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**INVESTMENT ATTRACTIVENESS OF RURAL AREAS
IN ZACHODNIOPOMORSKIE PROVINCE
FOR THE PRODUCTION OF ENERGY FROM BIOMASS**

Key words: biomass, the attractiveness of investment, regional development, human capital, market, activity of local authorities, the potential of biomass

Introduction

Zachodniopomorskie Province is an example of a province with economically well developed areas with high profits from the production and the sale of services (especially tourist services) on the one hand, and which also possesses problematic areas with poorly developed enterprise and marginalized society groups on the other hand. Several factors contribute to that, which can be very briefly characterised as an impact of large cities on population migrations and a concentration of the enterprise development in a small area, a location of the communes in the west part of the province by the frontier, and a highly developed tourist function in seaside communes. The remaining areas had been characterised by the year 1989 with a high share of employment in nationalised agriculture, the consequence of which is now a high unemployment rate, lack of investments and an accumulation of social problems. Twenty years after the systemic changes in Poland, the ways of development, which could help change the poor situation of the rural areas, are still being sought. Opportunities for the development of these areas might be offered by renewable sources of energy, their production as well as the creation of energy self-sufficient local systems, the so-called dispersed power industry. Owing to the multifaceted possibilities to create energy from renewable sources, such solutions can be used in areas with diversified potentials of investment micro-climates and a diversified level of production resources.

The production of energy from renewable sources is governed by the same principles of economics as typical market undertakings that are commonly encountered in the economy. The management of such an undertaking must take into account the basic condition of profitability, which is determined with receipts and costs, and whose relation should aim in the long run to a situation when these two are equal. These two main factors which have an impact on the profitability of an investment and the value of the profit constitute the basis of the actions undertaken by managers aimed at an improvement of the company's profitability.

At the beginning of the foreseen business activities the location is also a crucial element. It is important with respect to the profits and the possibilities of a reduction of the costs related among others to the transport, reaching the customer, or the availability of the means of production. For the selection of the location, there are different factors, which help to make decision depending on the desired type of production. All sorts of investment attractiveness bases are helpful as regards the selection of the location. They are generated for the needs of those Polish and foreign investors that are seeking objective evaluations concerning the possibilities to locate capital. The purpose of the present study is an attempt to create a synthetic measure for the assessment of the investment attractiveness for the production of renewable energy from a broad perspective. This means that an evaluation will be conducted of the key elements which are most frequently referred to as those which have an impact on the most of the generally known investment-related decisions.

An analysis of the demand for energy in Zachodniopomorskie Province

The economy, whose functioning is based primarily on the relations between the demand and the supply, forces producers to observe constantly the market and an investigation of the preferences of the potential purchasers of goods or services. Market research offers a possibility to plan the profitability of an investment, particularly if the volume of the sale and later profits connected with the sale are to be foreseen. In the case of the sale of renewable energy, the main customers may be both households and companies from industry sectors, construction, services, agriculture or transport: all of these that make use of an energy potential. An analysis of the consumption of electricity in Zachodniopomorskie Province demonstrated that the main consumers of electricity are as follows: the industry sector, households, the power engineering sector and, to a small extent, transport and agriculture (Fig. 1). A total of 5,398 GWh was used in the year 2008 in Zachodniopomorskie Province, i.e. 3.8 per cent in relation to the national consumption. The situation concerning the consumption of

heat is similar, where the main consumers of heat are the industry sector, small consumers and households (Fig. 2). The total amount of heat consumed was 21,120 TJ, i.e. 4.8 per cent in relation to the national heat consumption.

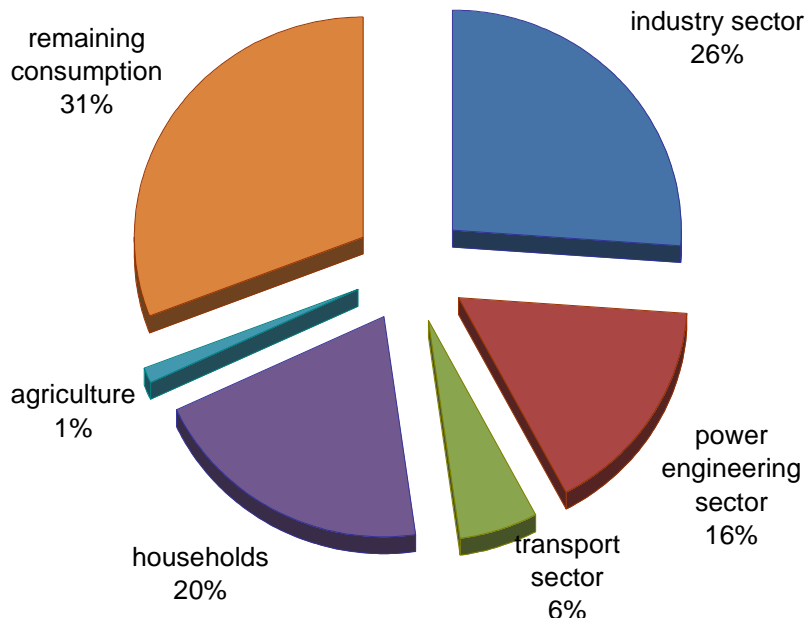


Fig. 1. Consumption of electricity in economic sectors in Zachodniopomorskie Province
Source: Author's own study on the basis of the Regional Data Bank, Central Office of Statistics 2008.

The demand for energy in the province is fairly strongly diversified, which is basically determined by the spatial differentiation of the main consumers, households and businesses. It can be accepted for the purpose of the calculation of the energy demand in rural communes in household that one person consumes 1,930 KWh annually¹.

An assessment of the demand for energy on the part of businesses in a spatial arrangement may be somehow difficult; however, it can be assumed that as in the previously presented data (Fig. 3, Fig. 4), the largest consumers of energy are companies from the industrial sector and from construction, which concentrate mainly in the large cities in the Province: Szczecin, Koszalin, Police and Stargard Szczeciński (Table 1).

¹ As per the data published by the Central Office of Statistics, the average electricity consumption per one consumer is 1,930 kWh annually.

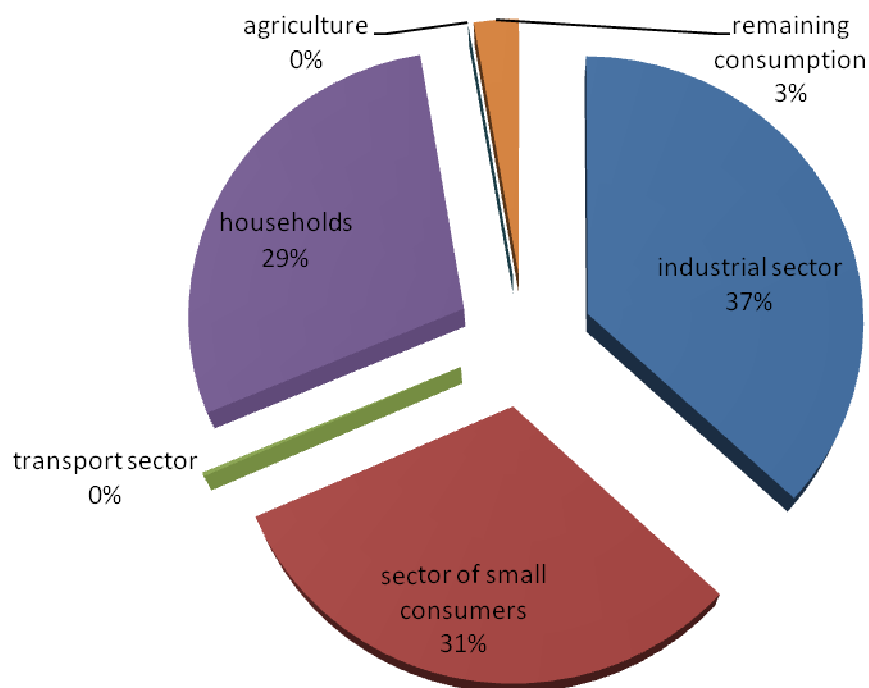


Fig. 2. Heat consumptions in economic sectors in Zachodniopomorskie Province

Source: Author's own study on the basis of the Regional Data Bank, Central Office of Statistics 2008.

