

Preparation of Local Governments to Implement the Concept of Sustainable Development Against Demographic Changes in Selected Rural and Urban-Rural Communes of the Warmińsko-Mazurskie Voivodship

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The demographic potential, especially in the peripheral and remote areas, has been deteriorating. The negative natural increase, low or negative migration balances, unfavourable values of the feminisation rate and a growing ratio of the number of people of post-working age to the number of people of working age have been threatening rural development. The taxonomic measures calculated using Hellwig's method show spatial concentrations of communes with a similar level of demographic potential. The analysis of strategic objectives of the communes shows that in some of them the authorities (and the society) have been aware of the threats resulting from the depopulation of rural areas and the unfavourable demographic structure. At the same time, environmental conditions and existence of legally protected areas force the authorities to carry out activities in line with the principles of sustainable economy.

Keywords: demographic potential, sustainable development, problem areas.

Przygotowanie samorządów do wdrażania koncepcji zrównoważonego rozwoju wobec zmian demograficznych w wybranych gminach wiejskich i miejsko-wiejskich

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Potencjał demograficzny, zwłaszcza w obszarach peryferyjnych i oddalonych, ulega pogorszeniu. Ujemny przyrost naturalny, niskie lub ujemne salda migracji, niekorzystne wielkości wskaźnika feminizacji i rosnąca relacja liczby osób w wieku poprodukcyjnym do osób w wieku produkcyjnym stanowią zagrożenie dla rozwoju obszarów wiejskich. Obliczone wskaźniki taksonomiczne metodą miary rozwoju Hellwiga ukazują skupienia przestrzenne gmin o podobnym poziomie potencjału demograficznego. Przeprowadzona analiza celów strategicznych gmin wskazuje, że w części z nich władze (i społeczeństwo) są świadome zagrożeń wynikających z wyludniania się obszarów wiejskich i niekorzystnej struktury demograficznej. Jednocześnie warunki środowiskowe i obecność obszarów prawnie chronionych niejako wymuszają na władzach gmin realizowanie działań zgodnych z zasadami gospodarki zrównoważonej.

Słowa kluczowe: potencjał demograficzny, rozwój zrównoważony, obszary problemowe.

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1. Introduction

Local development takes place mainly as a result of investments – these may be new projects and modernisation of facilities erected during previous investment undertakings (Zalewski, 2006). However, it is crucial that the implemented projects should be of a complementary nature, enabling the achievement of the synergy effect (Pomianek, 2008). All developmental activities require the involvement of regional and local authorities and their engagement in gaining social acceptance of changes in an area – through prepared development programs and instruments for influencing the inhabitants of a given territory, and entrepreneurs (Wiatrak, 2006; Wiatrak, 2011). The local government, as Ślusarz writes, should solve problems, cope with development challenges in competitive conditions, stimulate and coordinate development processes within the scope of its operation characterised by a large degree of openness (Ślusarz, 2006). Demographic changes lead to long-term socio-economic consequences, which can be considered from the perspective of sustainable development (Wilk & Bartłomowicz, 2012). Nowadays, changes in the demographic structure bring about the aging of the society, risk of poverty and social exclusion of elderly people with weaker physical and mental function, especially widowed women in single-person households (Główny Urząd Statystyczny [GUS], 2016; Szweda-Lewandowska, 2012; Adamczyk, 2017). The implementation of the concept of sustainable development in the field of local development requires also an effective management of the commune's finances (Poniatowicz & Dziemianowicz, 2017). The availability of EU funds creates unique opportunities for local governments and local communities to make changes in their environment through the implementation of projects that the commune would not be able to finance on its own. Of particular importance are the investments that provide appropriate conditions for living, starting a family, raising children. The essence of demographic problems on a local scale is equally valid on a regional, national or global scale. As Strzelecki points out, positive demographic processes are concentrated in agglomeration regions with a diversified structure of the economy, while disadvantageous ones – in economically monocultural regions and in regions with a low endogenous development potential, which comprises also a demographic factor, i.e. one of the numerous factors for sustainable development (Strzelecki, 2013).

