

# Selected Problems of Sustainable Development of Environmentally Valuable Areas of the Lubelskie Voivodship

**Danuta Guzal-Dec**

Pope John II State School of Higher Education in Biała Podlaska, Poland

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## Abstract

*The overall objective of the study was to identify the problems of sustainable development of environmentally valuable areas of the Lubelskie Voivodship, as seen from the perspective of local authorities. Implementation of the adopted objective was served by the analysis of the results of research carried out in 2013 in the Lubelskie Voivodship in the 30 communes of the greatest ecological value in the Lubelskie Voivodship<sup>1</sup> according to the index developed by D. Guzal-Dec within the assessment of natural value in the study of the ecological value of rural and urban-rural communes of the Lubelskie Voivodship<sup>2</sup> and the analysis of documents of local development strategies of the researched communes. The study included a questionnaire survey of 383 councilors representing 86% of respondents. In light of the conducted analysis we can claim that problems of socio-economic development, such as unemployment, poverty, emigration of young people, difficulty in developing social capital, poor infrastructure—both social and technical, including roads and sewers, are still important issues of sustainable development. and environmental problems are not seen as important when compared to the essential problems of socio-economic development, as well as the small scale of direct environmental threats.*

**Keywords:** sustainable development, environmentally valuable areas, Lubelskie voivodship

## Introduction

In view of adverse global and local environmental changes, growing problems and threats to ecosystems, new solutions and ideas that will help to preserve the environment and benefit from its resources are sought. The answer is sustainable development as a concept and a set of practical measures to integrate efforts in the political, social, and economic areas for social and economic development which will be achieved without damage to the natural environment and the sustainability of the processes taking place in it (Kusterka 2005). Within environmentally valuable areas, there is a significant potential for growth—of the ecological potential of the environment. At the same time, these areas are characterized by their peripheral location and numerous problems of economic development. Capabilities of implementing sustainable development include, on the one hand, pro-development resources and values of the environment, and on the other—ecological limitations. In practice, the creation of sustainable development at the municipal level is not an easy process. Problems arise in the relations between various planes of local development, especially

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1. The group of 30 local government units includes: Janów Podlaski, Konstantynów, Józefów, Łukowa, Obsza, Dzwola, Janów Lubelski, Modliborzyce, Janowiec, Kazimierz Dolny, Wąwolnica, Kraśniczyn, Wilków, Dębowa Kłoda, Sosnowica, Stężyca, Lubycza Królewska, Susiec, Tarnawatka, Tomaszów Lubelski, Rossosz, Sławatycze, Urszulina, Włodawa, Adamów Zamojski, Krasnobród, Łabunie, Skierbieszów, Stary Zamość, Zwierzyniec.

2. Implemented under the project entitled: “Ekologiczne uwarunkowania i czynniki rozwoju funkcji gospodarczych na obszarach przyrodniczo cennych województwa lubelskiego finansowanego ze środków Narodowego Centrum Nauki na podstawie decyzji nr DEC-2011/01/D/HS4/03927” [Environmental conditions and factors of economic functions’ development in the areas of natural value of the Lubelskie Voivodship, funded by the National Science Centre].

between the sphere of ecology and the sphere of infrastructure development. The overall objective of the study was to identify the problems of sustainable development for environmentally valuable natural areas of the Lubelskie Voivodship, as seen from the perspective of local authorities.

Specific objectives were formulated as follows:

- identification of the problems of sustainable development in the social, economic and environmental spheres
- determination of the seriousness of environmental problems compared to other issues of sustainable development
- identification of existing hazards to the environment

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## 1 Material and methods

Implementation of the adopted objective was served by the analysis of the results of research carried out in 2013 in the Lubelskie Voivodship in the 30 communes of the greatest ecological value in the Lubelskie Voivodship according to the index developed by D. Guzal-Dec within the assessment of natural value in the study of the ecological value of rural and urban-rural communes in the Lubelskie Voivodship (Guzal-Dec 2013) and the analysis of documents of local development strategies of the researched communes. The group of 30 local government units, as identified in the cited studies, includes: Janów Podlaski, Konstantynów, Józefów, Łukowa, Obsza, Dzwola, Janów Lubelski, Modliborzyce, Janowiec, Kazimierz Dolny, Wąwolnica, Kraśniczyn, Wilków, Dębowa Kłoda, Sosnowica, Stężyca, Lubycza Królewska, Susiec, Tarnawatka, Tomaszów Lubelski, Rososz, Sławatycze, Urszulin, Włodawa, Adamów Zamojski, Krasnobród, Łabunie, Skierbieszów, Stary Zamość, Zwierzyniec. The study included a questionnaire survey of 383 councilors representing 86% of respondents.

