



Socio – economic analysis of the programme area

INTERREG NEXT POLAND – BELARUS – UKRAINE 2021 -2027



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1. SUMMARY

The socio-economic analysis of the support area was developed as part of the Poland-Belarus-Ukraine Interreg NEXT Programme for the years 2021-2027, which is a continuation of over 15 years of cross-border cooperation. The purpose of the analysis is to diagnose major problems and developmental capacity in the support area. This will make it possible to prepare a thematic overview for the new version of the programme along with actions to solve identified problems and ideas on how to take advantage of the potential of the support area.

The support area has been characterized in terms of: population structure and trends in the labour market, economic situation, natural and cultural heritage resources, tourist potential, state of the environment and transport connections. Institutions, functional areas and cross-border relations in the area of support were also analysed.

In 2018, 19,886,000 inhabitants lived in the support area, of which 31% lived in Poland, 27% in Belarus and 42% in Ukraine. In each country there is a decrease in the population, moreover, this trend will continue in the coming years. The most favourable situation was observed in areas with large cities, as a result of people migrating to cities from rural areas. A natural decrease rate was recorded in the entire Belarusian and Ukrainian parts of the support area and in the Lubelskie Voivodeship in Poland. An additional obstacle is the fact that a large share of people of post-working age in the Belarusian part was noticed. In the Ukrainian part, however, the demographic burden is relatively low. In the upcoming time the main challenges in the programme support area will be: depopulation, natural decrease rates, as well as the negative net migration rate in the areas without large urban centres.

In the programme support area the economic activity rate is increasing in all areas except for the Volynska and Zakarpatska Oblasts. The structure of the economy is dominated by the services sector, and its share is constantly growing, which is typical for the developed and developing economies. The level of unemployment is close to the so-called natural rate of unemployment in Poland and Belarus, but in the case of Ukraine the unemployment rate is high. Concerning is the fact that the number of unemployed with higher and post-secondary education levels in the support area is constantly increasing. There are also clear disproportions on the labour market between areas with large urban agglomerations and others. There is a decrease in the number of educational institutions, which is definitely a consequence of demographic changes. Analysing health issues concerning the population of the support area, it is noted that citizens of the districts with large urban agglomerations live the shortest. That indicates a negative impact of life in a metropolitan environment on health and



thus on life expectancy. The main cause of death are cardiovascular diseases, i.e. the so-called civilisation diseases. The number of medical centres and doctors is growing, while the number of available places in hospitals is decreasing. Better access to health care and the fight against civilization diseases in the support area should be one of the areas of programme intervention.

The economic situation in the support area is quite varied with significant disparities observed between Poland, Belarus and Ukraine, which is also visible at the subregional level, especially between metropolises and peripheries. This is also confirmed by the decreasing contribution of the regional economies to the gross value added of Poland, Belarus and Ukraine in 2014-2017. Moreover, the eastern Polish border subregions are characterised by one of the lowest GDP per capita adjusted by purchasing power parity in the European Union. In the regional structure of the economies, a significant share of the agricultural sector in GVA is noted, as well as the industrial sector in the case of the Ukrainian oblasts and the Podkarpackie Voivodeship in Poland. The number of the national economy entities varies depending on the country. The largest number is noted in Poland, a quite big number in Ukraine, and the smallest in Belarus. The highest innovation level is recorded in enterprises in the Lubelskie and Podkarpackie Voivodeships and in the Brest oblast. Strong economic links of the support area with other parts of Poland, Belarus and Ukraine are also visible, which is indicated by the volume of trade exchange.

On the one hand the support area is characterised by a large amount of valuable natural areas. In particular, the Polish part of the support area stands out from the other two countries with a large share of protected areas in the total area. On the other hand, the state of the environment and the fight against its pollution require large investments and support. The collected data show that the Ukrainian part of the support area is the main pollution emitter. The largest source of pollution is electricity, gas and steam, followed by the processing industry. On the other hand, the Minsk Oblast in Belarus records the highest percentage of retained and neutralised pollution (over 90%). In the field of water management, in the support area water consumption has been decreasing over recent years. The percentage of people using the sewage networks is by far the largest in Belarus. It is noted that the percentage takes higher values in urban than in rural areas. It is important to note that the negative phenomenon of untreated municipal and industrial sewage discharged into the waters is also observed.

The analysis also includes waste management. It shows that the trends in that respect are quite varied in the support area. During five examined years (2014-2018), the amount of waste generated in Poland decreased, in Ukraine increased, while in Belarus the trends were not clear. The last component of the analysis was the use of renewable energies. In this category the support area stacks up rather poorly. In the new edition

of the programme projects which contribute to the improvement of the condition of the natural environment in the support area and allow for the better use of the tourist potential of the Polish-Belarusian-Ukrainian borderland's natural heritage should be supported.

Two out of the three countries participating in the Poland-Belarus-Ukraine programme are not members of the European Union. Transport connections must therefore be analysed in the context of the availability and capacity of border crossings. The density of the road network in the support area remains low, as does the quality of road infrastructure, which is particularly bad in Ukraine and Belarus. There has also been a decrease in the number of passengers using public transport in Belarus and Ukraine as well as in Podlaskie and Lubelskie Voivodeships. In addition, the decreasing number of border crossing points combined with their limited capacity seems to be insufficient to ensure smooth traffic. Ten checkpoints on the Polish-Ukrainian border are to serve about 22 million people who want to cross them. Given the projected budget of the programme, high-capital investments in the development of the road network in the support area are not recommended. Support for further development of border service cooperation and actions aimed at reducing the time needed to cross borders should be addressed.

Important for the support area are also cross-border relations, such as the cooperation of various levels of governments and very diverse activities of Euroregions and NGOs. It is expected that projects with small budgets in the 2014-2020 financial perspective, on the topic of cultural and natural heritage, due to the diversity and relative availability of funds for very diverse groups of recipients, contribute to the creation and development of networks of contacts between local communities of the support area as well as raise awareness of the program in the support area. Therefore, it is recommended to consider continuing to support these types of projects for the diverse heritage of the cross-border area in the next EU financial perspective.



2. INTRODUCTION

The Cross-Border Cooperation Programme Poland-Belarus-Ukraine has been supporting cross-border development processes since 2004 by co-financing various projects. The implemented actions contribute to the improvement of the life quality of the inhabitants of eastern Poland, and western Ukraine and Belarus.

One of the first actions taken to establish the INTERREG Cross-Border Cooperation Programme for 2021-2027 between Poland, Belarus and Ukraine was to perform analytical work to diagnose main problems occurring in the support area. Attention was also paid to the different features of the respective areas. The analysis covered thematic issues related to the economy, social affairs, public services, culture, environment, infrastructure and digitisation. While obtaining data, every effort was made to ensure their comparability for the Polish, Belarusian and Ukrainian parts of the support area.