2. Purpose and Method

The aim of the paper was to present changes in the level of demographic development in all rural communes¹ (67) and urban-rural communes (33) of the Warmińsko-Mazurskie Voivodship in 2003–2016 and the activities of local governments with regard to the concept of sustainable development aimed at improving the quality of residents' life.

The first part of the paper presents an analysis of data from the Local Data Bank of the Central Statistical Office (LDB CSO) for the period 2003–2016. The timeframe of data and the choice of features were dictated primarily by their availability at the level of communes and the completeness of time series. The analysis comprised two stages. Rankings of the demographic potential level were established for data from the extreme years of 2003 and 2016, using Hellwig's development measure. Then, based on average values of variables covering a period of fourteen years, another ranking was drawn up, arranging the analysed communes by the average level of demographic potential in the years 2003–2016. Communes with the most favourable and the weakest demographic situation in the analysed period were identified. The administrative status of communes was adopted as at 31 December 2016 and it was stable in all analysed years.

The measure of Hellwig's pattern of development was used to compare the communes. This measure (d_i) usually adopts values from the interval $[0; 1]$. The less the given object (commune) is distant from the pattern, the higher the value of the measure (Hellwig, 1968; Pomianek, 2010). Two parameters of the taxonomic measure, i.e. arithmetic mean (\bar{d}_i) and standard deviation (S_{d_i}), were used to classify communes according to the level of development. The following class ranges (groups of communes) were distinguished:

- class 1 (a very high level of demographic potential) – $d_i > \bar{d}_i + S_{d_i}$ (this class comprises the communes whose distance from the pattern exceeds the value of $\bar{d}_i + S_{d_i}$),
- class 2 (a high level of demographic potential) – $\bar{d}_i + \frac{1}{2}S_{d_i} < d_i \leq \bar{d}_i + S_{d_i}$ (this class includes the communes whose distance from the pattern falls within the range of $\bar{d}_i + \frac{1}{2}S_{d_i}, \bar{d}_i + S_{d_i}$),
- class 3 (an average level of demographic potential) – $\bar{d}_i - \frac{1}{2}S_{d_i} < d_i \leq \bar{d}_i + \frac{1}{2}S_{d_i}$ (this class comprises the communes whose distance from the pattern falls within the range of $(\bar{d}_i - \frac{1}{2}S_{d_i}, \bar{d}_i + \frac{1}{2}S_{d_i})$),
- class 4 (a low level of demographic potential) – $\bar{d}_i - S_{d_i} < d_i \leq \bar{d}_i - \frac{1}{2}S_{d_i}$ (this class includes the communes whose distance from the pattern falls within the range of $(\bar{d}_i - S_{d_i}, \bar{d}_i - \frac{1}{2}S_{d_i})$),
- class 5 (a very low level of demographic potential) – $d_i \leq \bar{d}_i - S_{d_i}$ (this class comprises the communes whose distance from the pattern does not exceed the value of $\bar{d}_i - S_{d_i}$),

where:

d_i – value of the synthetic measure computed with Hellwig's method of pattern of development,

\bar{d}_i – arithmetic mean of the feature (synthetic indicator) d_i ,

S_{d_i} – standard deviation of the feature d_i .

Four features were used to establish rankings of communes: population density per 1 km², population change per 1,000 inhabitants (taking into account the natural increase and migrations), feminisation rate (expressed by the number of women per 100 men) and the demographic dependency ratio (expressed by the number of people of post-working age per 100 people of working age). The demographic dependency ratio was a destimulant; the remaining features were stimulants.

The second part of the study presents the results of a survey conducted in the period from March to September 2017 in the Warmińsko-Mazurskie Voivodship. The study covered all rural and urban-rural communes (100 units). The survey was addressed to commune administrators and mayors. 42% of the surveys were returned (42 communes), including 14 surveys from urban-rural communes (42%) and 28 surveys from rural communes (also 42%). The distribution of responses by subregions of the voivodship was as follows: Elbląg subregion – 38% of the surveyed communes in this subregion, Ełk subregion – 48%, and Olsztyn subregion – 43%. The resulting structure of respondents was consistent with the structure of the surveyed population, which makes it possible to generalise the conclusions.