## 2 Specificity and problems of sustainable development in the environmentally valuable areas of the Lubelskie Voivodship

A naturally valuable area is an area where there is an organism, a species or group of organisms or an inanimate creation, a whole habitat, an ecosystem and landscape, distinguished due to their rarity, typicality, usability, symbolism, aesthetic value, etc. (Ryszkowski 1984). Valuable natural areas include a significant growth potential—the potential of the ecological environment. This potential—unique resources and environmental characteristics—can be used to provide many services for the benefit of society and the economy. According to the classification of the Millennium Ecosystem Assessment socio-economic environmental services can include, among others, resource services: food, fiber, fuel, genetic resources, medicinal materials, ornamental resources and fresh water, and cultural services: impact on cultural diversity, religious and spiritual values, educational values, creative inspiration, aesthetic values, impact on social relations, sense of belonging, cultural heritage values and recreation along with nature tourism (Dobrzańska 2007, 74).

Economic activity in areas of high natural value should be conducted primarily through “greening” the existing forms of the local economy and the development of new, favorable natural environment solutions, such as, e.g. eco-tourism, organic farming and healthy food production. We should, however, bear in mind that the structure and intensity of the activities of the given field of economy must be adjusted to the criteria of the natural environmental values (Czaja and Becla 2007, 375).

In terms of natural and landscape values the region of Lublin is one of the most interesting regions in Poland. It is characterized by the presence of both areas with past intense human pressure, which has caused irreversible changes in the functioning of ecosystems, but also areas where

nature and landscape have preserved their natural character (Biuro Planowania Przestrzennego w Lublinie and Banak 2002).

The Lubelskie Voivodship is—statistically—the least developed region in Poland. It has the characteristics of a stagnation region — deprived of both great cities with developed metropolitan functions and any attractive industry which would be within the interest of external capital (mostly foreign). It exhibits the “syndrome of underdevelopment,” which includes a low level of education and qualification of personnel, low productivity, relative underdevelopment of infrastructure, limiting the availability of transport and telecommunications, low quality of education and low levels of social self-organization, and lack of innovation (Danilkiewicz et al. 2014).

### 3 Problems of sustainable development in SWOT analysis of the local development strategies of the surveyed communes

Analysis of documents concerning local development strategies was to help in extracting specific problems of sustainable development in the communes surveyed in the social, economic and environmental spheres. SWOT analysis allowed us to establish problems indicated in at least two of the 30 surveyed communes. Problems concerning the social sphere are shown in table 1. Within the social sphere of development, the most often indicated problems were unemployment and poverty, emigration of youth and a social infrastructure deficit, which would allow residents’ cultural development and development of social bonds. Problems evidencing weakness in the creation of social capital of these areas were also indicated, such as the lack of strong NGOs or difficulty in establishing associations of farmers.

**Tab. 1.** Problems of sustainable development in the social sphere, as identified in the SWOT analysis of the development strategy of the surveyed communes

The problems of development-social sphere	Indication in communes
High unemployment	Józefów, Modliborzyce, Janowiec, Susiec, Łabunie, Stary Zamość, Wilków, Sławatycze, Dębowa Kłoda, Sosnowica, Obsza
Large share of the poor (large financing needs of social benefits)	Janów Podlaski, Urszulin, Józefów, Tomaszów Lubelski, Janów Podlaski, Susiec, Stary Zamość
Emigration of young people	Konstantynów, Susiec, Zwierzyniec, Łabunie, Stary Zamość, Skierbieszów, Dębowa Kłoda
Low level of education	Lubycza Królewska, Stary Zamość, Skierbieszów
Lack of strong NGOs / low level of social capital	Stary Zamość, Skierbieszów, Wilków, Sosnowica
Low level of farm income	Łukowa, Janów Lubelski, Janów Podlaski, Janowiec, Skierbieszów, Wilków, Sławatycze, Obsza
Lack of association of farmers in producer groups	Janowiec, Łabunie, Urszulin, Sosnowica
Lack of leisure and sports facilities / underdeveloped local places of gathering, cultural events	Kazimierz Dolny, Józefów, Krasnobród, Stary Zamość, Włodawa, Sosnowica, Obsza, Kraśniczyn
Poor technical condition of rural community centers, lack of a cultural center fully organizing cultural life, lack of funds for substantive activities of the Municipal Cultural Centre (GOK) / lack of resources for the modernization of GOK	Urszulin, Włodawa, Krasnobród, Zwierzyniec, Susiec, Janowiec, Janów Podlaski, Janów Lubelski, Lubycza Królewska, Wąwolnica, Łukowa, Kazimierz Dolny, Tarnawatka, Sławatycze

*Source:* Own development based on the documents of local development strategies

Specific problems concerning the economic sphere are shown in table 2. Among the problems of the economic sphere of development, deficiencies in the technical infrastructure equipment were indicated, in particular those connected with tourism development. Limitations within agricultural development resulting from the poor quality of soil and agrarian fragmentation were also stressed. Participants also pointed to the unfavorable structure of local businesses with the dominance of small businesses with limited capital resources.