In order to deepen information obtained through desk research, workshops were organised in the respective voivodeships (in Poland) and in Belarus and Ukraine. Both current and potential beneficiaries were invited, including representatives of local government units, scientific and research units, health care institutions, cultural institutions, non-governmental organisations, public service employees and entities involved in the protection of valuable natural areas. Thanks to their opinions, it was possible to obtain additional qualitative information about the support area. In addition, the diagnosis material was forwarded to the members of the Joint Program Committee¹ to appraise.

The information gathered on the basis of the existing data and workshops enabled to prepare a SWOT analysis of specific thematic areas.

¹ The JPC consists of the representatives of respective ministries, regional authorities, euroregions and economic and social partners, and civil society representatives, who participate in the preparation of the Programme in accordance with Commission Delegated Regulation (EU) No 240/2014



3. DIAGNOSIS OF THE SUPPORT AREA

3.1. GENERAL INFORMATION ON THE SUPPORT AREA

The support area covers approximately 316,000 sq. km. Its largest part lies on the Belarusian territory (44%) and the rest, respectively, in Ukraine (32%) and in Poland (24%).

In Poland, the following subregions, in accordance with the NUTS3 classification, are covered by the Programme:

- Subregions: Białostocki, Łomżyński, Suwalski (Podlaskie Voivodeship);
- Subregions: Ostrołęcki, Siedlecki (Mazowieckie Voivodeship);
- Subregions: Białski, Lubelski, Puławski, Chełmsko-Zamojski (Lubelskie Voivodeship);
- Subregions: Przemyski, Rzeszowski, Tarnobrzegi, Krośnieński (Podkarpackie Voivodeship).

In Belarus, the Programme support areas are:

- Grodno Oblast;
- Brest Oblast;
- Minsk Oblast;
- Gomel Oblast.

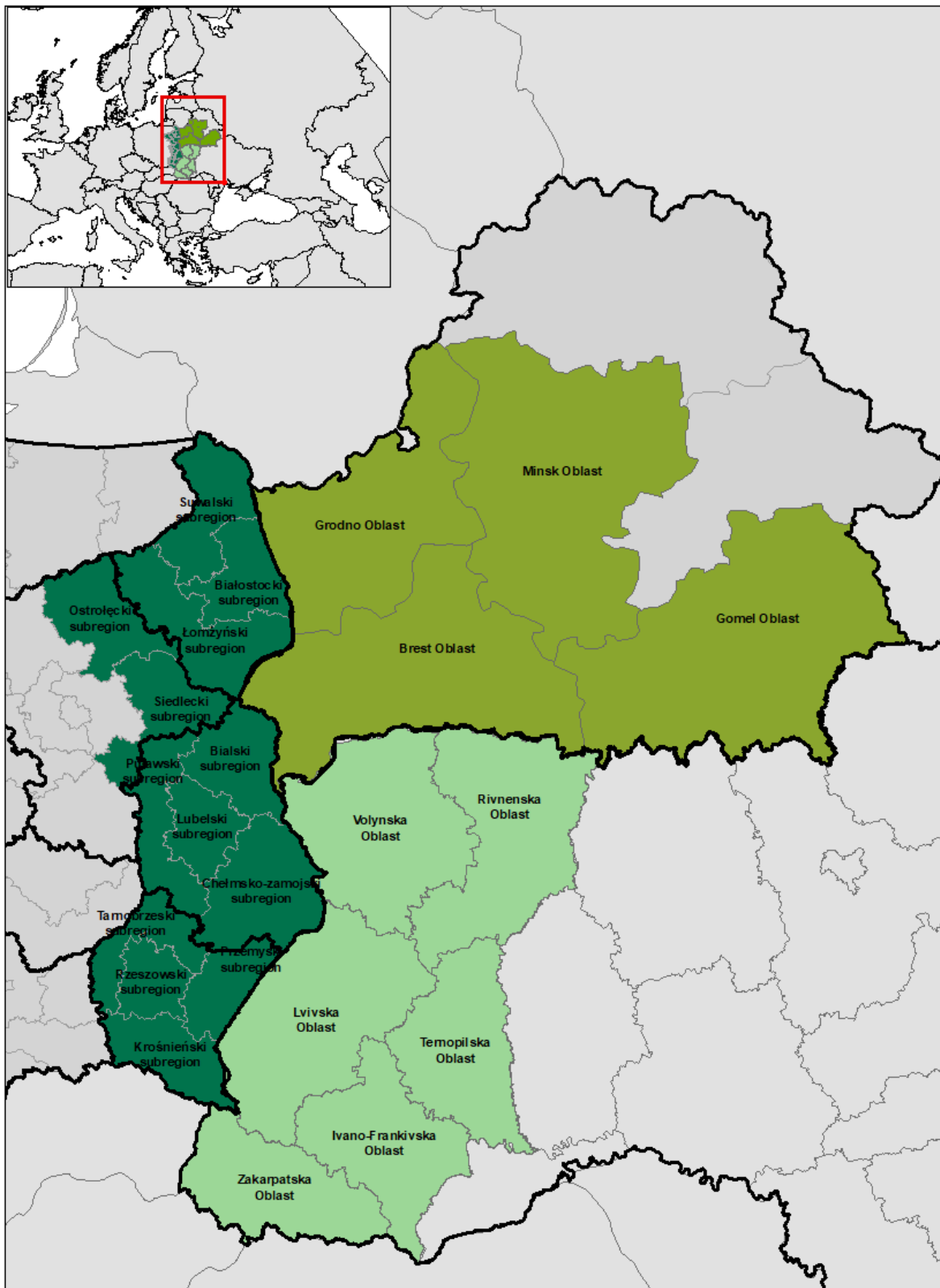
In Ukraine, the following are included in the support area:

- Wołyńska Oblast;
- Lwowska Oblast;
- Zakarpatska Oblast;
- Rivnenska Oblast;
- Ternopilska Oblast;
- Ivano-Frankivska Oblast.

The boundaries of the support area are shown in Map 1.

The selection of the administrative units covered by the Programme results directly from its objective, which serves to support and promote integrated regional

development in the area of neighbouring border regions, including regions at the external borders of the European Union.