3. Demographic Changes in Urban-Rural and Rural Communes of the Warmińsko-Mazurskie Voivodship in 2003–2016

In the period 2003–2016, the average population density per km² in the 100 communes surveyed stood at 34 people. In urban-rural communes, it was on average 43 people / km², in rural areas population density was lower by 35% (29 people / km²). The most populated was Elbląg subregion (38 people / km²), the least populated – Ełk subregion (29 people / km²). The negative result of population change per 1,000 inhabitants was recorded in 2016 in all administrative groups, and in 2003 a positive result was reported in rural communes only. The average changes in 2003–2016 were positive (2 people per 1,000 inhabitants) in rural communes and in Olsztyn subregion; the average value for the surveyed communes of the Warmińsko-Mazurskie Voivodship was less than 1. Negative values were characteristic of urban-rural communes and communes of Ełk subregion. In the analysed years, the feminisation rate exceeded 100 in urban-rural communes. In Olsztyn subregion, this rate remained at the level of 100 women per 100 men. In the other communes, there were on average 98–99 women per 100 men. This rate, measured for all the communes in the period 2003–2016, was 99 women / 100 men. In the years 2003–2016, in all surveyed communes, there were on average 23 people of post-working age per 100 people of working age. In 2003, the average demographic dependency ratio was the highest (and the least favourable) in the communes of Ełk subregion and stood at 24 people of retirement age per 100 people of working age. Details are presented in Table 1.

Timeframe	Communes by administrative status		Communes by subregion		
	urban-rural	rural	Elbląg	Elk	Olsztyn
X₁ – Population density per 1 km²					
2003	43	28	38	29	31
2016	43	29	38	29	32
Average 2003–2016	43	29	38	29	32
X₂ – Change in population per 1,000 inhabitants					
2003	-2	1	-1	-2	2
2016	-5	-2	-3	-6	-1
Average 2003–2016	-1	2	0	-1	2
X₃ – Feminisation rate					
2003	102	98	100	99	100
2016	101	98	98	98	100
Average 2003–2016	102	98	99	98	100
X₄ – Demographic dependency ratio					
2003	22	23	22	24	21
2016	28	25	26	27	26
Average 2003–2016	23	22	23	24	22

Tab. 1. Demographic potential indicators by administrative groups of urban-rural and rural communes of the Warmińsko-Mazurskie Voivodship in 2003–2016. Source: Own calculations based on LDB CSO.

Using the method of Hellwig's measure of development, 3 rankings of communes were established. In the first ranking (2003), 17 communes were included in the class with a very high demographic potential, while 10 units were classified into the high-potential class. In 2003, a low or a very low level of demographic potential was characteristic of 24 and 12 communes, respectively (Figure 1). Located in the border area of the commune with a very high demographic potential are Gołdap and Węgorzewo, cut through by the national routes 65 and 63. An additional advantage of Gołdap commune was the proximity of the Poland-Russia border crossing. From among 12 border communes, as many as 8 were characterised by a low and a very low level of demographic potential. The weakest class comprised the follow-

ing border communes: Dubeninki and Banie Mazurskie in Gołdap powiat, Lełkowo in Braniewo powiat and Górowo Iławeckie in Bartoszyce powiat. The largest share of communes with a low or a very low level of development was reported in Elk subregion.

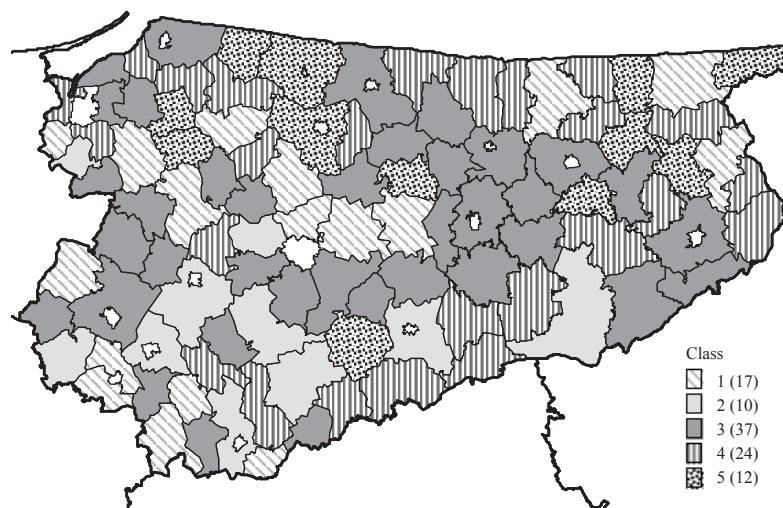


Fig. 1. Urban-rural and rural communes of the Warmińsko-Mazurskie Voivodship by the level of demographic potential determined using Hellwig's measure of development in 2003. Source: Own calculations based on LDB CSO.