**Tab. 2.** Problems of sustainable development in the economic sphere, as identified in the SWOT analysis of the development strategy of the surveyed communes

The problems of development-economic sphere	Indication in communes
Bad roads	Łukowa, Józefów, Wąwolnica, Tomaszów Lubelski, Lubycza Królewska, Konstantynów, Janów Lubelski, Modliborzyce, Janowiec, Zwierzyniec, Krasnobród, Stary Zamość, Włodawa, Urszulin, Wilków, Obsza
No new foreign investors	Tomaszów, Lubycza, Modliborzyce, Stary Zamość, Wilków
Lack of gas lines in communes	Łukowa, Lubycza, Janowiec, Wilków, Dębowa Kłoda, Obsza
Lack of employment in industry	Łabunie, Urszulin, Sławatycze
Limited capital resources of local businesses / residents	Janów Lubelski, Skierbieszów, Sosnowica
Lack of larger companies supporting communes with taxes	Kazimierz Dolny, Konstantynów, Janowiec
Small number of business entities	Konstantynów, Krasnobród, Urszulin, Wilków, Obsza
Dominance of very small companies	Tomaszów Lubelski, Urszulin
Lack of dedicated investment terrains / disordered zoning within communes	Susiec, Wilków, Sosnowica, Obsza
No direct access to counseling and business support institutions	Susiec, Stary Zamość
Location in a conservation zone being a difficulty in investment	Kazimierz Dolny, Wilków, Dębowa Kłoda, Janowiec, Susiec
Insufficient use of natural and cultural resources of communes	Janów Lubelski, Susiec, Kazimierz Dolny
Lack of tourist infrastructure / poorly developed tourism infrastructure (accommodation) / bad standard of tourist infrastructure, not enough bicycle paths	Łukowa, Józefów, Łabunie, Kraśniczyn, Stary Zamość, Wilków, Sławatycze, Dębowa Kłoda, Obsza, Kazimierz Dolny, Tomaszów Lubelski, Lubycza Królewska, Konstantynów, Janowiec, Susiec, Urszulin, Zwierzyniec, Skierbieszów, Wilków, Wąwolnica, Janów Lubelski
Lack of vision, no strategy of tourism development / lack of proper promotion of the values of the municipality / no visual identification	Kazimierz Dolny, Wilków, Dębowa Kłoda, Wąwolnica, Łabunie, Tomaszów Lubelski, Stary Zamość, Włodawa, Sosnowica
Poor technical condition of historic buildings / lack of funds for revitalization / scarcity of financial means for the renovation of historic buildings	Stary Zamość, Sosnowica, Obsza, Kazimierz Dolny, Krasnobród, Janów Lubelski, Tomaszów Lubelski
Poor soil, unfavorable climate	Łukowa, Józefów, Konstantynów, Zwierzyniec, Krasnobród, Urszulin, Sosnowica
Fragmentation of farms	Łukowa, Józefów, Janów Lubelski, Janów Podlaski, Janowiec, Zwierzyniec, Krasnobród, Łabunie, Stary Zamość, Skierbieszów, Urszulin, Wilków, Sławatycze
Multidirectionalism of agricultural production, lack of specialized farms	Łukowa, Zwierzyniec, Łabunie
Low productivity of plant and animal production / marketability	Łukowa, Susiec, Krasnobród, Skierbieszów
Lack of food processing	Łukowa, Konstantynów, Modliborzyce, Stary Zamość

Source: Own development based on the documents of local development strategies

Table 3 shows development problems associated with the need to maintain the environment in good condition. Within the group of the analyzed problems the ones most often pointed out were: development problems of the environmental infrastructure — especially of the local sewerage network. There was also a problematic issue of a low level of environmental awareness and littering of naturally valuable areas by residents and tourists.