Map 1. Support area in the Cross-Border Cooperation Programme Poland-Belarus-Ukraine 2021-2027

Source: Own study

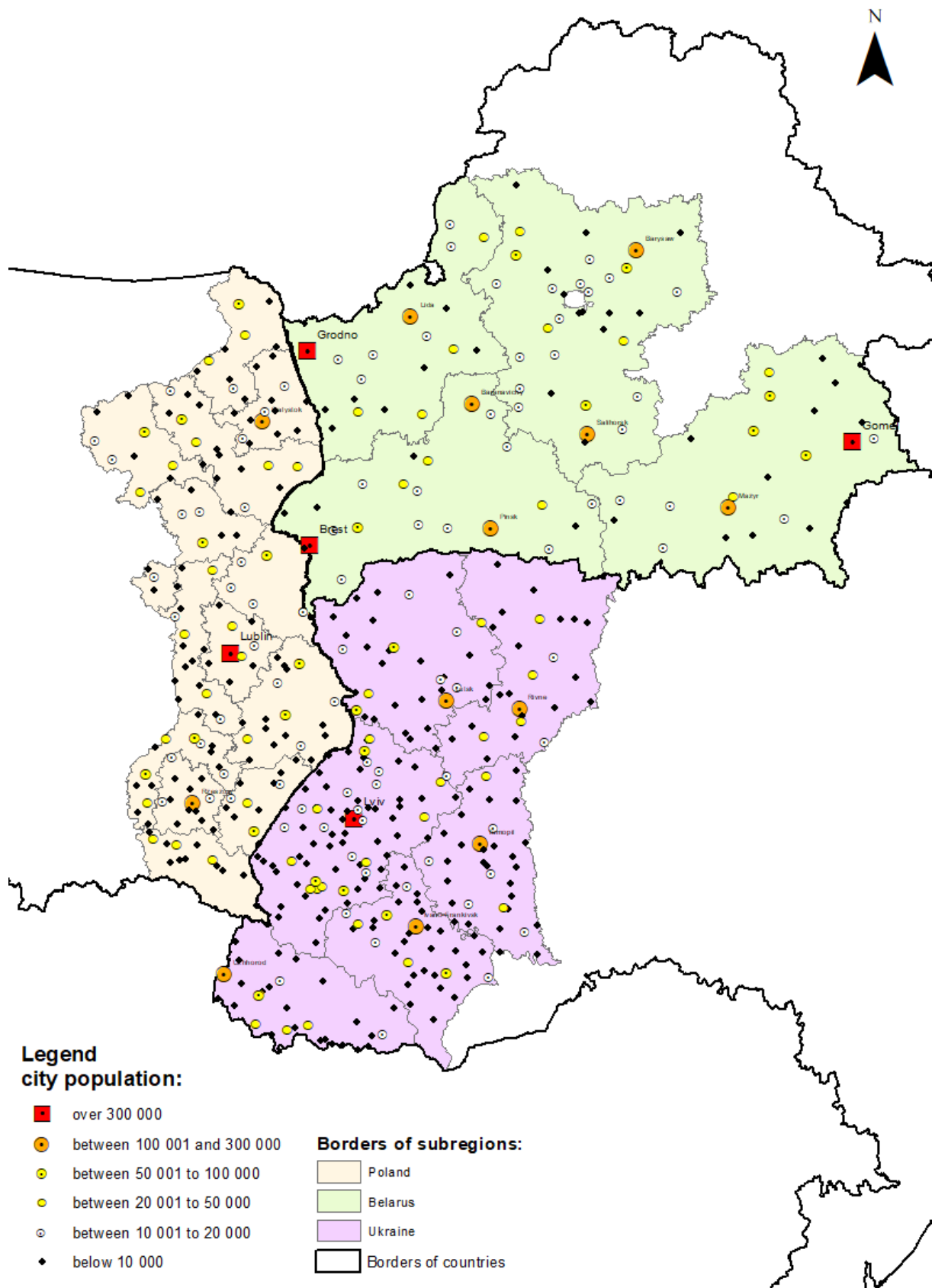
In 2018, the support area had 19 886 000 inhabitants. Of this number, 31% lived in Poland, 27% in Belarus and 42% in Ukraine.

In terms of population, the largest cities located in the part of Poland covered by the Programme include the capitals of the voivodeships: Lublin (approx. 339,000 inhabitants in 2018), Białystok (297,500) and Rzeszów (191,600). Among the cities with the population of around 50,000 there are: Suwałki, Łomża, Ostrołęka, Siedlce, Biała Podlaska, Chełm, Zamość and Przemyśl. In the Polish part of the area, the percentage of people living in cities in relation to the total population is 45%.

The cities that play a key role in the Belarusian settlement network are: Gomel (535,000), Brest (344,000), Grodno (369,000), Baranarichy (179,000), Pinsk (138,000) and Lida (101,000). Mazyr, Barysaw (Borisov) and Salihorsk (Soligorsk) also note a number of inhabitants exceeding 100,000.

The main cities in the Ukrainian part of the support area are: Lviv (724,000), Lutsk (217,000), Ivano-Frankivsk (231,000), Ternopil (216,000), Rivne (248,300) and Uzhhorod (115,000). Major cities with over 60,000 inhabitants include: Mukachevo, Drohobych, Chervograd, Kovel and Stryi.