As many as 9 out of 17 units with a very high demographic potential were located in Elbląg subregion, including 3 in Działdowo powiat and 2 in Elbląg and Nowe Miasto powiats. This subregion stood out among other areas in terms of the number of communes with a high potential (5 out of 10). The communes with a medium demographic potential were concentrated in the central part of the voivodship, with the exception of a stripe of communes north of Olsztyn. The suburban area of the voivodship's capital, as shown by the Central Statistical Office [GUS] data, was an area with a positive migration balance and a positive natural increase. The top ten of the ranking included 4 communes from Olsztyn powiat: Dywity, Barczewo, Biskupiec and Dobrze Miasto (Table 2).

In 2016, the border zone stood out more prominently as compared to 2003 – only the commune of Gołdap remained in the class with a very high demographic potential. Węgorzewo commune moved down by one class, and the commune of Lidzbark Warmiński changed its status from a commune with a very low demographic potential into the one with a low demographic potential. Except for the communes of Gołdap, Olecko, Węgorzewo and Pisz, the communes from class 1 and 2 were concentrated in the central and south-western part of the Warmińsko-Mazurskie Voivodship (Figure 2).

Rank	Commune	Powiat	Value of the measure	Class
1	Dywity (r)	Olsztyn	0.659	1
2	Pasłek (u-r)	Elbląg	0.628	
3	Morağ (u-r)	Ostróda	0.588	
4	Barczewo (u-r)	Olsztyn	0.559	
5	Biskupiec (u-r)	Olsztyn	0.556	
6	Olecko (u-r)	Olecko	0.553	
7	Gołdap (u-r)	Gołdap	0.523	
8	Kurzętnik (r)	Nowe Miasto	0.518	
9	Dobre Miasto (u-r)	Olsztyn	0.507	
10	Gronowo Elbląskie (r)	Elbląg	0.507	
11	Iłowo-Osada (r)	Działdowo	0.504	
12	Lidzbark (u-r)	Działdowo	0.484	
13	Nowe Miasto Lubawskie (r)	Nowe Miasto	0.470	
14	Susz (u-r)	Iława	0.463	
15	Orneta (u-r)	Lidzbark	0.448	
16	Węgorzewo (u-r)	Węgorzewo	0.437	
17	Rybno (r)	Działdowo	0.426	
...
89	Górowo Iławeckie (r)	Bartoszyce	0.136	5
90	Godkowo (r)	Elbląg	0.131	
91	Lidzbark Warmiński (r)	Lidzbark	0.125	
92	Wilczęta (r)	Braniewo	0.122	
93	Krukłanki (r)	Giżycko	0.104	
94	Jedwabno (r)	Szczytno	0.102	
95	Miłki (r)	Giżycko	0.088	
96	Świątajno (r)	Olecko	0.072	
97	Lelkowo (r)	Braniewo	0.071	
98	Banie Mazurskie (r)	Gołdap	0.070	
99	Dubeninki (r)	Gołdap	0.064	
100	Kolno (r)	Olsztyn	0.028	

r – rural communes, u-r – urban-rural communes.

Tab. 2. Urban-rural and rural communes of the Warmińsko-Mazurskie Voivodship with a very high and a very low level of demographic potential in 2003. Source: Own calculations based on LDB GSO.