In the year 2008, these companies consumed 1,438 GWh of electricity, which accounts for 27 per cent of the energy consumption in the Province. For the purpose of a more complete analysis of the demand for energy, the seasonal demand connected with large tourist migrations, especially in the seaside areas, has to be taken into account. The total number of accommodations in the province in the year 2008 was over 10 million². In the holiday period, this results in a substantially increased demand for electricity and gas.

² Data from the Regional Data Bank, Central Office of Statistics, 2008.

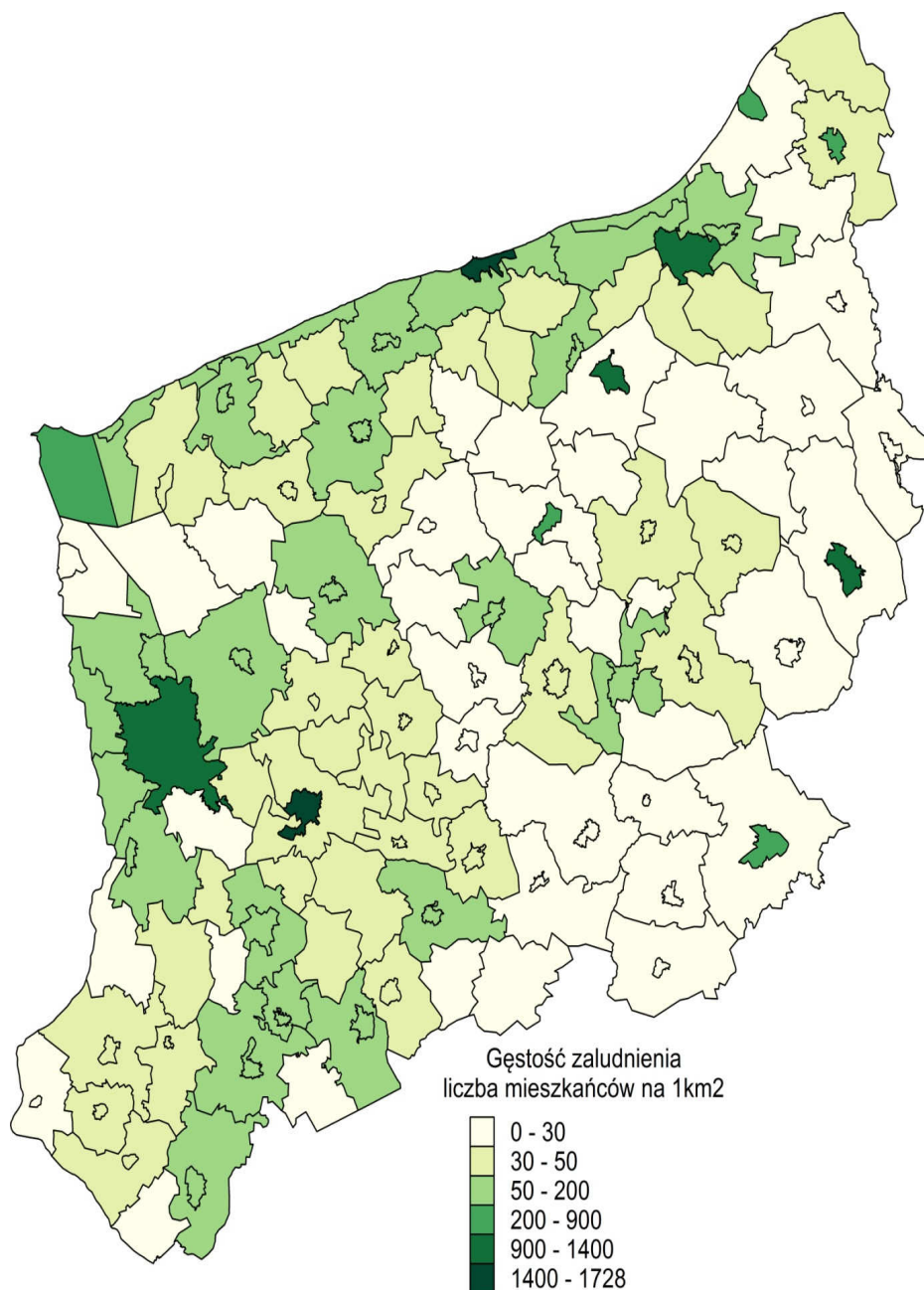


Fig. 3. Population density per 1 km² in Zachodniopomorskie Province in the year 2008
Source: Author's own study on the basis of the Regional Data Bank, Central Office of Statistics 2008.