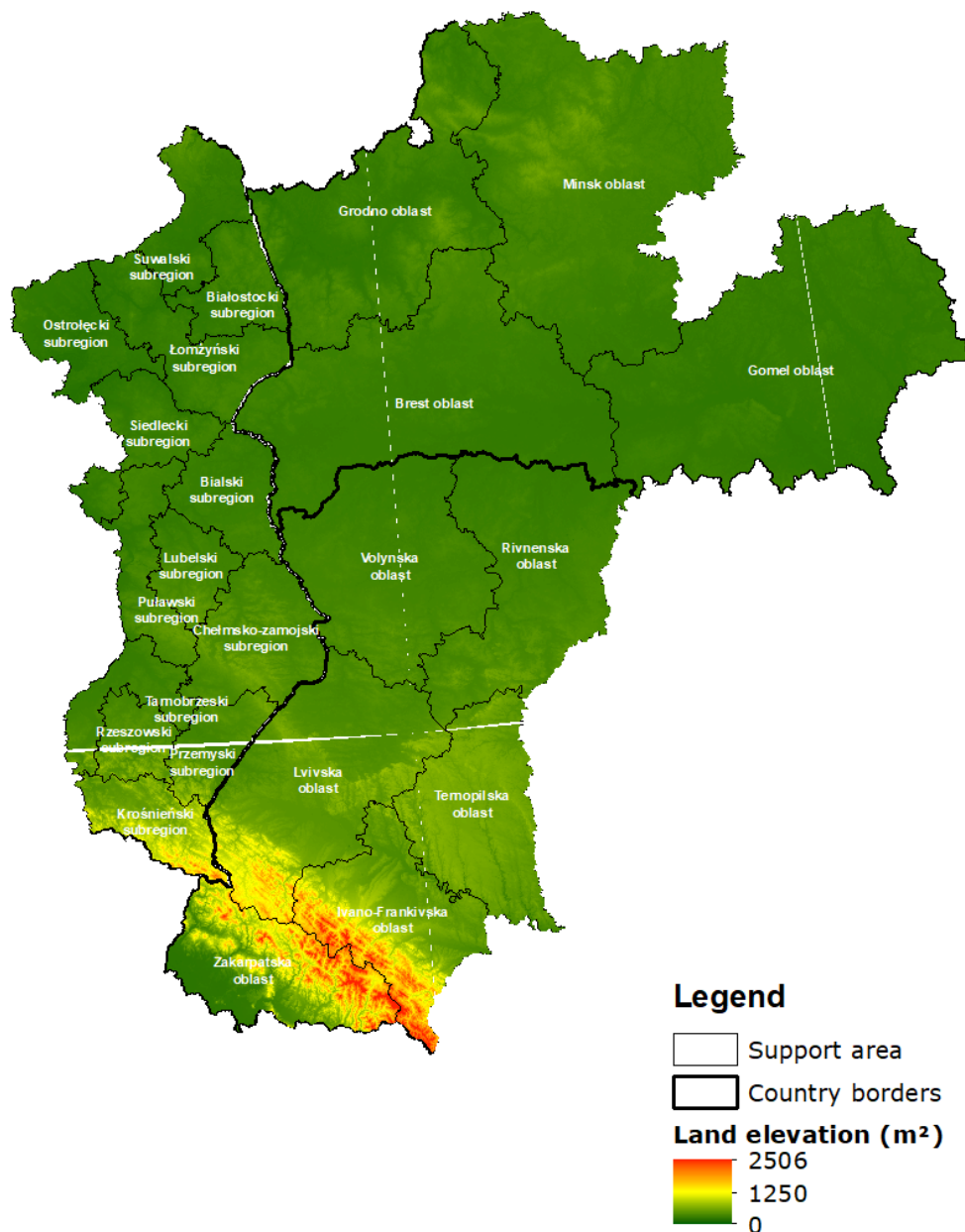
There are differences in the settlement network of the support area depending on the country. In the Belarusian part of the support area, the settlement network has a low density, which means that cities are located at a considerable distance from each other. The distance to the main urban centres serving rural areas is high. In the Polish and Ukrainian parts of the support area, there is a concentration of population primarily in the voivodship cities and around them (Map 2.)



Map 2. Settlement structure of the support area

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

The support area lies mainly on lowlands, mostly in the physical geographic megaregion -of the Eastern European Plain. Only on the southern edge of the area extends the Carpathian Mountains, reaching at its highest point 2,061 m a.s.l. (Mt. Hoverla), which is also the highest elevation in the support area. Further north stretches the range of the Volhynian-Podolian Upland and the Lublin Upland (Map 3.)



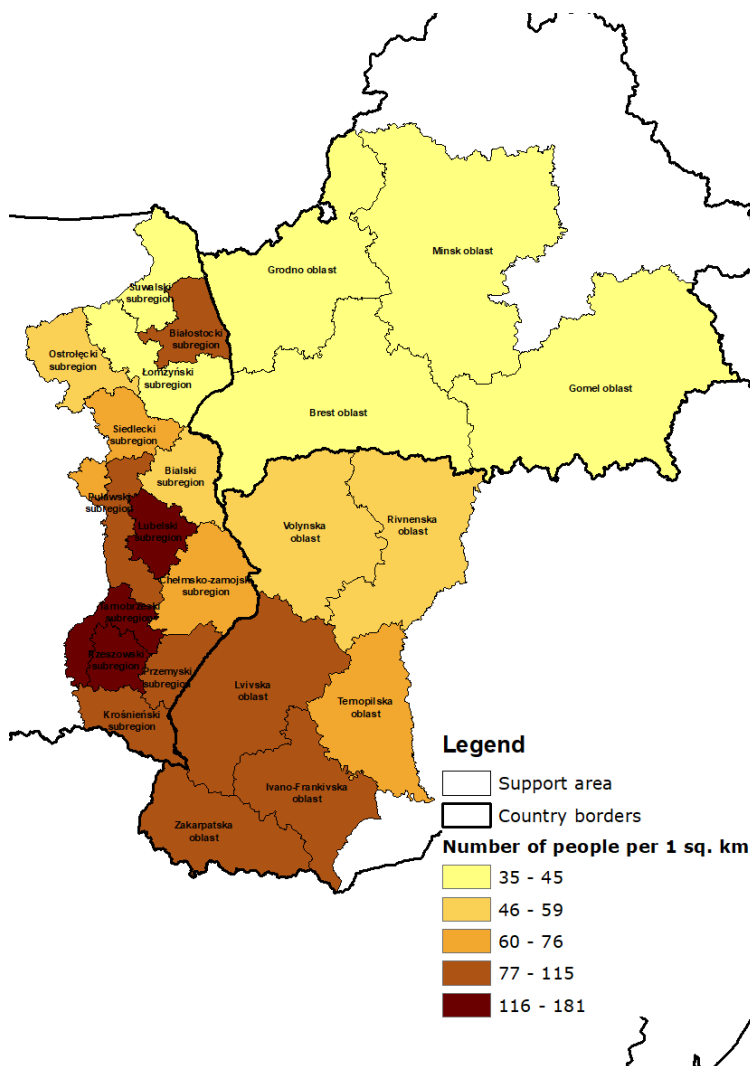
Map 3 Topography of the support area

Source: Own study based on the SRTM model: <https://dwtkns.com/srtm> (accessed Feb. 1, 2020)

3.2. POPULATION

3.2.1. DENSITY OF POPULATION

The average population density in the support area is 80 people per sq. km. Analysing the indicator values for the respective oblasts and subregions leads to the conclusion that the least people per 1 sq. km live in the northern part of the support area. The exception is the Białostocki subregion, where the population density is 100 people per sq. km, which is however lower than the average for Poland (123 people per sq. km). The highest population density is in the Lubelski and Rzeszowski subregions, where their high values depend on the fact that the voivodeship capitals are located there, and in the Tarnobrzski subregion, in which the concentration of medium-sized cities along the Vistula River has a decisive impact on the higher population density (Map 4.).