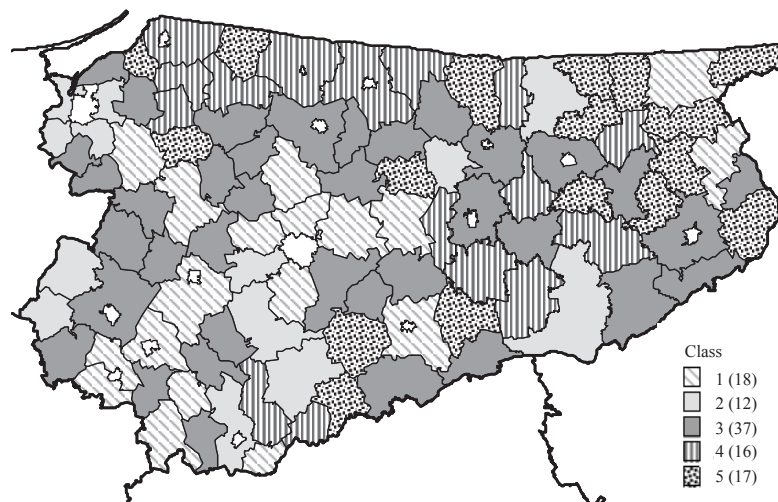


Fig. 2. Urban-rural and rural communes of the Warmińsko-Mazurskie Voivodship by the level of demographic potential determined by Hellwig's measure of development in 2016. Source: Own calculations based on LDB CSO.

The class of units with a very high demographic potential was dominated by communes from Olsztyn powiat (6), including the first top four communes in the ranking: Stawiguda, Dywity, Jonkowo and Barczewo, as well as from Działdowo (3) and Ostróda powiats (2). In addition to border communes, the 2016 ranking closed with the communes of, among others, Olecko, Kętrzyn and Braniewo (Table 3).

The features analysed in the 14-year series made it possible to compile a ranking for communes for the period 2003–2016. Figure 3 shows some concentrations of communes with a similar level of demographic potential determined by Hellwig's measure of development. The concentration in the central part of the voivodship and two smaller concentrations in the west-south part are the communes with an average level of demographic potential. Another visible concentration comprises 9 communes with a very low demographic potential, in Węgorzewo, Gołdap, Giżycko, Olecko and Ełk powiats. Most of the communes from class 4 were concentrated around the communes of Szczytno (Szczytno powiat) and Orneta (Lidzbark powiat).

Rank	Commune	Powiat	Value of the measure	Class
1	Stawiguda (r)	Olsztyn	0.569	1
2	Dywity (r)	Olsztyn	0.514	
3	Jonkowo (r)	Olsztyn	0.435	
4	Barczewo (u-r)	Olsztyn	0.422	
5	Olecko (u-r)	Olecko	0.401	
6	Moraġ (u-r)	Ostróda	0.394	
7	Biskupiec (u-r)	Olsztyn	0.391	
8	Nowe Miasto Lubawskie (r)	Nowe Miasto	0.386	
9	Pasłġk (u-r)	Elblġg	0.380	
10	Īowo-Osada (r)	Dziaġdowo	0.376	
11	Szczytno (r)	Szczytno	0.369	
12	Lidzbark (u-r)	Dziaġdowo	0.366	
13	Dobre Miasto (u-r)	Olsztyn	0.359	
14	Lubawa (r)	Īawa	0.353	
15	Goġdap (u-r)	Goġdap	0.352	
16	Kurzġtnik (r)	Nowe Miasto	0.349	
17	Rybno (r)	Dziaġdowo	0.348	
18	Ostróda (r)	Ostróda	0.330	
...
84	Miġki (r)	Giġzycko	0.106	5
85	Jedwabno (r)	Szczytno	0.105	
86	Stare Juchy (r)	Eġk	0.105	
87	Janowo (r)	Nidzica	0.100	
88	Świġtajno (r)	Olecko	0.099	
89	Świġtajno (r)	Szczytno	0.092	
90	Kolno (r)	Olsztyn	0.092	
91	Godkowo (r)	Elblġg	0.091	
92	Kowale Oleckie (r)	Olecko	0.085	
93	Frombork (u-r)	Braniewo	0.083	
94	Pozezdrze (r)	Wġgorzewo	0.074	
95	Banie Mazurskie (r)	Goġdap	0.054	
96	Dubeninki (r)	Goġdap	0.054	
97	Kalinowo (r)	Eġk	0.048	
98	Budry (r)	Wġgorzewo	0.040	
99	Barciany (r)	Kġtrzyn	0.038	
100	Lelkowo (r)	Braniewo	0.035	

r – rural communes, u-r – urban-rural communes.