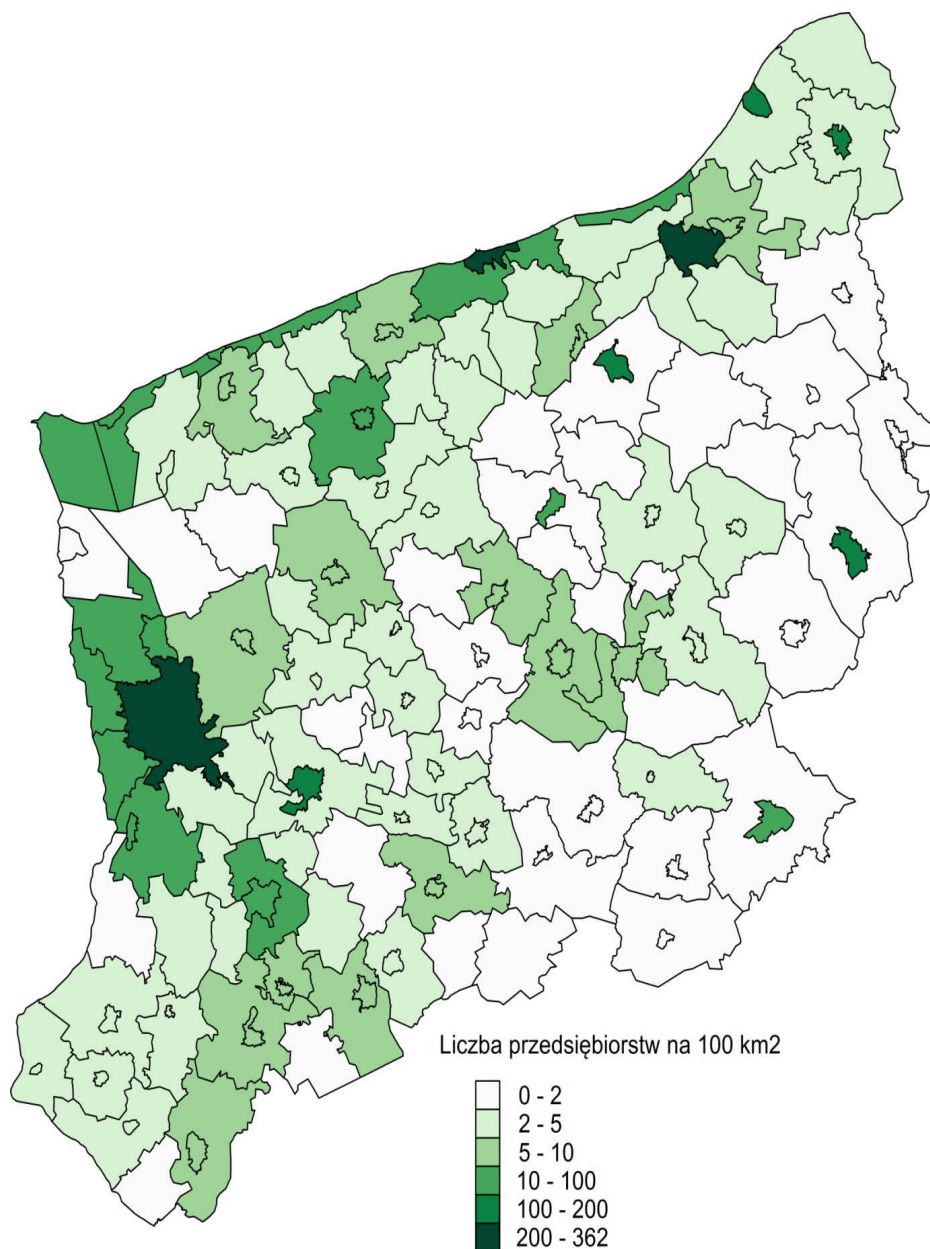


Fig. 4. Number of businesses per 100 km² in Zachodniopomorskie Province in the year 2008

Source: Author's own study on the basis of the Regional Data Bank, Central Office of Statistics 2008.

Table 1. Communes with the largest number of companies from the industrial sector in the year 2008

No.	Commune	Polish Business Classification			
		C – mining	D – industrial processing	E – production and provision of electricity, gas, water	F – construction
1	Szczecin	29	5 400	146	7 222
2	Koszalin	5	1 406	33	1 767
3	Police	2	708	3	665
4	Stargard Szczeciński	2	706	9	1 160
5	Kołobrzeg	2	487	12	807
6	Szczecinek	1	450	9	554
7	Gryfino	0	445	8	707
8	Goleniów	1	443	9	465
9	Świnoujście	0	401	7	569
10	Wałcz	0	306	5	381
11	Dębno	2	276	5	195
12	Białogard	1	242	7	367
13	Pyrzyce	1	227	2	406
14	Nowogard	1	221	3	427
15	Dobra (Szczecińska)	1	209	4	224
16	Choszczno	0	199	3	246
17	Barlinek	0	186	4	277
18	Myślibórz	0	174	4	247
19	Złocieniec	0	173	7	208
20	Połczyn-Zdrój	1	168	7	166
21	Sianów	2	152	3	202
22	Gryfice	1	145	7	314
23	Świdwin	0	137	4	143
24	Czaplinek	0	124	1	115
25	Drawsko Pomorskie	2	123	2	176
26	Sławno	0	119	6	199
27	Darłowo	1	118	6	146
28	Kamień Pomorski	1	118	2	342
29	Łobez	1	116	8	156
30	Stargard Szczeciński	0	114	0	218
31	Kołbaskowo	0	113	0	133
32	Kołobrzeg	4	107	3	166
33	Trzebiatów	0	105	2	185
34	Wolin	2	103	1	189

Source: Author's own study on the basis of the Regional Data Bank, Central Office of Statistics 2008.

An analysis of the biomass potential for the production of energy in communes

Biomass is most frequently defined as the organic fractions of products, waste and by-products from agriculture (substances of an organic and animal origin), from forestry and related industries, as well as biodegradable fractions of industrial and municipal wastes. Owing to such a wide spectrum of sources, an assessment of the biomass potential for energy purposes is to be multifaceted. Various sources as well as technologies to obtain energy should be taken into account.

Agricultural production and any residue from agriculture may be the first source of biomass, including:

- agricultural products: cereals, potatoes, rape, maize, sugar beets,
- crops from energy plantations (willow, Miscanthus, poplar, robinia, Jerusalem Artichoke, knotweed etc.),
- cereal straw: from oil plants, leguminous plants and hay,
- organic wastes: liquid manure, sewage sludge, organic wastes from sugar factories, distilleries and breweries.

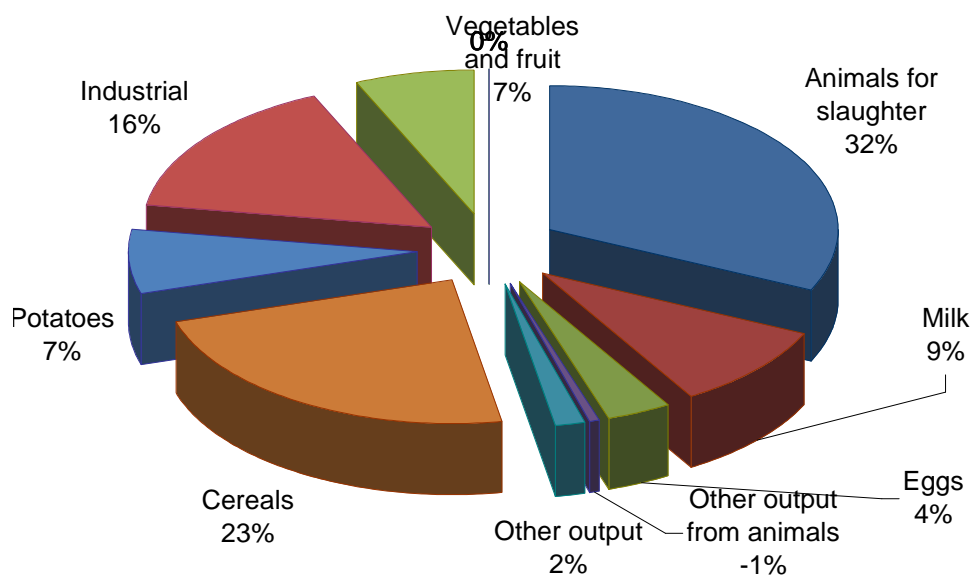


Fig. 5. Structure of agricultural output in the year 2007

Source: Author's own study on the basis of the Regional Data Bank, Central Office of Statistics 2008.