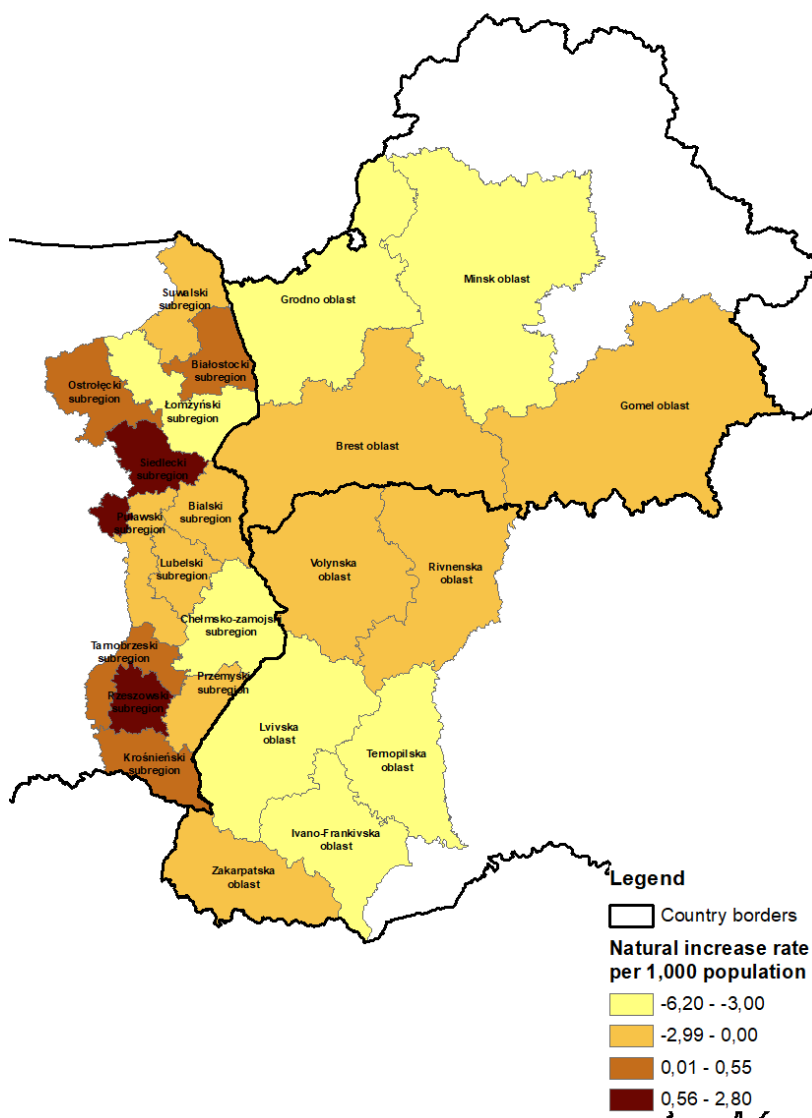


Map 4 Number of people per 1 sq. km in the units in 2018

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

3.2.2. POPULATION GROWTH

The most favourable difference between the number of births and deaths per 1,000 people was noted in the Siedlecki and Rzeszowski subregions, where in 2018 the value of the indicator was 0.8 and 2.8, respectively. The support areas in Ukraine, Belarus and the Lubelskie Voivodeship are marked by a negative population growth. Population growth is the lowest in the Minsk, Grodno, Lvivska, Ternopilska, Ivano-Frankivska oblasts, as well as in areas located in Poland –in the Chełmsko-Zamojski and Łomżyński subregions. The indicator reached the lowest value in the Ternopilska oblast – around 6.2 per 1,000 people. The data analysed over a longer period, i.e., in the years 2014–2018, show increasing trends of negative birth rates in most of the units (Map 5.)



Map 5 Natural increase rate per 1,000 inhabitants by regions/subregions in 2018

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)



3.2.3 POPULATION STRUCTURE

The population structure is an important factor influencing various social spheres. In the economic field, it is expressed by the demographic burden rate, i.e. the ratio of people of non-working age to people of working age. This factor enables to estimate which part of society will contribute to the increase of the state income, and which will require support from it.

The trend an increasing share of people of post-working age in the total population, observed in developed countries, implies the necessity to enforce changes among which the most obvious is the increase in the state budget of expenditure for social benefits and services required by an aging society, primarily for health services.

In terms of demographic structure, the most favourable situation is noted in the Ukrainian part of the support area. The average share of particular age groups for the Ukrainian oblasts are following: 21.47% for pre-working age, 64.98% for working age and 13.55% for post-working age. In the Volynska, Zakarpastka, Rivnenska and Ivano-Frankivska oblasts more than one fifth of the population are young people.

The lowest percentage of people of working age is observed in Belarus, where it reaches 56.01%. At the same time, the country noted the highest share of people of post-working age in the entire population. This phenomenon is present in all Belarusian oblasts, of which the Minsk oblast is characterised by the least favourable situation. The observed Pan-European trends in the demographic structure towards progressive population aging is particularly visible in this country.

The average share of people of pre-working age in relation to the total population in the Polish part of the support area is lower than in the Belarusian and Ukrainian oblasts. In the Łomżyński and Chełmsko-Zamojski subregions the percentage of young people is below 17.00%. It is the lowest value among all compared analytical units (Table 1).

Table 1. Percentage of inhabitants in the respective age groups in the subregions and oblasts in 2018

SPECIFICATION	Pre-working age	Working age	Post-working age
Białostocki subregion	17.62%	61.55%	20.83%
Łomżyński subregion	16.99%	61.20%	21.81%
Suwalski subregion	17.70%	62.50%	19.80%
Ostrołęcki subregion	18.16%	61.33%	19.21%
Siedlecki subregion	19.73%	59.95%	20.32%
Bialski subregion	18.48%	61.00%	20.52%
Lubelski subregion	17.99%	60.23%	21.78%
Puławski subregion	17.85%	60.09%	22.07%
Chełmsko-Zamojski subregion	16.67%	61.14%	22.19%
Przemyski subregion	17.75%	62.22%	20.03%



SPECIFICATION	Pre-working age	Working age	Post-working age
Rzeszowski subregion	19.20%	61.78%	19.02%
Tarnobrzieski subregion	17.69%	62.17%	20.14%
Krośniński subregion	17.87%	61.76%	20.37%
Average for subregions in Poland	17.98%	61.30%	20.62%
Grodno Oblast	18.28%	56.32%	25.40%
Brest Oblast	19.32%	55.79%	25.04%
Minsk Oblast	18.52%	55.28%	26.13%
Gomel Oblast	18.29%	56.64%	25.17%
Average for oblasts in Belarus	18.60%	56.01%	25.43%
Volynska Oblast	23.11%	63.91%	12.98%
Lvivska Oblast	19.33%	66.04%	14.64%
Zakarpatska Oblast	23.29%	65.00%	11.71%
Rivnenska Oblast	24.01%	63.62%	12.36%
Ternopilaska Oblast	18.84%	65.66%	15.50%
Ivano-Frankivaska Oblast	20.24%	65.66%	14.10%
Average for oblasts in Ukraine	21.47%	64.98%	13.55%

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus and the Ministry of Foreign Affairs (Belarus) and the State Statistics Service of Ukraine (Ukraine)

Data on population by education levels was collected during censuses carried out in various years: in Poland in 2011, in Ukraine in 2001 and in Belarus in 2009. Due to the different periods of the data collection, the oldest of which was carried out 19 years ago, it was decided not to include this issue in the analysis.