Tab. 3. Urban-rural and rural communes of the Warmińsko-Mazurskie Voivodship with a very high and a very low level of demographic potential in 2016. Source: Own calculations based on LDB CSO.

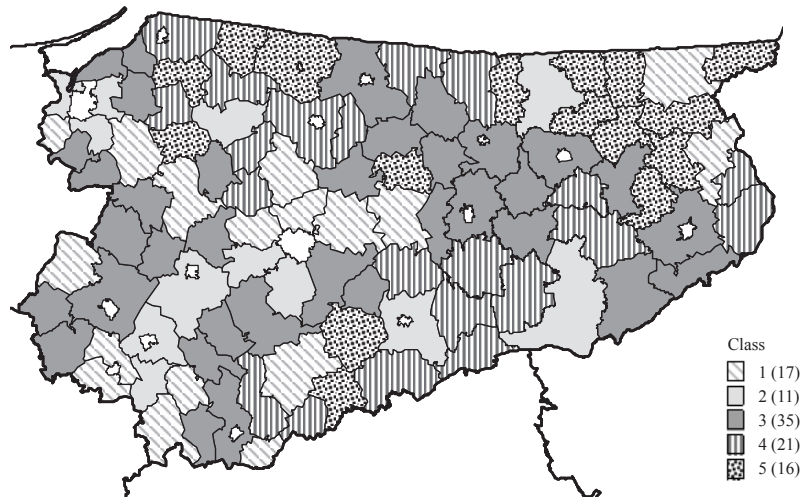


Fig. 3. Urban-rural and rural communes of the Warmińsko-Mazurskie Voivodship by the level of demographic potential determined by Hellwig's measure of development in 2003–2016. Source: Own calculations based on LDB CSO.

The first position in the 2003–2016 ranking was taken by Dywity commune, located in the suburban area of Olsztyn, which topped the previously presented rankings. The class with a very high level of demographic potential included 10 urban-rural communes (almost every third commune in the Warmińsko-Mazurskie Voivodship) and 7 rural communes (only every tenth rural commune of the analysed voivodship). The class with a very low potential level consisted of rural communes only (Table 4).

Communes from class 1 were characterised by more than three times higher population density (61 people / km²) as compared to communes in class 5 (18). Population density can, of course, result from natural conditions typical of the Warmińsko-Mazurskie Voivodship, that is from the share of lakes in the commune area. Nevertheless, more intensive forms of residential development are typical of suburban zones, especially the suburban zone of the voivodship city of Olsztyn. Suburban zones and urban-rural communes, in which the city is not only of local but also of regional significance, attract residents from remote and peripheral areas. Therefore, as analyses show, in such communes a growth in population is observed, first and foremost due to migrations but also as a result of a positive natural increase. In the years 2003–2016, in urban-rural communes throughout the country, population went up on average by 4 people per 1,000 inhabitants, and in rural communes – by almost 2 people. In rural communes of the Warmińsko-Mazurskie Voivodship population grew on average by 3 people / 1,000 inhabitants, and in urban-rural communes, population declined by 1 person / 2,000 inhabitants.