Table 2. Communes with the largest share of arable lands in Zachodniopomorskie Province in the year 2008

No.	Commune	Share of arable lands %
1	Pyrzyce	84
2	Bielice	84
3	Stara Dąbrowa	82
4	Przelewice	81
5	Warnice	81
6	Karnice	80
7	Będzino	79
8	Dobra	77
9	Kozielice	77
10	Suchań	75
11	Siemyśl	74
12	Maszewo	74
13	Brojce	73
14	Kołobrzeg	72
15	Dygowo	71
16	Stargard Szczeciński	71
17	Pełczyce	71
18	Dolice	71
19	Karlino	70
20	Choszczno	70
21	Gościno	70

Source: Author's own study on the basis of the Regional Data Bank, Central Office of Statistics 2008.

Depending on the source of biomass, the production scale and the technology of crops as well as the management of production, different energy and economic effects can be obtained. The structure of the agricultural production in the province shows that the production of slaughter animals and cereals is dominating (Fig. 5). In the first case, slaughter waste constitutes an ideal element of substrates for the biogas production. Concerning the economic aspect, such biogas works should be built near those locations where wastes are generated, which substantially facilitates the production and reduces its costs. Cereals have a much wider range of applications and are mainly used in the production of bio-alcohols, with ethanol being the most important one. Additional energy is obtained in the process of the combustion of straw, which is not used in agriculture.

In Zachodniopomorskie Province, arable lands are concentrated mainly in the south-west part of the province and its northern part (Fig. 6). However, this does not mean that only these areas constitute a biomass potential. The remaining areas also have an opportunity considering some species of energy plants which

do not require a high quality soil for the agricultural production. In this Province, agricultural production dominates in the following communes: Pyrzyce, Bielice, Stara Dąbrowa, Przelewice, Warnice and Karnice, which account for over 80 per cent of arable lands.

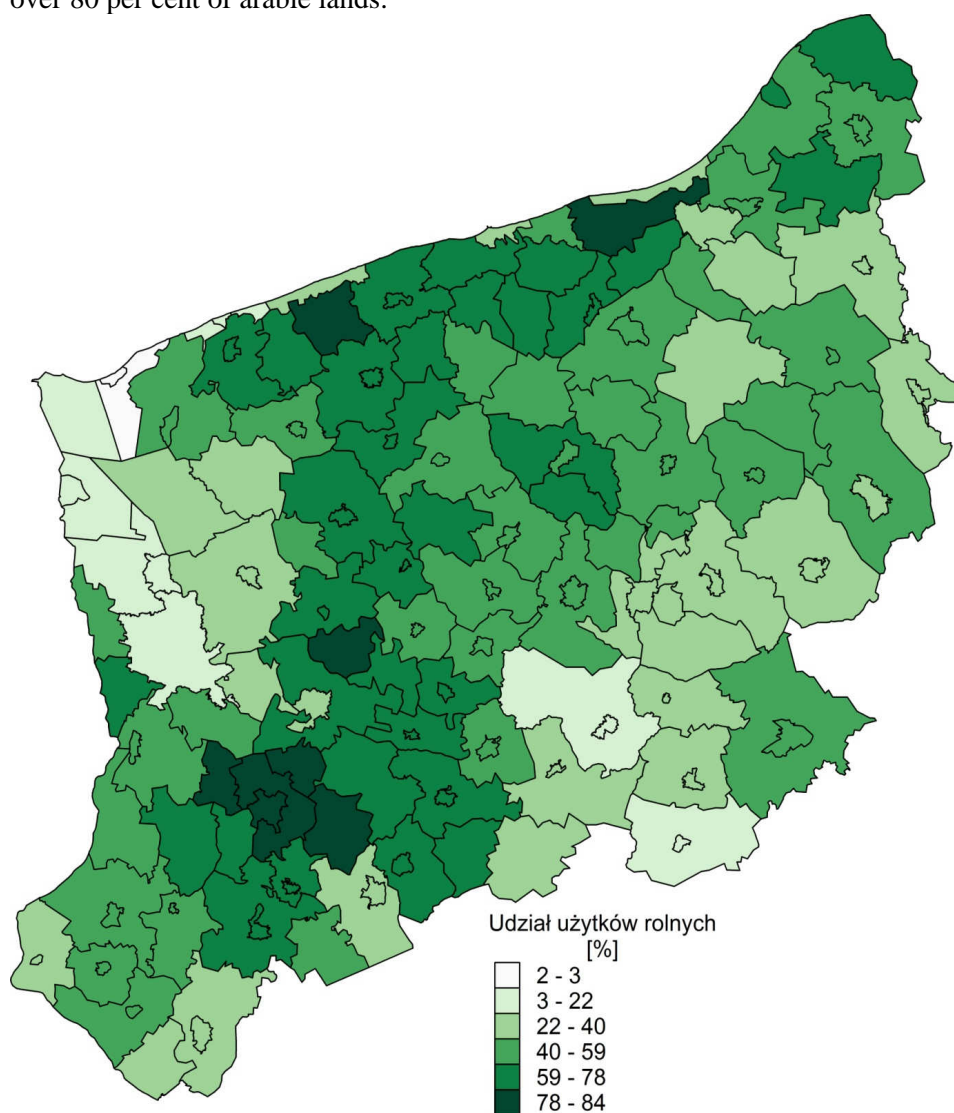


Fig. 6. Share of arable lands in the communes of Zachodniopomorskie Province in the year 2008

Source: Author's own study on the basis of the Regional Data Bank, Central Office of Statistics 2008.

Another source of biomass which is included in the overall potential of the Province is wood and wood wastes. In the case of wood waste, in particular the following is taken into consideration:

- wood chips is wood that has been broken up, produced during the first thinning of forest stands, tree tops and other remains after clearings, during working of logs in sawmills, in fast growing willow plantations, and wood wastes in large wood processing plants,
- wood shavings generated during working of dry wood in furniture plants and in woodworking shops,
- sawdust produced during wood sawing in sawmills,
- dusts generated in the finishing processes of dry wood in furniture plants and in woodworking shops,
- bark, which constitutes the surface layer of the tree.

The calorific value of the dry mass of the abovementioned types of wastes is determined on the level from 18.5 to 20 MJ/kg of dry matter. Depending of the number of those plants which use wood resources, the potential may be diversified. Also, those wood wastes are to be taken into account which are produced as a result of trimming and the management of the forest space. In general, this gives a fairly big potential of biomass which can be used. On the national scale, Zachodniopomorskie Province possesses the largest area of forest grounds in Poland (Table 3).

Table 3. Area of forest grounds in provinces in the year 2009

No.	Province	Area of forest grounds (ha)	Share of forest grounds (%)
1.	Zachodniopomorskie	803 063.4	36.1
2.	Mazowieckie	802 074.4	22.6
3.	Wielkopolskie	763 221.4	26.1
4.	Warmińsko-mazurskie	735 366.4	31.1
5.	Lubuskie	683 810.6	50.5
6.	Podkarpackie	663 796.7	37.6
7.	Pomorskie	661 403.5	36.9
8.	Podlaskie	614 094.2	30.8
9.	Dolnośląskie	587 845.6	30.4
10.	Lubelskie	573 662.1	22.6
11.	Małopolskie	432 721.8	28.9
12.	Kujawsko-pomorskie	418 731.3	23.7
13.	Śląskie	391 204.9	32.5
14.	Łódzkie	382 291.5	21.2
15.	Świętokrzyskie	326 487.6	28.3
16.	Opolskie	249 316.8	27.4

Source: Author's own study on the basis of the Regional Data Bank, Central Office of Statistics 2009.

