farmland. Yields from production of grains (9.2 q from ha), as well as potatoes (58.7 q per ha) are also very low. This indicates that raising pigs as well as growing grains and potatoes are subordinated to the needs of the farm itself and are essentially complementary to the main line of production [Niewiadomski 2005].

Based on the results of farms operating in region I it can be concluded that under conditions of common marginalization of the function of agriculture that takes place in the areas of individual communities (groups of communities) as unit of space (community, group of communities), there are conditions for intensive development of cattle production and dairy cows in individual farms based on large grassland resources which despite the generally poor quality of soils can achieve relatively very good economic results for their owners. However, this requires a significant investment effort in order to create adequate production potential, including a relatively large area of farmland. Financial support for agriculture and farms after the Polish accession to the EU contributed to the growth of interest of farm owners in arranging such modern farms throughout the entire the Podlaskie voivodeship, including problem areas<sup>7</sup>.

Against the background of the above positive assessments of farms operating in problem areas of the Podlaskie voivodeship one needs to mention that there are still relatively few such modern farms in the region and positive productivity and economic results may be credited to several favorable, interrelated circumstances. Firstly, one needs to point out that these farms are the ones generating financial statements which to make appropriate accounting entries have been selected mainly in a targeted manner on the basis of its production potential and results achieved. Secondly, an important factor is the technical and biological advances that enabled a more rational utilization of green mass with large resources of grassland (silage making), and overcoming barriers to crop failures and low productivity of maize for silage due to the agro-technical progress and new varieties of this plant. Problem of feeding the cattle was solved this way. Another factor was the biological progress in raising animals, which enabled substantial increase in unit yield of dairy cows. This process was also supported by introduced more stringent quality requirements for milk after Poland's accession into the EU, which led to the elimination of cows in very small and small flocks, and their concentration in large herds and farms that were able to provide an adequate standard of husbandry and hygiene. An important element was also the financial support under the EU's Common Agricultural Policy. Without this support many households would not have been able to afford taking on the necessary investment effort.

#### **OPPORTUNITIES OF USING AGRICULTURAL LAND THROUGH THE DEVELOPMENT OF ORGANIC FARMS**

Organic farming is one of the alternatives to conventional agriculture and is based on withdrawal from using chemical plant protection, mineral fertilizers and industrially-

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<sup>7</sup> The system of direct subsidies, however, which was adopted by Poland (up to certain amount of hectares) caused significant inhibition of turnover of land and a large increase in prices of agricultural land and leases (capitalization phenomenon of direct payments), and thus the existing agrarian structure petrification. Therefore, many farms experienced problem with increasing size of land for agriculture.

produced animal fodder, moreover, it means a significant reduction of veterinary drugs in farm production. Organic production is therefore a negation of industrialized agriculture since it is based on the natural circulation of resources within the farm. Foods deriving from organic farms are commonly perceived as “healthy” and associated with positive effects on human organism.

The development of organic production is reflected in the documents defining the shape of Polish agricultural policy and legal regulations [Rozporządzenie... 1991, Ustawa... 2004] and systems of financial support. In order to qualify for the category of organic farm, a farm has to observe the regulations on organic agriculture and needs to obtain the appropriate certificate, which is a guarantee that the product meets the requirements of organic production and is subject to adequate control of certification bodies.

With almost 29 thousand hectares of organic farms (2009) which represent 2.6% of total agricultural land (average in Poland 2.3%), the Podlaskie voivodeship occupies 6th place in Poland in terms of the number of organic farms. The Podlaskie voivodeship has advanced by three places in this ranking since 2004. However, if these figures are compared to the average results in the European Union countries (4.0% in 2007, and Germany at the same time – 5.4%, which is the main buyer of Polish agricultural products), the results achieved do not inspire too much optimism. In the area of the Podlaskie voivodeship in 2009, there were only 5 organic products of processing plants (total number in Poland 236)<sup>8</sup>. Not very impressive share of farmland dedicated to organic farming in Poland, and in the Podlaskie voivodeship additionally a low degree of processing capacity significantly reduces export opportunities for organic production.

Organic farms are created in particular in the areas with lower intensity of agricultural production, which is consistent with the general objectives of this type of farming. In eight separate communities identified as problem areas the share of organic farms in total agricultural area of these communities is 3.90%, in the municipalities of group II – 3.24% and III (the most developed agriculture) – 2.32%.

Research shows [Niewiadomski 2007 a, c] that organic farming is being developed in particular in the areas with the following characteristics:

- lower production (both per fully employed person –  $r$  (correlation coefficient) =  $-0.39$ , per 1 ha of farmland –  $r = -0.40$  as well as per 1 farm –  $r = -0.36$ ,
- lower density of livestock per units of large livestock ( $r = -0.30$ ), including cattle ( $r = -0.22$ ), cows ( $r = -0.21$ ) and pigs ( $r = -0.20$ ),
- lower quality of agricultural production area ( $r = -0.32$ ).