Rank	Commune	Powiat	Value of the measure	Class
1	Dywity (r)	Olsztyn	0.718	1
2	Olecko (u-r)	Olecko	0.561	
3	Pasłęk (u-r)	Elbląg	0.539	
4	Morağ (u-r)	Ostróda	0.523	
5	Biskupiec (u-r)	Olsztyn	0.502	
6	Kurzętnik (r)	Nowe Miasto	0.501	
7	Nowe Miasto Lubawskie (r)	Nowe Miasto	0.497	
8	Barczewo (u-r)	Olsztyn	0.496	
9	Gronowo Elbląskie (r)	Elbląg	0.495	
10	Iłowo-Osada (r)	Działdowo	0.491	
11	Dobre Miasto (u-r)	Olsztyn	0.485	
12	Gołdap (u-r)	Gołdap	0.470	
13	Jonkowo (r)	Olsztyn	0.463	
14	Nidzica (u-r)	Nidzica	0.446	
15	Lidzbark (u-r)	Działdowo	0.445	
16	Rybno (r)	Działdowo	0.413	
17	Susz (u-r)	Iława	0.411	
...
85	Stare Juchy (r)	Elk	0.132	5
86	Świątajno (r)	Olecko	0.129	
87	Kowale Oleckie (r)	Olecko	0.127	
88	Kruklanki (r)	Giżycko	0.125	
89	Srokowo (r)	Kętrzyn	0.119	
90	Godkowo (r)	Elbląg	0.117	
91	Pozezdrze (r)	Węgorzewo	0.109	
92	Kolno (r)	Olsztyn	0.104	
93	Górowo Iławeckie (r)	Bartoszyce	0.102	
94	Banie Mazurskie (r)	Gołdap	0.100	
95	Budry (r)	Węgorzewo	0.093	
96	Lelkowo (r)	Braniewo	0.088	
97	Jedwabno (r)	Szczytno	0.087	
98	Płoskinia (r)	Braniewo	0.087	
99	Janowo (r)	Nidzica	0.076	
100	Dubeninki (r)	Gołdap	0.062	

r – rural communes, u-r – urban-rural communes.

Tab. 4. Urban-rural and rural communes of the Warmińsko-Mazurskie Voivodship with a very high and a very low level of demographic potential in the period 2003–2016. Source: Own calculations based on LDB CSO.

Timeframe	Commune group by the average demographic potential in 2003–2016				
	Class 1	Class 2	Class 3	Class 4	Class 5
X ₁ – Population density per 1 km ²					
2003	59	38	32	24	18
2016	62	42	32	23	17
Average 2003–2016	61	39	32	24	18
X ₂ – Change in population per 1,000 inhabitants					
2003	5	3	-1	-2	-3
2016	0	6	-4	-6	-7
Average 2003–2016	4	9	0	-2	-4
X ₃ – Feminisation rate					
2003	103	99	100	97	99
2016	102	99	99	96	98
Average 2003–2016	102	99	100	97	99
X ₄ – Demographic dependency ratio					
2003	20	20	22	23	26
2016	26	25	26	26	28
Average 2003–2016	22	21	22	23	26

Tab. 5. Demographic potential indicators for urban-rural and rural communes of the Warmińsko-Mazurskie Voivodship by class of average demographic potential in 2003–2016. Source: Own calculations based on LDB CSO.

The average feminisation rate in 2003–2016 in urban-rural communes of the Warmińsko-Mazurskie Voivodship was 102 women / 100 men, and in rural communes – 98. Similar rates for the whole country were 104 in urban-rural communes and 101 in rural communes, respectively. The presented analysis (Table 5) allows for describing the communes from classes 2–5 as problematical in terms of the number of women per 100 men, which may be reflected in a low or a negative natural increase in subsequent periods.

In 2003–2016, the average demographic dependency ratio measured by the number of people of post-working age per 100 people of working age in urban-rural communes stood at 25, and in rural communes – at 26. In the Warmińsko-Mazurskie Voivodship, the demographic dependency rate was much higher in cities (25) than in rural areas (almost 22), including in urban-rural communes – over 23 people of post-working age per 100 inhabitants of working age, while in rural communes 21–22 people.

4. Assessment of Coherence of Strategic Goals of Communes and Local Government Investments With the Concept of Sustainable Development

By March 2017, 57% of communes that responded to the survey had developed local environmental protection plans. In classes with a high or a very high level of demographic potential, the share of communes with a developed environmental protection plan was 71–78%, while in the remaining groups it ranged from 25% (class with a very low demographic potential) to 60%. In three communes, the employees of the Commune Office (or the City and Commune Office) were responsible for developing the plan; other communes outsourced this task to external specialist companies. Only every third commune with no environmental protection plan declared that such works were being carried out.

The development strategy of the commune was elaborated in 88% units (37 communes-respondents). The next four communes declared that the strategy was being prepared. In the commune of Kurzętnik (class 1), the preparation of the commune's strategy was abandoned – the tasks were carried out as part of a joint strategy for the communes of Nowe Miasto powiat. In Pisz commune (class 2), a low-carbon economy programme for the commune was in use. In 71% of the communes, the strategy was developed for a period of 6–10 years. The most frequently indicated purpose of developing the strategy was the need to have such a document when applying for the financing from the EU structural funds. In 54% of communes, it was possible to fully implement the objectives set in the strategy. In the other units (including the majority of communes from the class with a very low demographic potential), the objectives were implemented only partially (or in stages) due to financial constraints or difficulties in obtaining external sources of financing.