3.2.4 CHANGES IN POPULATION

In recent years, all the countries have experienced a population decrease in the area covered by the Programme. When comparing the population in the given analytical units in the years 2014-2018, it can be noted that the number of inhabitants in the sub-areas located in Poland, i.e. Łomżyński, Puławski, Chełmsko-Zamojski subregions, and in Ukraine, in the Ternopilska oblast fall the fastest. Areas in Poland, where the phenomenon of population decline did not take place, include the Lubelski, Rzeszowski and Białostocki subregions, which results from their location near voivodeship capitals which attract new residents. In Ukraine, such trends are similar in the Rivnenska oblast, while in Belarus in the Minsk oblast (Table 2).



Table 2. Number of inhabitants in subregions/districts in 2014–2018

SPECIFICATION	2014	2015	2016	2017	2018	Change in 2014–2018 (2014 = 100)
Białostocki subregion	510,749	510,873	511,546	512,478	513,070	100.45
Łomżyński subregion	405,312	403,015	400,907	398,830	396,155	97.74
Suwalski subregion	275,857	274,912	274,172	273,240	272,308	98.71
Ostrołęcki subregion	389,068	388,078	387,523	386,927	385,915	99.19
Siedlecki subregion	421,604	421,017	420,686	420,483	419,631	99.53
Białski subregion	306,245	305,116	304,212	303,100	301,643	98.50
Lubelski subregion	712,124	711,450	711,960	712,143	712,354	100.03
Puławski subregion	489,242	486,619	484,277	482,005	479,203	97.95
Chełmsko-Zamojski subregion	640,135	636,541	632,891	629,069	624,419	97.54
Przemyski subregion	395,225	393,948	392,900	391,958	390,473	98.80
Rzeszowski subregion	630,042	631,560	634,432	637,857	641,292	101.79
Tarnobrzeski subregion	618,715	617,908	616,877	616,616	615,451	99.47
Krośnieński subregion	485,205	484,241	483,447	482,707	481,799	99.30
Total for subregions in Poland	6,279,523	6,265,278	6,255,830	6,247,413	6,233,713	99.27
Grodno Oblast	1,053,725	1,051,357	1,048,810	1,045,588	1,041,480	98.83
Brest Oblast	1,388,752	1,387,957	1,386,668	1,385,412	1,382,433	99.54
Minsk Oblast	1,405,297	1,412,599	1,420,147	1,424,760	1,427,527	101.58
Gomel Oblast	1,424,751	1,423,452	1,421,799	1,418,204	1,412,819	99.16
Total for oblasts in Belarus	5,272,525	5,275,365	5,277,424	5,273,964	5,264,259	99.84

SPECIFICATION	2014	2015	2016	2017	2018	Change in 2014–2018 (2014 = 100)
Volynska Oblast	1,041,303	1,042,918	1,039,940	1,038,226	1,035,729	99.46
Lvivska Oblast	2,538,436	2,537,799	2,515,804	2,515,657	2,511,238	98.93
Zakarpatska Oblast	1,256,850	1,259,570	1,256,325	1,255,944	1,255,322	99.88
Rivnenska Oblast	1,158,851	1,161,151	1,160,751	1,161,703	1,159,587	100.06
Ternopilska Oblast	1,073,327	1,069,936	1,062,458	1,055,941	1,049,061	97.74
Ivano-Frankivska Oblast	1,382,096	1,382,553	1,379,626	1,377,189	1,374,770	99.47
Total for oblasts in Ukraine	8,450,863	8,453,927	8,414,904	8,404,660	8,385,707	99.23

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus and the Ministry of Foreign Affairs (Belarus) and the State Statistics Service of Ukraine (Ukraine)



3.2.5 MIGRATION

The average of the net migration rate for the Polish territorial units covered by the Programme is negative every year. Over the years, there has been no constant increase or decrease of the trend regarding the scale of migration. It remains at the level from -1,061 in 2014, through -763 in 2016, to -938 in 2018. A positive net migration rate is characteristic for the subregions in which voivodeship capitals are located, i.e. Białystok, Lublin and Rzeszów. A negative rate is constantly observed in other subregions which lack voivodeship capitals.

The Belarusian oblasts covered by the study have a positive average of the net migration rate (631), even though it is negative in the Grodno, Brest and Gomel oblasts. This is due to the annual positive (high) rate in the Minsk oblast (from 6,722 in 2014, through 10,366 in 2015, to 6,753 in 2018).

The internal net migration rate from the Grodno, Brest and Gomel oblasts to the capital of Belarus, Minsk, is negative. On the other hand, the Minsk oblast is marked by a positive rate when it concerns the city of Minsk. This may be the result of a suburbanisation process.

The examined oblasts in Ukraine have varied net migration rates. The average migration rate for 2018 is -579, but in previous years, 2016 and 2017, it was slightly positive. The Lvivska oblast has the highest positive rate every year, but it has a downward trend (from 4,982 in 2016 to 1,886 in 2018). The net migration rate in the Zakarpatska and Ternopilaska oblasts has an upward trend, which in 2018 was slightly positive (Zakarpatska – 84, Ternopilaska – 35) (Table 3).

Table 3. Net migration rate in the support area in 2014–2018

SPECIFICATION	2014	2015	2016	2017	2018
Białostocki subregion	267	-	656	564	524
Łomżyński subregion	-1,584	-	-1,230	-1,304	-1,647
Suwalski subregion	-932	-	-713	-961	-891
Ostrołęcki subregion	-1,217	-	-962	-1,014	-1,185
Siedlecki subregion	-1,143	-	-748	-747	-1,144
Białski subregion	-1,153	-	-799	-1,039	-1,093
Lubelski subregion	-571	-	442	354	443
Puławski subregion	-1,816	-	-1,594	-1,865	-2,030
Chełmsko-Zamojski subregion	-2,220	-	-2,116	-2,181	-2,679
Przemyski subregion	-892	0	-944	-1,080	-1,408
Rzeszowski subregion	860	0	1,602	1,730	1,643
Tarnobrzeski subregion	-1,251	0	-1,339	-1,214	-1,716



SPECIFICATION	2014	2015	2016	2017	2018
Krośnieński subregion	-966	0	-958	-1,213	-1,260
Average for subregions in Poland	-1,061	0	-763	-865	-938
Grodno Oblast	-970	-1,692	-1,835	-960	-513
Brest Oblast	-667	-3,085	-1,888	-479	-1,888
Minsk Oblast	6,722	10,366	7,014	7,037	6,753
Gomel Oblast	-458	-716	-2,062	-2,491	-1,828
Average for oblasts in Belarus	1,157	1,218	307	777	631
Volynska Oblast	-	-	-1,255	-823	-3,842
Lvivska Oblast	-	-	4,982	2,666	1,886
Zakarpatska Oblast	-	-	-982	-97	84
Rivnenska Oblast	-	-	-253	-1,827	-2,198
Ternopilska Oblast	-	-	-1,537	-1,355	35
Ivano-Frankivska Oblast	-	-	124	1,461	560
Average for oblasts in Ukraine	-	-	180	4	-579

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

It was also decided to analyse which nations migrate to the respective analytical units covered by the Programme as well as in what directions the outflow of residents takes place.