It should be noted that the area of the Podlaskie voivodeship in comparison to other Polish regions has certain advantages supporting the development of organic farming. One of the primary advantages is clean natural environment in terms of lower pollution from toxic dusts and gases, “backwardness,” as evidenced, among others, by a lesser consumption of industrial means of production. Consumption of mineral fertilizers in recent years has been less than 100 kg per 1 ha of agricultural land, which is almost 1/3 less than the national average, and usage of chemical plant protection measures are estimated for about half of the national average. Dust pollution per 1 km<sup>2</sup> of total area amounts to 0.08 t (i.e. almost four times less than average in Poland). Even bigger dif-

<sup>8</sup> The figures presented in the paper are my own calculations derived from the following sources: Informacja... [2009], Rocznik Statystyczny Rolnictwa [2005, 2009].

ferences can be observed in terms of emissions of gases (0.63 t per km<sup>2</sup> of total are, ten times less than average in Poland).

The Podlaskie voivodeship has however – has been already mentioned – the worst natural and soil conditions to carry out agricultural production compared to all provinces in Poland, which is an unfavourable element for development of conventional farming, and organic farming in particular. These conditions have a strong impact on the type of crops and their unit productivity, which in the course of organic production will significantly reduce its productivity, and profitability as well as lower the income of organic farm owners in comparison to those from the regions with better natural and soil conditions.

The factors restricting the development of organic farming should also include a number of economic factors, and in particular one needs to mention the relatively low demand for organic foods in Poland in general, but also in the Podlaskie voivodeship. The reason are high organic food prices which is mainly due to lower productivity per unit compared with conventional agriculture. Almost all previous scientific research shows [Gospodarowanie... 2000, Dworakowski and Niewiadomski 2006] that by using natural ways one cannot achieve the same levels of productivity per unit as in conventional agriculture. It needs to be added that the Polish society is not in general rich and expenses on food still constitute large percentage of total income (around 1/3, and are not equally growing in all groups of the society). Relatively small demand for organic food may also be explained by lack of very distinct differences in the perception by consumers of product features between organic foods and foods obtained by conventional methods. This applies especially to the area of the Podlaskie voivodeship because it is generally considered to be ecologically “clean” and it is commonly perceived that agricultural production in the entire area of the voivodeship is “organic”. Also, the agglomeration of Białystok is neither large nor rich enough to create greater demand for organic food (as we all know the demand for such food is mainly reported by large cities, and in the surrounding geographical area of the Podlaskie region this is mainly the city of Warsaw).

Among macroeconomic conditions the recent sharp increase in prices of agricultural products should be mentioned both on Polish and world markets and in Poland, which, as experts predict, will continue in the coming years, among other things due to natural disasters that hit different parts of the Earth last year, including floods in Poland, but also due to a dynamic economic development in the region of Southeast Asia and an increase in the level of life in the poor and the poorest countries of the globe. Soaring food prices will cause some consumers in economically developed countries to seek to maintain their current level of consumption and will likely direct their demand into cheaper and standard products, and therefore produced by conventional methods.

## **AGRO-TOURISM AND TOURISM IN RURAL AREAS<sup>9</sup>**

Agro-tourism is one of the forms of conventional tourism and means spending free time on a functioning farm. These elements differentiate agro-tourism from rural tour-

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<sup>9</sup> 65.1% of conventional tourism traffic in the Podlaskie voivodeship concentrates in rural areas. It is then an important element of rural environment.

ism which basis is vacationing in rural environment and hence hotels, motels, private summer houses and camping sites located within the vicinity of the village, but also does not exclude nights in guest rooms in farmers' houses [Gaworecki 2000]. There are also more precise definitions of these two forms of tourism<sup>10</sup>.

People's interest in spending their free time on an agro-touristic farm has its source in expanding urbanization and migrations from villages to the cities, and thus lost ties of ever increasing part of the society with rural areas and agriculture which in these conditions becomes something unknown, alien, rare, worth discovering, and simply a value and tourist attraction<sup>11</sup>.

During last two years (2009-2010) the number of agro-touristic farms in the area of the Podlaskie voivodeship was at the level of 473 objects. These are the agro-touristic farms that meet the conditions ex definition. In the ranking of voivodeships in Poland, the Podlaskie voivodeship in terms of both nominal number of agro-touristic farms, but also in terms of the number of farms per unit of the total area, occupies high, third place.