Regardless of the wealth of the surveyed communes, the goals set in the strategies can be assessed as valid and ambitious. The majority of respondents (including those from classes 2–5) viewed landscape and national parks, reserves and other natural protected areas located in the commune as a constraint in the economic development due to environmental laws. In class 1, most communes considered them as an opportunity for the development of entrepreneurship due to tourist values. Such a position was reflected in strategic goals, e.g.:

- “Increasing the attractiveness of the commune as a place of residence, civic activity, education, leisure and recreation” (Lubawa),
- “Improving the quality of life of the inhabitants” (Olecko),
- “Preserving natural, landscape and cultural values, improving the quality of the commune's natural environment” (Lubawa),
- “Improving investment and tourist attractiveness of the commune” (Olecko),

- “An educated, active and committed society and internal integration of the commune” (Biskupiec, Olsztyn powiat),
- “Strengthening competitiveness, innovation and recognition of the commune’s brand” (Lubawa).

In the communes with a very low demographic potential where environmentally protected areas are recognised as a barrier to economic development, the strategic goals reflected the awareness of the value of the natural environment in the commune, e.g.:

- “Commune as a place to live with a unique natural environment” (Janowo),
- “Proper infrastructure and use of natural & cultural resources” (Godkowo),
- “Creating a good environmental protection system” (Godkowo).

There were also calls for raising the residents’ standard of living and “promoting the idea of social and economic responsibility for the development among the inhabitants” (Świątajno, Olecko powiat).

The respondents were asked to indicate three of the completed investments that were the most important for the economic development of the commune. Most numerous were investments in infrastructure, such as the construction and modernisation of local roads, water supply & sewage networks and sewage treatment plants. The investments named as the most significant included also such undertakings as: adaptation of existing buildings to serve cultural and educational functions, provision of infrastructure to investment areas or development of lake shores or river banks to develop their recreational and tourist functions. In all the communes, the respondents pointed to the impact of completed investments on the improvement of residents’ living conditions, followed by the improvement of technical infrastructure (88% of communes), and then a reduction of the environmental pollution (60% of respondents) and creation of new enterprises (25%). Other important effects of completed investments were also named, for example the construction of a nursery and the creation of jobs permitted mothers to return to work (commune of Olsztynek).

5. Conclusion

The results of the conducted research are consistent with the findings of similar analyses carried out at the national and the European Union level. The demographic potential, especially in the peripheral and remote areas, has been deteriorating. The negative natural increase, low or negative migration balances and a growing ratio of the number of people of post-working (retirement) age to people of working age (employed or able to take up a job) pose a threat to rural development. Unfavourable values of the feminisation rate do not guarantee that the current situation will improve in the coming years or decades. The analysis of the strategic goals of the

communes shows that in some of them the authorities (and the society) are aware of the threats ensuing from the depopulation of rural areas and the unfavourable demographic structure. Therefore, actions are taken to improve the quality of life of residents, attract tourists, new residents and investors; the most frequently mentioned undertakings include the improvement of technical infrastructure (e.g. construction and modernisation of local roads, water supply and sewage systems and sewage treatment plants; provision of infrastructure in investment areas) and social infrastructure (construction and adaptation of existing buildings to serve social & educational functions, e.g. nurseries). Such activities should continue mainly in communes with a very low and low level of demographic potential. At the same time, environmental conditions and the presence of legally protected areas force the commune authorities to implement measures in line with the principles of sustainable economy – more than half of the respondents believe that the investments have contributed to reducing environmental pollution in the commune, which is an additional advantage especially in the communes located at some distance from cities and main transport routes. Achieving the goals set is sometimes difficult due to the lack of sufficient financial resources (e.g. failure to obtain the EU funding).

Endnotes

- ¹ Municipalities, in Poland also called: communes or gminas, are units on the LAU 2 level (Nomenclature of Territorial Units for Statistics).

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