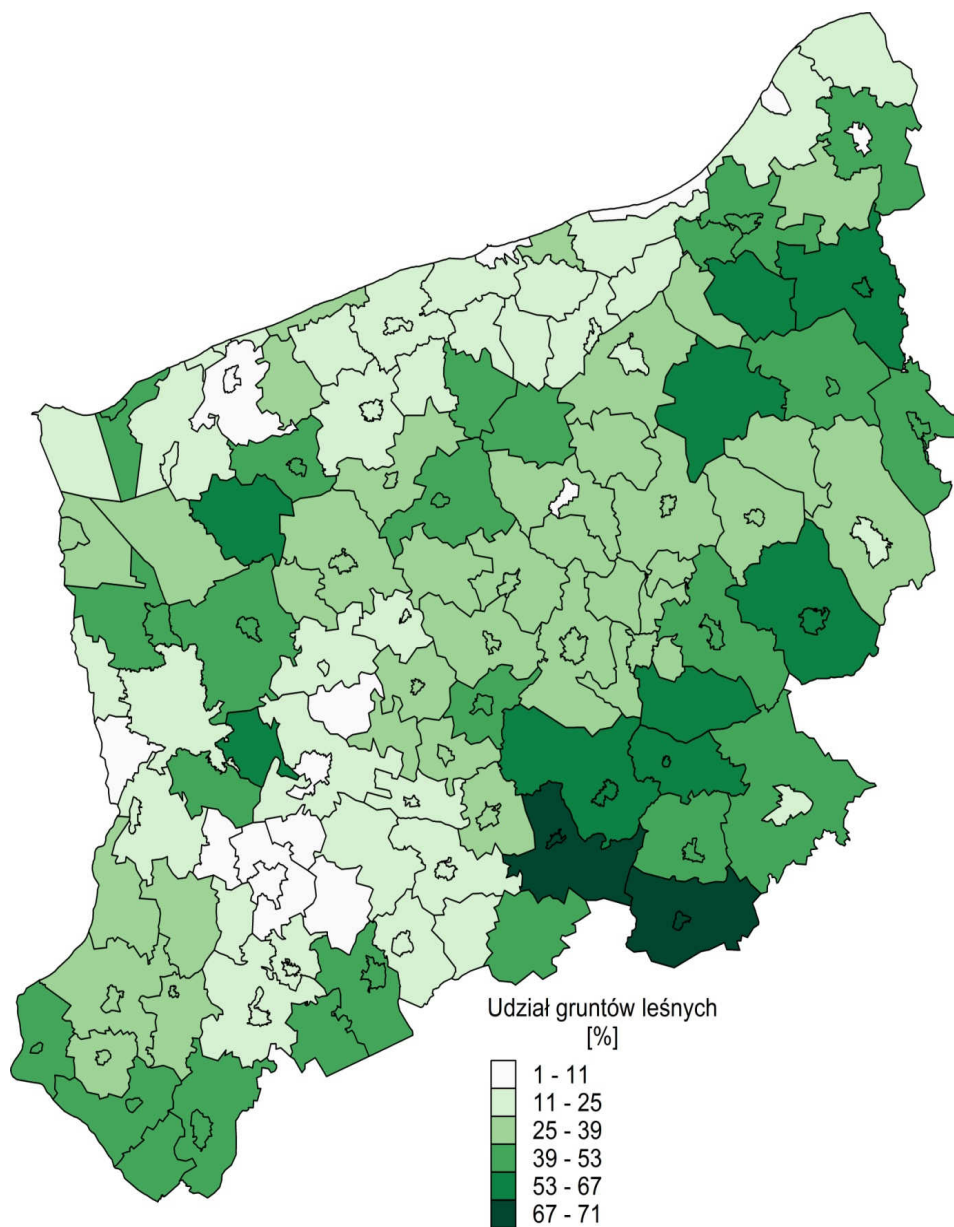


Fig. 7. Share of forest grounds in the communes of Zachodniopomorskie Province in the year 2008

Source: Author's own study on the basis of the Regional Data Bank, Central Office of Statistics 2008.

Table 4. Area of forest grounds in communes in the year 2008

No.	Commune	Share of forest grounds (%)
1.	Człopa	71
2.	Drawno	67
3.	Manowo	65
4.	Wierzchowo	62
5.	Mirosławiec	60
6.	Borne Sulinowo	59
7.	Tychowo	57
8.	Kalisz Pomorski	56
9.	Kobyłanka	56
10.	Przybiernów	56
11.	Polanów	53
12.	Boleszkowice	52
13.	Bierzwnik	52
14.	Dębno	50
15.	Biały Bór	49
16.	Barlinek	49
17.	Bobolice	48
18.	Goleniów	48
19.	Tuczno	48
20.	Sławoborze	48
21.	Police	48
22.	Wałcz	48

Source: Author's own study on the basis of the Regional Data Bank, Central Office of Statistics 2008.

Forest grounds are concentrated in the West and South-West part of the Province, in the following communes in particular: Człopa, Drawno, Manowo, Wierzchowo and Mirosławiec (Fig. 7, Table 4).

As it can be seen in Fig. 6 and 7, the potentials of rural agricultural and forest lands are complementary and constitute an important potential of biomass for energy purposes. However, for local energy systems to be fully formed, an adequate infrastructure, transmission grids as well as proper incinerating plants and boiler plants for the combustion of biomass are all required.

Analysis of the infrastructure for the creation of dispersed power systems in the communes of Zachodniopomorskie Province

The analysis of the biomass potential for energy purposes demonstrated that most of the communes possess adequate sources for the production of energy to meet their own requirements. The local energy production will be possible if adequate infrastructure, namely incinerators, boilers and heat distribution, electrical and gas networks will be developed.

The incineration process is the most common and at the same time the simplest form of obtaining energy from biomass both for the production of heat energy and the generation of electricity. As much as 90 per cent of energy obtained from biomass is generated worldwide in the incineration process, where biomass in all aggregation states can be combusted. In Zachodniopomorskie Province, there were 939 boiler plants in the year 2008 with quite a diversified heat distribution network. As evidenced by the statistical data, in the town, 87.4 per cent of flats possess central heating systems, while in villages this share is substantially smaller and is 67.9 per cent only. A spatial analysis demonstrates that the best situation regarding the heating system is to be observed in the areas of the large cities of Szczecin and Koszalin as well as in the seaside area (Fig. 8). Here, a certain similarity can be observed to the spatial diversification of the economic development: areas with a high level of the economic development possess such conditions which are above the average regarding the technical infrastructure.

Investments involving installations for biomass combustion are quite expensive; consequently, the profitability of such undertakings is frequently questionable. It is obvious that such a profitability is increased by the later possibility of the sale and distribution of heat or electricity produced in a cogeneration system. For this reason, the gas grids and electric grids constitute the further elements that need to undergo an analysis concerning the investigation of the investment attractiveness.

The smallest numbers of buildings with network gas are to be found in rural communes and in town-rural communes (19%) with quite a high result in urban communes (81%) (Fig. 9). This fact limits possibilities of a direct inclusion of gas from biogas works to grid systems in rural areas. Nevertheless, with new technologies of the storage and transport of gas, this limitation may not have a great impact on the profitability of the construction of biogas plants. Alternatively, biogas may be combusted in a cogeneration system, and the energy obtained from it may be transmitted as electricity or heat.