Characteristic feature of development of agro-touristic farms in the area of the Podlaskie voivodeship is their uneven distribution. Five communities (Sejny, Suwałki, Hajnówka, Augustów and Grajewo) have total number of 304 agro-touristic farms ie 64.3% of total number of functioning agro-touristic farms in the Podlaskie voivodeship. Further five communities have total number of only 143 (30.2%), and the outstanding four communities merely 26 such farms (5.5%).

Various factors determine development of agro-tourism. Research [Niewiadomski 2011 b] indicates that the density of agro-touristic farms is primarily very closely correlated with the share of the areas with the so-called special natural values ( $r = 0.81$ ). Forest cover also shows a strong correlation ( $r = 0.47$ ). This means that natural conditions constitute the basis for the development of agro-tourism in the communities in the Podlaskie voivodeship. Semi-strong correlation of the measured dependent variable with the levels of conventional tourism ( $r = 0.38$ ) shows, that important factor of development of agro-tourism are widely understood natural values and tourist attractions<sup>12</sup>. Quite a strong correlation between these two types of tourism even led to creating the thesis about competition between them, especially for tourist attractions [Niewiadomski 2009 a].

From among other factors one needs to be singled out and it is the quality of the environment. High correlation of this variable with density of agro-touristic farms ( $r = -$

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<sup>10</sup> "Agro-tourism means an economic activity which encompasses renting (with food or without) not more than five guest rooms to tourists in houses (not counting common areas such as salon, bathrooms and kitchens). These buildings should be located in rural areas, in the farms that achieve at least half of their income from agriculture. Services offered by farmers should be related to agricultural production of the farm. Similarly, rural tourism means economic activity carried out by farm that achieves less than 50% of its income from agricultural production" [Agroturystryka 2006, p. 2].

<sup>11</sup> "Tourist attraction" is a broader category than "tourism values" as it includes the range of features related to the widely understood tourism, which are the items of interest (demand) for potential tourists. Tourist attractions are determined not only by tourism values (environmental and cultural), but also by offered tourism products, tourism infrastructure, economic and physical availability (e.g. transport, pricing), cultural heritage, and even social, cultural and sports events etc. [Davidson 1996, Jedlińska 1999, Kornak and Rapacz 2001].

<sup>12</sup> Correlation between the share of area with natural values and forest cover and conventional tourism traffic is also quite strong ( $r = 0.66$  and  $r = 0.52$  respectively).

0.63) means that agro-touristic services are getting interest from farmers located mainly in the areas with lower quality of soil that are simultaneously attractive for tourists. Negative correlation was also observed with the value of agricultural production, which indicates that agro-touristic farms are mostly being established in the areas with lower intensity of agricultural production. The results of these studies are also reflected in the delimitation of the area of the Podlaskie voivodeship. On the area of the communities classified as problem areas (I group of communities) there are 47.2 agro-tourism farms per 1000 km<sup>2</sup> of total area, i.e. more than twice in comparison with two other groups (21.9 of agro-tourism farms – group II and 21.4 – group III).

Contrary to the high rank of the Podlaskie voivodeship in Poland in terms of the number of agro-touristic farms, overall conventional tourism traffic recorded in this area (rural areas and cities) is however, relatively low. By nominal number of nights spent by tourists, as well as by number of nights per 1000 people, the Podlaskie voivodeship occupies the second position from the bottom (15) among all voivodeships in Poland. In 2009 the number of nights spent by tourist calculated per 1000 people amounts to 725 and was half the average in Poland. Between 1999-2009 the overall conventional tourism traffic shrank in the area of the Podlaskie voivodeship by 6.0%, whereas at the same time it increased in the whole area of Poland by 13.0%.

Main reason for slow traditional tourism traffic in the area of the Podlaskie voivodeship is its strong concentration in traditional places and areas of tourist interest that have been the same since years, mainly the Białowieża Forest and the Suwałki-Augustów Lakeland, as well as the city of Białystok. Almost half of all tourism traffic is concentrated in four communities in the Podlaskie voivodeship, i.e. Augustów, Hajnówka, Białystok and Suwałki (49.1%)<sup>13</sup>, however, this number would be staggering 75.3% if traffic only in rural areas was measured. Basic motive attracting tourists to these areas are natural conditions and to far lesser extent cultural values. Due to the limited capacity of forms of tourism tied to natural conditions, its further development in this area may face barriers. Tourist traffic is low in the remaining rural areas of the Podlaskie voivodeship. It is associated mainly with the more attractive areas in river valleys, forests, wetland areas, places of worship, monuments of cultural heritage preserved here and there, as well as the specific characteristics resulting from a mosaic of nationalities appearing in the area where the Poles live alongside with Russians, Lithuanians, Tatars and Jews. One of the key ways to activate tourism in this area however, is the need to create new tourism products and services [Niewiadomski 2009 b, 2011 a] and, in the follow up, the creation of adequate tourism infrastructure.