In Poland due to the lack of data on migration directions in subregions, data at the voivodship level was analysed. The Mazowieckie Voivodship was left out due to the area specificity (the Capital City of Warsaw located outside the support area) was not relevant for this part of the support area.

In the examined period, the Lubelskie Voivodeship observed an intensive influx of people from Ukraine (from 812 residents with Ukrainian citizenship in 2010 to 9,193 in 2018) and Belarus (from 217 residents with Belarusian citizenship in 2010 to 1,579 in 2018). Also a slight migration of Bulgarians (in 2018 – 492) and Italians (in 2018 – 346) was also marked.

Similar trends can be observed in the Podkarpackie Voivodeship, where the largest influx of people from Ukraine was also recorded (from 831 inhabitants with Ukrainian citizenship in 2010 to 4,477 in 2018).

In the Podlaskie Voivodeship there is also a significant increase in the Belarusian population (from 656 residents with Belarusian citizenship in 2010 to 3,438 in 2018) and the Ukrainian population (from 143 residents with Ukrainian citizenship in 2010 to 1,612 in 2018).



In Belarus, as far as external migrations, migration from Russia to the Grodno oblast (annual average of 626 in 2013–2018), Turkmenistan (annual average of 147 in 2013–2018), Kazakhstan (annual average of 148 in 2013–2018) and Ukraine (annual average of 484 in 2013–2018) is noted. The most common directions for foreign migration from the Grodno oblast are Russia (annual average of 419 in 2013–2018), Turkmenistan (annual average of 144 in 2013–2018), Ukraine (annual average of 104 in 2013–2018) Poland (annual average of 142 in 2013–2018) and Lithuania (annual average of 181 in 2013–2018).

When it comes to the Brest oblast people mainly migrate from Russia (annual average of 1,144 in 2013–2018), Ukraine (annual average of 1,044 in 2013–2018), Turkmenistan (annual average of 350 in 2013–2018) and Kazakhstan (annual average of 270 in 2013–2018). The most common directions of foreign migration from the Brest region are Russia (annual average of 726 in 2013–2018), Ukraine (annual average of 166 in 2013–2018), Turkmenistan (annual average of 259 in 2016–2018) and Poland (annual average of 116 in 2013 to 2018).

When it comes to the Minsk oblast people mainly migrate from Russia (annual average of 982 in 2013–2018), Ukraine (annual average of 750 in 2013–2018) and Kazakhstan (annual average of 218 in 2013–2018). In 2017, three people from China were noted, while in 2018, already 345 people were noted. The most common directions of foreign migration are Russia (annual average of 536 in 2013–2018) and Ukraine (annual average of 145 in 2013–2018).

When it comes to the Gomel oblast, mainly people migrate from Russia (annual average of 1,212 in 2013–2018), Ukraine (annual average of 1,089 in 2013–2018), China (annual average of 328 in 2013–2018) and Turkmenistan (annual average of 279 in 2013–2018). The most common directions of foreign migration include Russia (annual average of 907 in 2013–2018), Ukraine (annual average of 205 in 2013–2018) and China (annual average of 284 in 2013–2018, with a peak in 2017 – 1,309 people).

There is no data on the directions of foreign migration from the respective oblasts in Ukraine. Considering external migration to Ukraine people mainly migrate from from Russia (annual average of 10,858 in 2010–2018), Moldova (annual average of 2,418 in 2010–2018), Turkmenistan (annual average of 2,023 in 2010–2018), Azerbaijan (annual average of 1,784 in 2010–2018), Uzbekistan (annual average of 1,573 in 2010–2018), Turkey (annual average of 1,221 in 2010–2018), Belarus (annual average of 1,090 in 2010–2018), Georgia (annual average of 980 in 2010–2018), the USA (annual average of 848 in 2010–2018) and Armenia (annual average of 766 in 2010–2018). The most common directions of emigration are Russia (annual average of 3,805 in 2010–2018), Germany (annual average of 1,500 in 2010–2018), the USA (annual average of 1,421 in 2010–2018), Israel (annual average of 1,293 in 2010–2018), Turkmenistan (annual

average of 1,065 in 2010–2018), Belarus (annual average of 603 in 2010–2018), Turkey (annual average of 446 in 2010–2018) and Poland (annual average of 378 in 2010–2018).²