The possibilities presented for the production of energy from biomass constitute key elements of the overall investment attractiveness. An attempt of a synthetic assessment of the investment attractiveness will be a further step here taking into account a number of investment microclimates.

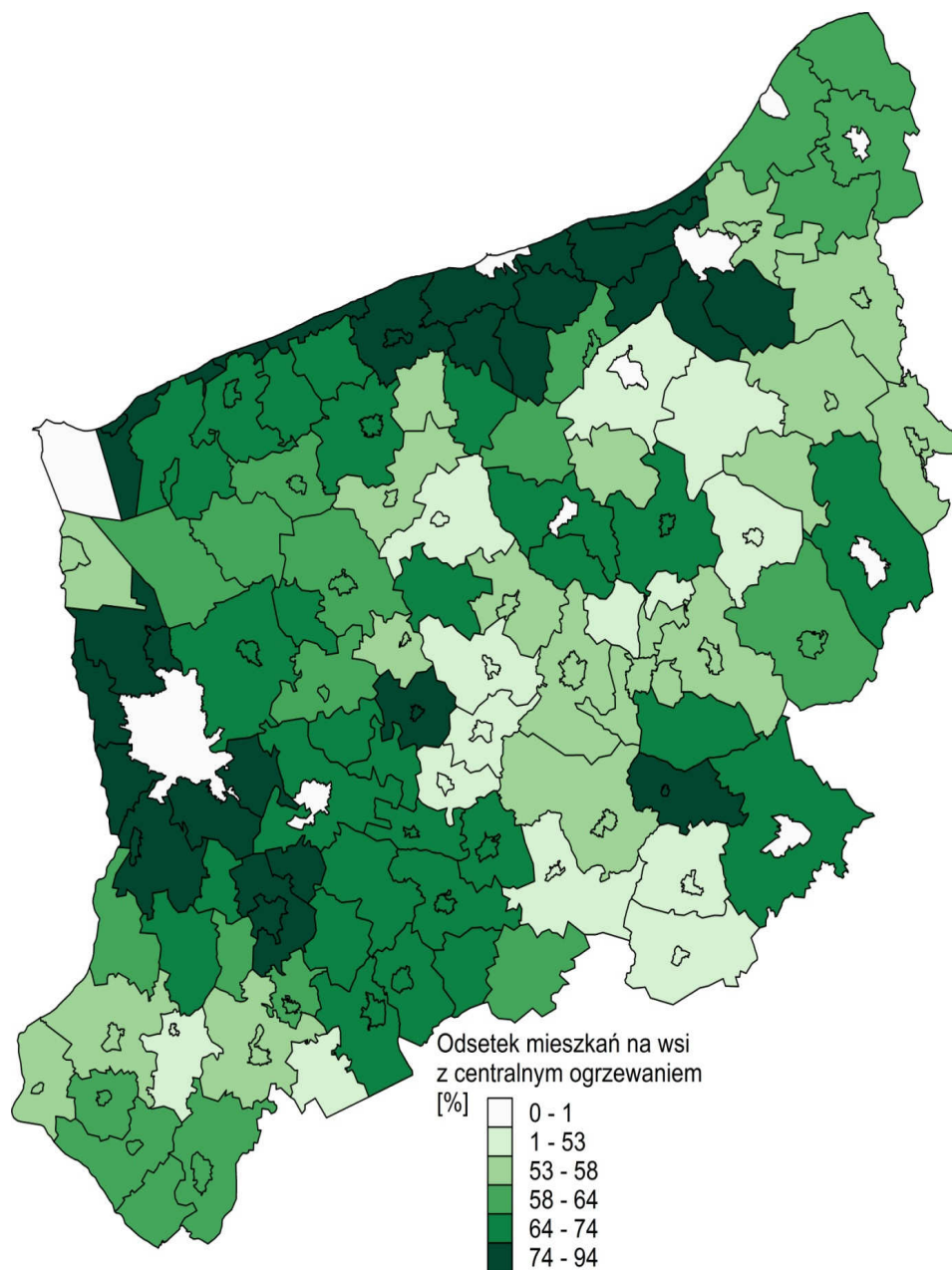


Fig. 8. Percentage of village houses with central heating systems in Zachodniopomorskie Province in the year 2008

Source: Author's own study on the basis of the Regional Data Bank, Central Office of Statistics 2008.