**Tab. 3.** Problems of sustainable development in the environmental sphere, as identified in the SWOT analysis of the development strategy of the surveyed communes

The problems of development-environmental sphere	Indication in communes
Large needs to organize a large environmental infrastructure/lack of sewerage system/insufficient development of networks	Łukowa, Józefów, Wąwolnica, Konstantynów, Janów Lubelski, Modliborzyce, Janów Podlaski, Janowiec, Susiec, Zwierzyniec, Krasnobród, Łabunie, Stary Zamość, Włodawa, Urszulin, Wilków, Dębowa Kłoda, Sosnowica, Obsza, Lubycza Królewska
Underdeveloped waste management	Kazimierz, Wąwolnica, Sosnowica
Low level of environmental awareness of inhabitants/insufficient environmental education of society	Kazimierz Dolny, Tomaszów Lubelski, Janów Podlaski, Janowiec, Stary Zamość, Skierbieszów, Wilków, Wąwolnica
Household boilers and furnaces fed primarily with coal	Łukowa, Kazimierz Dolny
Illegal landfills in forests, littering the particularly attractive commune areas	Kazimierz Dolny, Janów Lubelski, Janowiec, Wilków
Water contamination of the vistula	Kazimierz, Janowiec, Wilków, Sosnowica
Location in a conservation zone being a difficulty in investment	Kazimierz Dolny, Wilków, Dębowa Kłoda, Janowiec, Susiec

*Source:* Own development based on the documents of local development strategies

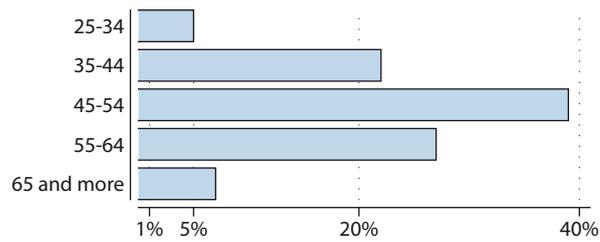
#### 4 Selected problems of sustainable development in the opinion of councilors of the surveyed communes

As part of this study, 83 councilors were asked to complete questionnaires, including 290 men — 76% of the total and 93 women — 24% of the total. The largest age group of councilors were between 45–54 — almost 40% of respondents. Detailed information about the structure of respondents by age is shown in figure 1. Figure 2 shows the structure of education of the respondents. The largest group of respondents were councilors with secondary education — almost 40%. Higher education was a characteristic of 32%, and 22% of councilors were educated at the primary or basic vocational level.

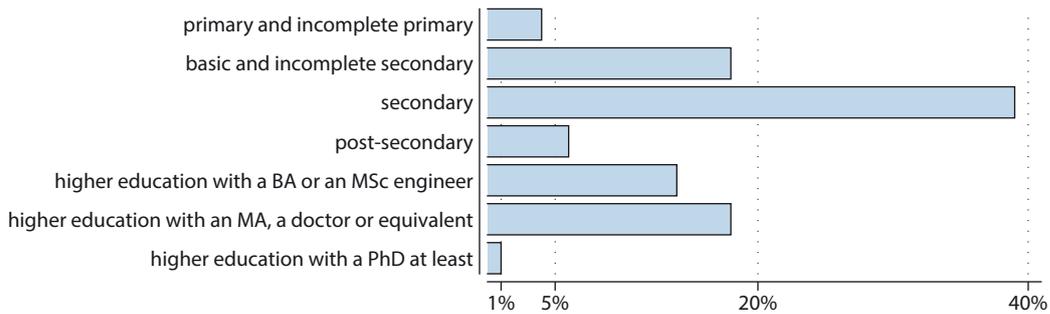
As part of the research council members were asked to determine the weights of individual problems of the development of their communes. The evaluated problems included specific issues related to environmental protection, as given next to 3 general issues, also important in the macroeconomic scale of the problems concerning socio-economic development, such as unemployment, poverty, crime and high prices — conditioning limited consumer possibilities. Councilors' opinions on the importance of each selected issue are shown in figure 3.

The most important issue of local development to be pointed out by respondents was unemployment — average ratings of 3,89, with a six-point scale, where 0 — meant no problem, and 5 — a great problem. Respondents assessed all of the socio-economic problems definitely higher — average scores above 2, while average ratings in relation to environmental problems were less than 2. Illegal disposal of waste was rated the highest among the environmental problems — average rating of 1,67.<sup>3</sup> The least problematic were issues connected with the availability of good quality drinking water and protecting populations of rare species of plants and animals.