## RECAPITULATION

The paper has outlined directions of development of rural, mainly agricultural areas of the Podlaskie voivodeship which in light of the current criteria describing areas with unfavourable conditions for development of agriculture (ONW) is classified almost entirely as area in this category. Research shows that the main direction of development of this space will be primarily creation of modern, large-scale farms, but under condi-

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<sup>13</sup> Tourists coming to Białystok city play an important role in the overall tourism traffic. Every fourth tourist coming to the Podlaskie voivodeship in recent years was staying in this city.

tions of very low quality of soil and the environment, as well as simultaneously very high share of grassland areas, these farms will be mostly focused on production of cattle and milk. Under different conditions, particularly in areas with better soils, next to the farms focused on cattle and milk production there will also be farms developing production of pigs or mixed production. Only under specific conditions can these farms compete with farms geared to livestock production, crop farms, mainly cereals (good quality soil and relatively large area.)

Close connection between the development of organic farms and natural conditions (both micro- and macro conditions) indicates that the development of this form of agriculture will be closely linked to the general processes of economic development, mainly depending on the income situation of households, the level of economic growth achieved, but also economic conditions in the world.

The development of agro-tourism, which will serve complementary role in relation to conventional agriculture, will depend mainly on the overall level of tourism traffic, to which agro-tourism is competitive in certain ways (in particular when it comes to tourist attractions), as well as the overall economic situation. Main factors attracting tourists are primarily widely understood tourist attractiveness of the area and right conditions created for the guests coming to the agro-touristic farm (facilities, meals, accompanying infrastructure, prices of services). Less important are the themes associated with the farm itself.

Fundamental method of rebuilding levels of conventional tourism traffic and growing it further is primarily the creation of new tourism products and services, and consequently the development of tourism infrastructure. Development of tourism based on areas with natural values can become a barrier to its further development due to the limited capacity of such areas.

General assessment of economic development of the Podlaskie voivodeship measured by GDP per capita shows that it currently occupies one of the last places in Poland, during 1999-2008 merely kept pace with the dynamics recorded in Poland on average. The general parameters for development of agriculture are more positive against this background in comparison to other regions in Poland. Tenth position of the Podlaskie voivodeship occupied in Poland in terms of basic parameters of agricultural development, and favourable trends in this area recorded in 1999-2008, as well as current developments in cattle production and milk, can justify the thesis concerning slow process of convergence.

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### **KIERUNKI ZAGOSPODAROWANIA OBSZARÓW O NIEKORZYSTNYCH WARUNKACH GOSPODAROWANIA NA PRZYKŁADZIE WOJEWÓDZTWA PODLASKIEGO (POLSKA)**

**Streszczenie.** Opracowanie jest poświęcone kierunkom zagospodarowania przestrzeni wiejskiej, głównie rolniczej, województwa podlaskiego, które w świetle obowiązujących kryteriów zostało zaliczone niemal w całości do obszarów problemowych (ONW). Prezentowane wyniki są zwięźczeniem badań nad tą problematyką z prowadzonych głównie na obszarze województwa podlaskiego przez autora niniejszego opracowania w ostatnich kilku latach. Konkludując wyniki badań można powiedzieć, że zasadniczym kierunkiem zagospodarowania przestrzeni wiejskiej-rolniczej województwa podlaskiego będą nowoczesne, towarowe gospodarstwa rolne, dostosowane do istniejących warunków, w szczególności przyrodniczo-glebowych. Na obszarach problemowych będą to przede wszystkim gospodarstwa nastawione na produkcję bydła i mleka, prowadzące produkcję na bazie bardzo wysokiego udziału użytków zielonych w strukturze użytków rolnych. Uzupełniającą rolę w stosunku do rolnictwa konwencjonalnego na obszarze województwa podlaskiego będą natomiast spełniać gospodarstwa prowadzące produkcję metodami ekologicznymi i gospodarstwa agroturystyczne. Po wykreowaniu nowych produktów i usług turystycznych będzie można też liczyć na intensywniejszy rozwój turystyki konwencjonalnej na obszarach wiejskich. Ocena dotychczasowych parametrów rozwoju gospodarczego województwa podlaskiego nie wskazuje na występowanie zjawiska konwergencji z innymi regionami i możliwości zmniejszenia dystansu do średnich wyników dla Polski w najbliższych latach. Jednak pewne tendencje pozytywne w zakresie zbieżności z innymi regionami Polski rysują się w zakresie rolnictwa, głównie za sprawą relatywnie wysokich wyników w produkcji bydła i mleka.

**Słowa kluczowe:** agroturystyka, spójność, dywersyfikacja, model gospodarstw rolnych, obszary o niekorzystnych warunkach gospodarowania, rolnictwo ekologiczne

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