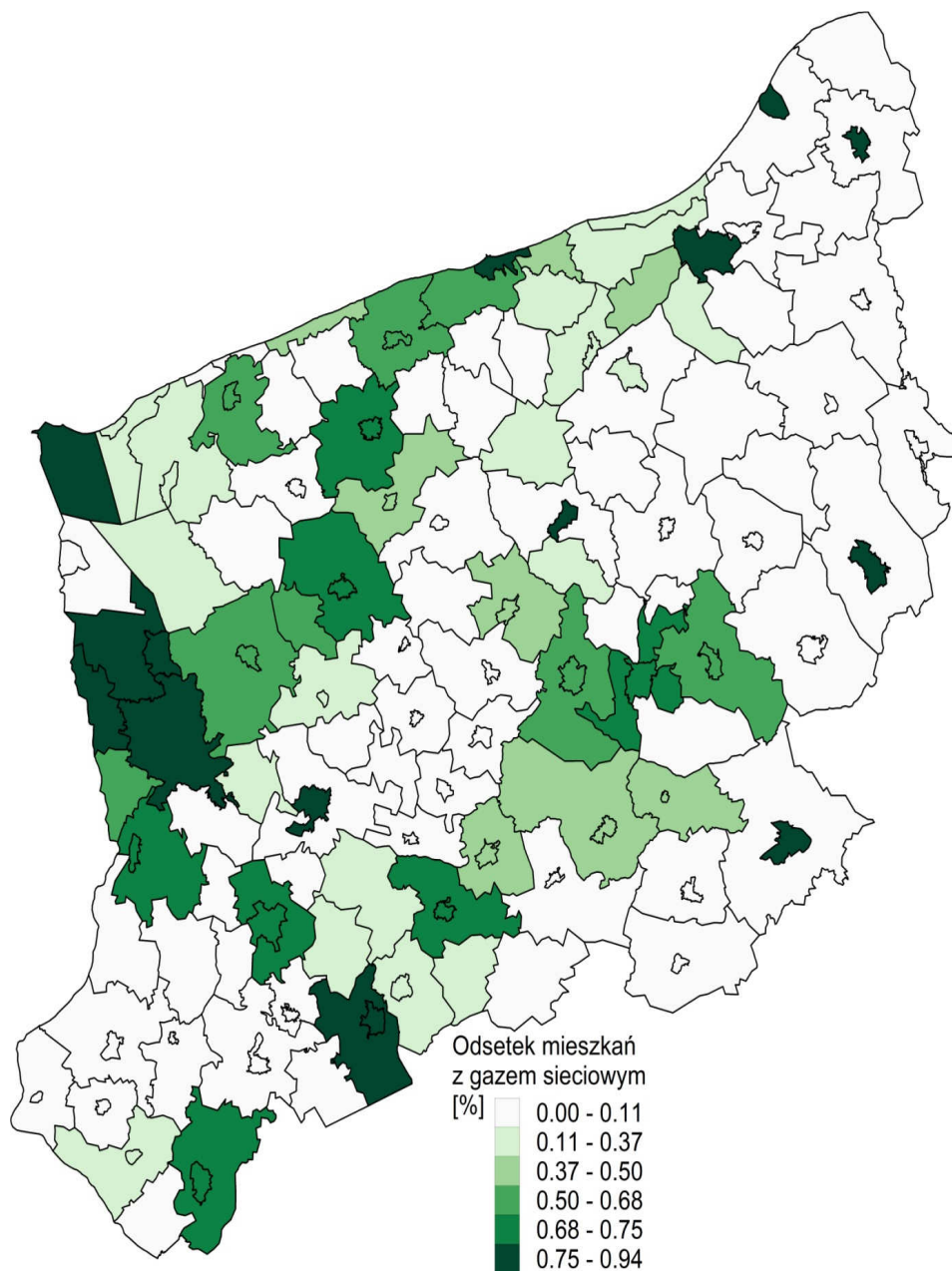


Fig. 9. Percentage of flats with network gas in Zachodniopomorskie Province in the year 2008

Source: Author's own study on the basis of the Regional Data Bank, Central Office of Statistics 2008.

Notion of investment attractiveness

Investment attractiveness comprises all factors which can be referred to those potential advantages that can be obtained by investors in a given area. These factors most frequently include labour costs, real property prices, outlets, human capital, the availability and quality of infrastructure, the activeness of the local authorities etc. The list of these factors is open; it changes depending of the needs and nature of the foreseen investment. However, here only those which are the most important ones can be indicated. These include labour costs, which are becoming in the present-day world's economy the primary factor of the migration of the capital of direct investments. Labour consuming production is located in those countries or regions where the costs of hiring an employee are relatively low, which is a of great significance for the final production costs. The level of remuneration (labour costs) is mainly the derivative of the demand on a labour market and the general economic condition in a given country.

Another important decision-related factor for businesses is the presence of human capital at least in those activities where it constitutes a required element of production. Human capital comprises a number of factors; however, its chief components include knowledge and an ability to undertake actions with the use of it. Knowledge is to translate into adaptation abilities as well as independent undertakings, including economic undertakings, which are frequently identified with enterprise. Human capital is strongly related with the activeness of the local authorities. This activeness may involve e.g. undertaking of such actions in the area of an administrative unit which will contribute in obtaining funds from the European Union for example, and then in running such investments which are expected on the part of the local community.

Running a business activity also depends from the so-called business environment, i.e. those companies which function in the area and cooperate regarding the provision of some services which support a given business. This is especially true of consulting companies, financial institutions, real property agencies etc. Their primary goal is cooperation on the basis of outsourcing, whose main advantage is a reduction of the costs of the business as well as a provision of high-quality services, which is often dictated by the specialisation of tasks.

The determination of an investment attractiveness may also include such properties as outlets, i.e. the potential recipients of our services, the technical infrastructure, sometimes the social infrastructure, and the functional nature of a given area. Each time, the list of those factors which determine the attractiveness may change depending of the nature of the foreseen investments as well as the availability of information concerning a given issue. For the purpose of the present study, it was accepted that the investment attractiveness for investments

related to renewable energy sources will be described with 6 main categories including 14 partial properties, to which adequate weights were assigned (cf. Table 5).

Table 5. Properties accepted for the construction of a synthetic measure of investment attractiveness

Categories and properties	Unit	Weight of property
1) Potential for biomass production		0,300
a) Share of arable lands	%	0.700
b) Share of forest grounds	%	0.300
2) Infrastructure		0,200
a) Those flats which possess central heating installations: percentage of the total number of flats	%	0.700
b) Percentage of those flats which are connected to a gas grid	%	0.300
3) Outlet		0,200
a) Population per 1 km ²	person/km ²	0.700
b) Number of businesses per 100 km ²	businesses/km ²	0.300
4) Support for businesses		0,100
a) percentage of financial agencies	%	0.500
b) percentage of companies dealing with real property services, rental and services connected with running a business	%	0.500
5) Human capital		0,100
a) percentage of those councillors which possess university degrees	%	0.200
b) percentage of working age population	%	0.400
c) unemployment rate	%	0.400
6) Activeness of local authorities		0,100
a) Share of EU funds in total receipts	%	0.333
b) Share of local receipts in total receipts	%	0.333
c) Investment-related expenditures in a commune per one resident	PLN/person	0.333

Source: Author's own study.

Assessment of the investment attractiveness of the rural areas in Zachodniopomorskie Province

For the purpose of the calculation of the synthetic measure of the investment attractiveness, the method of standardised sums was used together with the algorithm generally used for the determination of a multifunctional development

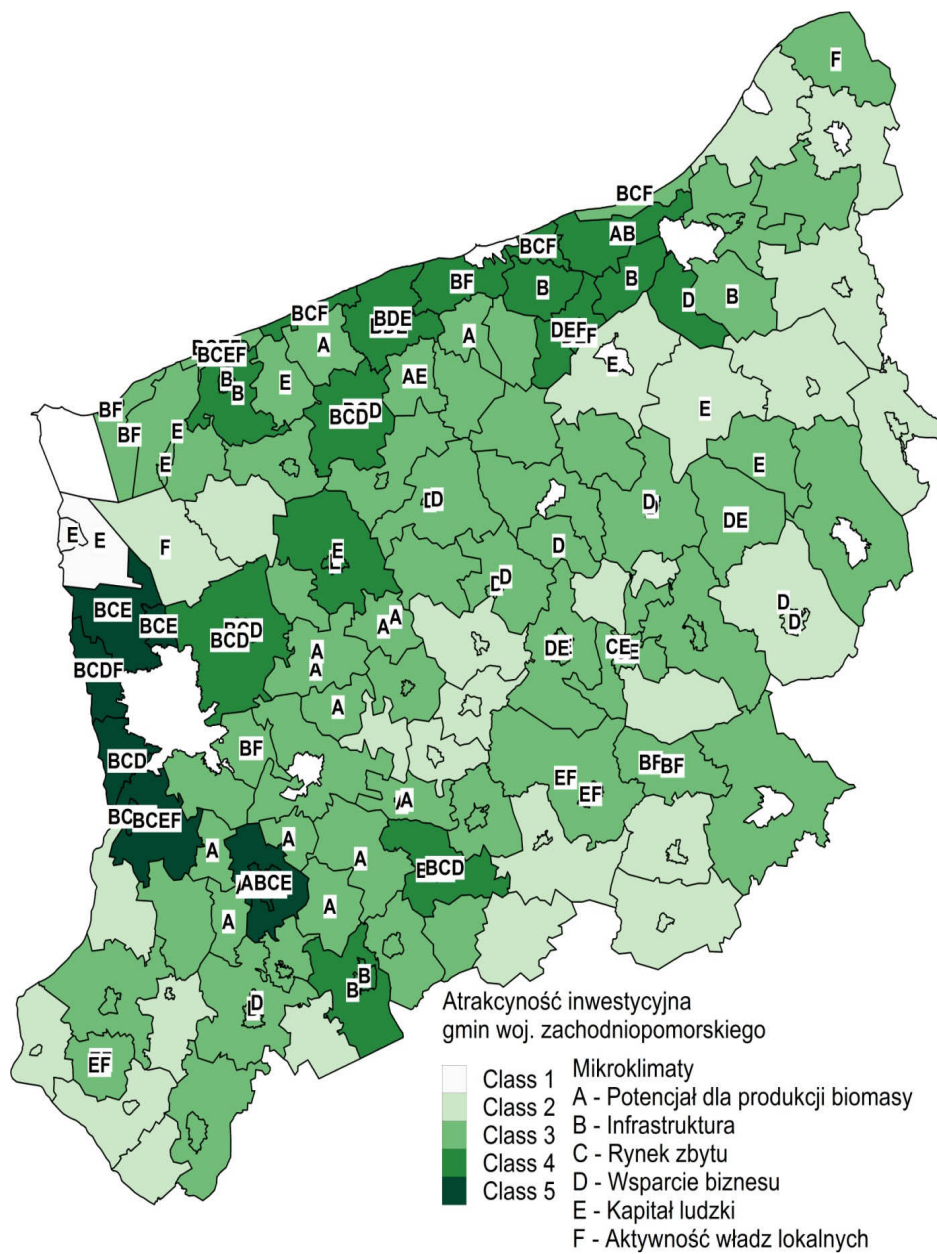
of areas. All the rural and rural-urban communes from Pomorskie Province underwent an analysis taking into account the data from the year 2008. The results of the calculations are presented in Fig. 10 and in Table 6. On the basis of the standard deviation for the group of the results, classes 1 to 5 were formed, where class 1 denotes the worst investment conditions and class 5 denotes the best conditions. Additionally, denotations A to F in the map show these categories which accept those values which are above the average in the Province.