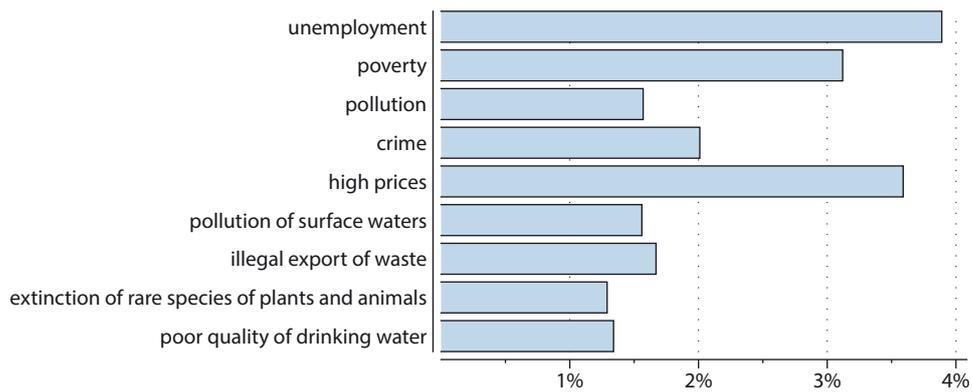
3. [In the journal European practice of number notation is followed — for example, 36 333,33 (European style) = 36 333.33 (Canadian style) = 36,333.33 (US and British style). — Ed.]



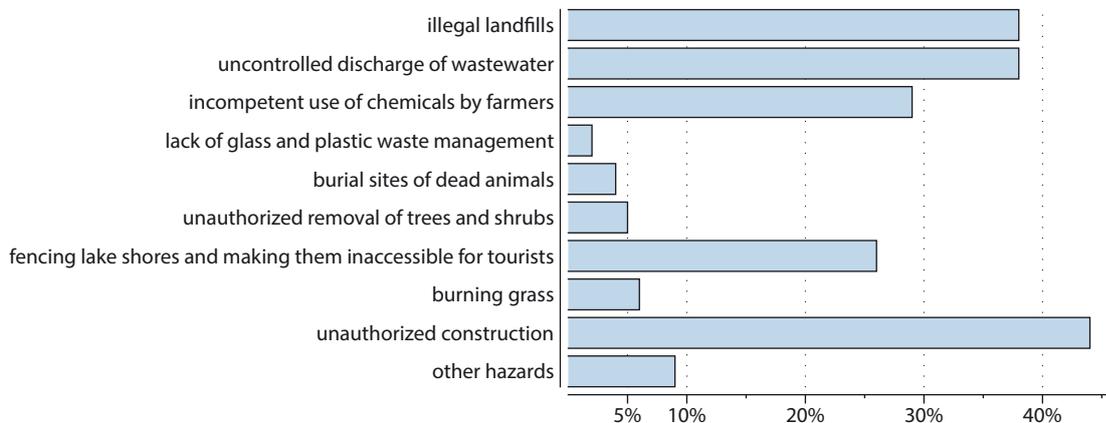
**Fig. 1.** Age structure of the respondent councilors



**Fig. 2.** Structure of the respondents' education



**Fig. 3.** Selected problems communes' development in the opinion of councilors of the surveyed communes



**Fig. 4.** Environmental hazards in the community, in the opinion of councilors

Respondents were also asked to indicate direct environmental hazards encountered within their communes—see figure 4. Among the immediate environmental threats, respondents primarily pointed out those causing soil pollution, connected with waste management, namely: illegal dumping and uncontrolled disposal of sewage. More and more commonly unauthorized construction and

frequent incompetent use of chemicals by farmers also constituted significant threats. Within the group of other hazards, the following were indicated: burning of plastic materials, rubber, large and uncontrolled tourism, felling of trees in state forests, the presence of a too large population of beavers and wild boars causing damage—destroying crops, flooding meadows, the destruction of old trees-oaks.

## Summary and conclusions

In light of the analysis of local development strategies and the analysis of the results of councilors' opinion concerning the perception of the problems of sustainable development of the municipalities inhabited by them, we can claim that:

- problems of socio-economic development, such as unemployment, poverty, emigration of young people, difficulty in developing social capital, are still important issues of sustainable development;
- problematic is the paucity of infrastructure, both the social—especially social development centers—and the technical infrastructure, including roads and sewers;
- environmental problems are not seen as important when compared to the essential problems of socio-economic development, as well as the small scale of direct environmental threats.

To some extent, the LEADER Community Initiative is an effective solution for specific social problems, through which, strengthening efforts are constantly taken within the development of cross-sectoral cooperation and the development of social capital, they also contribute to the improvement of the small tourist infrastructure and the creation and modernization of cultural centers (rural centers) in the region of Lublin. Development needs of the cost-intensive infrastructure still remain insufficiently met by public support programs funded at the central and the EU level. It seems that municipalities of varying natural resources requiring special legal protection should also be individually considered, especially in the support of the development of environmental infrastructure.

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