The highest values of the main assessment index and the individual microclimates are concentrated in 31 rural communes. They received such high results mainly due to the level of the economic development, which very frequently is the result of the following:

- intensified investments related to the infrastructure,
- attracting working age population: those who have good education and are looking for employment,
- an increased population density,
- increased incomes in the households in the region.

The economic growth and the investment attractiveness depend from one another through an interaction. The investment attractiveness attracts capital, which increases investments and production, which in turn raises the attractiveness value and results in a further concentration of capital. The communes which cannot overcome an investment barrier, or have no idea how to do it, and are unable to initiate any investment process in their area might be problematic. The production of biomass and green energy from the so-called local power engineering systems may become new important elements in the development of the local economy.

It is evident from the calculations that three clusters can be distinguished of those communes which have an investment potential being higher than the average one. Those communes which are situated in the west and north-west part of the Province are especially interesting. These include the following: Dobra (Szczecińska), Kołbaskowo Pyrzyce, Gryfino, Police, Choszczno, Trzebiatów, Gryfice, Kołobrzeg, Rewal, Karlino, Będzino, Ustronie Morskie. However, each one of them has at its disposal such conditions which are slightly different from those accepted for the calculations of the category, i.e. the human capital, the infrastructure, the outlet etc. This information is important as it allows the foreseen investments to be directed, and which can be time consuming or can be costly, or they require significant outlets to exist in the adjacent areas.



A. Potential for biomass production, B. Infrastructure, C. Outlet, D. Support for businesses, E. Human capital, F. Activeness of local authorities

Fig. 10. Investment attractiveness of rural areas in Zachodniopomorskie Province
Source: Author's own study.

Table 6. Rural areas with the highest investment attractiveness index in Zachodniopomorskie Province

No.	Commune	Synthetic index of AI	AI class	Dominating microclimates
1.	Dobra (Szczecińska)	0.687	5	BCDF
2.	Kołbaskowo	0.604	5	BCD
3.	Pyrzyce	0.589	5	ABCE
4.	Gryfino	0.583	5	BCEF
5.	Police	0.580	5	BCE
6.	Choszczno	0.554	5	BCD
7.	Trzebiatów	0.553	5	BDE
8.	Gryfice	0.551	5	BCD
9.	Kołobrzeg	0.528	4	BF
10.	Rewal	0.521	4	BCF
11.	Karlino	0.511	4	DEF
12.	Będzino	0.506	4	AB
13.	Ustronie Morskie	0.493	4	BCF
14.	Goleniów	0.489	4	BCD
15.	Kamień Pomorski	0.488	4	B
16.	Biesiekierz	0.480	4	B
17.	Dygowo	0.479	4	B
18.	Nowogard	0.474	4	E
19.	Barlinek	0.471	4	B
20.	Świeszyno	0.457	4	D
21.	Drawsko Pomorskie	0.449	4	DE
22.	Dębno	0.444	4	–
23.	Dziwnów	0.442	4	BCEF
24.	Łobez	0.442	4	D
25.	Złocieniec	0.437	4	CE
26.	Gościno	0.435	4	–
27.	Przelewice	0.432	4	A
28.	Siemyśl	0.431	4	A
29.	Pełczyce	0.425	4	–
30.	Lipiany	0.424	4	–
31.	Recz	0.423	4	–
32.	Kobylanka	0.420	3	BF
33.	Połczyn-Zdrój	0.418	3	D
34.	Dolice	0.416	3	A
35.	Manowo	0.415	3	B
36.	Brzeźno	0.413	3	D
37.	Karnice	0.411	3	A
38.	Mielno	0.411	3	BCF
39.	Mysłibórz	0.403	3	D
40.	Warnice	0.403	3	A

Source: Author's own study.

The worst situation is to be observed in the central part of the province, where most of the communes do not have such conditions which are above the average for economic undertakings. Nevertheless, this cannot be treated as a verdict for these areas, as attractiveness is subject to changes in time, and with an adequate involvement on the part of the local authorities and investors, for example owing to investments involving production of green energy, e.g. biomass, the attractiveness may increase. Furthermore, these areas are usually characterised by a high unemployment rate and low labour costs, which constitutes an important incentive for those investors who follow a strategy to minimise costs. However, the greatest asset of the central areas of the Province is agricultural production and forests: a potential source of biomass.

Conclusions

The investment attractiveness of regions constitutes a substantial element in planning business activities including those related to the production of renewable energy. The economic calculations frequently demonstrate that such undertakings are as of this day not profitable, if they are not subsidized. This is mainly due to incomplete calculations and a failure to take into account in the calculations the so-called external effects in the economy. This is especially true of the costs that are borne by the society as a result of the use of traditional fossil fuels. These costs include among others environment pollution, illnesses being the result of this pollution, climate changes etc. On many occasions, it is difficult to estimate how large losses we have by emitting increasing CO₂ volumes and other harmful substances and gases to the atmosphere. Nevertheless, it is to be expected that with an increasing awareness of the consequences of the use of the current energy solutions, more attention will be paid to energy produced from renewable sources; owing to proper support mechanisms, such investments will become profitable.

The first step to create profitable activities will be the selection of the proper location of investments, owing to which the production costs can be substantially reduced and chances of a commercial success will be greater. The example presented of Zachodniopomorskie Province shows how diversified those areas are where businesses can be planned. Nevertheless, the results presented constitute an overall assessment only, which needs to be accompanied by an individual analysis of a given case for the purpose of a final investment-related decision.