3.2.6 Demographic trends

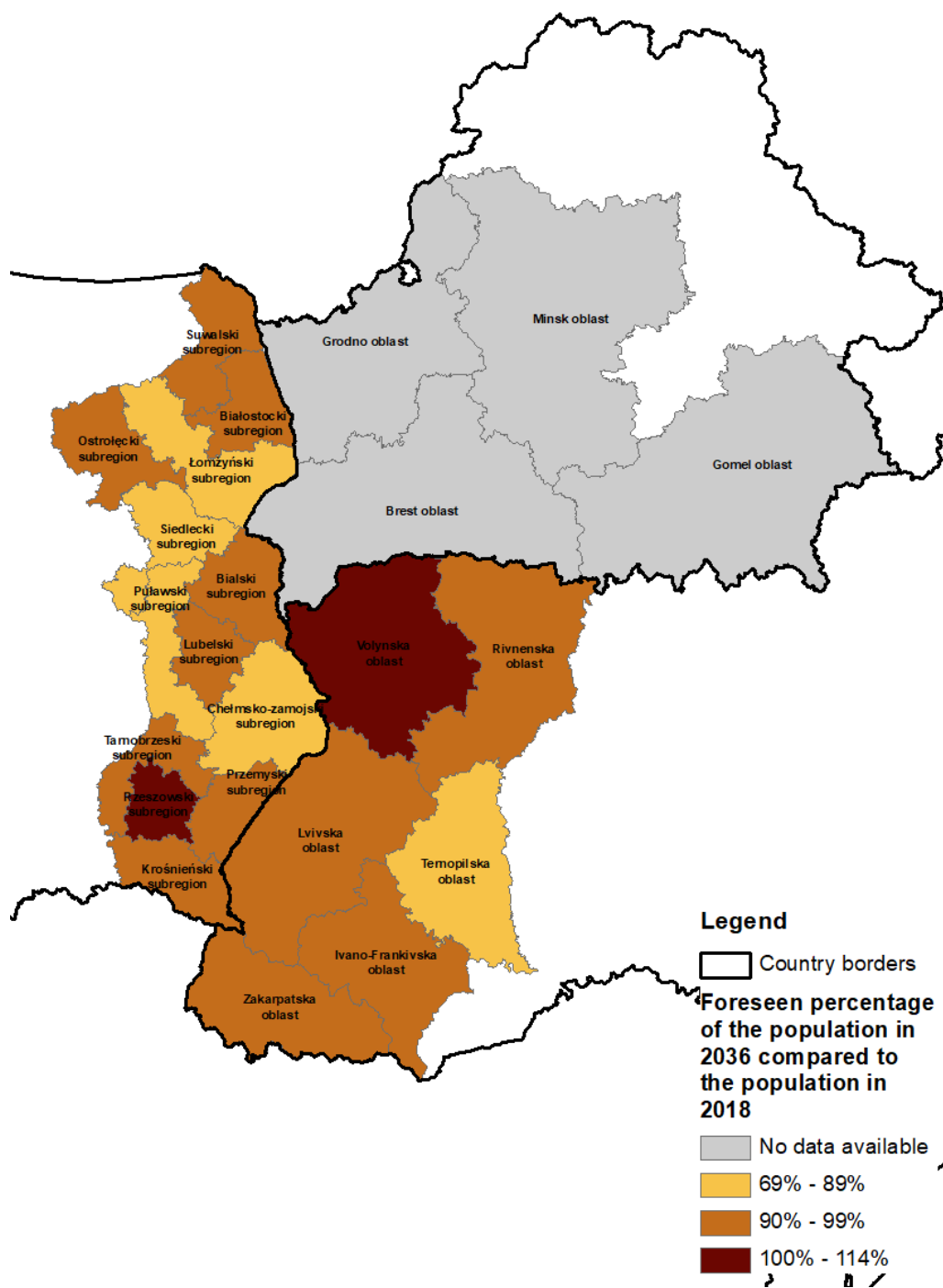
When analysing data on the forecasted demographic trends, it should be noted that the support area is mostly characterised by a negative forecast regarding the change in population in the next 18 years.

The foreseen percentage of the population in 2036 compared to 2018 stands out particularly negatively in the Łomżyński, Siedlecki, Puławski, Chełmsko-Zamojski subregions and well as the Ternopil'ska Oblast. It is estimated that between 69% to 89% of the current population will live there.

Only in the case of two analytical units, the Volyn'ska oblast and the Rzeszowski subregion, it is assumed that the population will increase in 2036 compared to 2018. However, it should be noted that in Ukraine, the demographic forecast comes from 2009 and is based on data that was current at the time. Positive assumptions for the Volyn'ska Oblast have not been confirmed currently. Since 2015 the oblast has noted a natural decrease rate as well as a negative net migration rate.

In Belarus, no research on demographic trends by oblasts are being carried out, which is why data is not available. However, taking into account a large percentage of people of post-working age and the negative net migration rates in the Grodno, Brest and Gomel oblasts, it can be assumed that the indicated analytical units will show a decrease in the population (Map 6.)

² The differences between the indicated numbers of migrants result from different research methodologies in Poland and Ukraine.



Map 6. Foreseen percentage of the population in 2036 compared to the population in 2018

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)



3.2.3 SUMMARY

Issues related to the population are of key importance in development processes. Changes taking place in the demographic structure cause a demand for various social services and affect the situation on the labour market.

In 2018, the support area was inhabited by 19, 886,000 people. Of this number, 31% lived in Poland, 27% in Belarus and 42% in Ukraine. Each country has experienced a decrease in the population in recent years. The fastest decrease in the number of inhabitants is noted in the łomżyński, Puławski, Chełmińsko-Zamojski subregions in Poland, and in Ukraine, in the Ternopil'ska Oblast. The demographic forecasts indicating a further decrease in inhabitants in most of the regions and areas the support area are equally unfavourable.

The most favourable demographic situation is observed in the subregions and oblasts in which the largest cities - capitals of voivodeships, main centres of public services – are located. In the Polish part this is the case of the Białostocki, Lubelski and Rzeszowski subregions, in Ukraine of the Lviv'ska Oblast, and in Belarus of the Minsk Oblast. This is related to the trend of inhabitants' migrating from rural areas to cities, especially those providing the greatest development opportunities, which is visible in the net migration rate.

Attention should also be paid to the natural decrease rate recorded in the Belarusian and Ukrainian parts of the Programme support area and in the Lubelskie Voivodeship. Data analysed between the years 2014–2018 shows that most of the examined regions show an increase in trends regarding the natural decrease rate.

An important issue affecting the demand for various social services, such as care and health services, is the age structure of residents. In that aspect, the Belarusian part of the support area stands out with the highest share of people of post-working age in the total population. The observed Pan-European trends in the demographic structure changes towards population aging is particularly visible in this area. At this point, one should note a relatively favourable demographic situation of the Ukrainian part of the support area, which is characterised by a lower demographic burden of the post-working age population compared to other regions of the support area. At the same time, this part is characterised by the largest percentage of pre-working age population.

Stopping negative demographic trends, such as depopulation of the support area and the natural decrease rate in most of the examined subregions and oblasts as well as



the negative net migration rate in the areas without large urban centres are challenges that will have to be faced in the support area in the coming years.

Conclusions regarding the population analysis are following:

- Each country located in the support area is experiencing a decrease in the population.
- Demographic forecasts for most of the subregions and/or oblasts are unfavourable.
- As a consequence of the trend of people migrating from villages to cities, the most favourable demographic situation is observed in the subregions and/or oblasts with the largest cities lying within their borders or in close proximity.
- A natural decrease rate is noted in the Belarusian and Ukrainian parts of the support area as well as in the Lubelskie Voivodeship.
- The population structure by age in the Belarusian part is distinguished by a large share of people of post-working age, while the Ukrainian part by a relatively low demographic burden rate. In Poland the average share of people of pre-working age in relation to the total population is lower than in the Belarusian and Ukrainian oblasts.

3.3 LABOUR MARKET, EDUCATION, HEALTH

3.3.1 EMPLOYMENT

In macroeconomic terms, one of the basic characteristics of the labour market is the level of economic activity rate. The group of active population consists of working and unemployed persons of working age (according to the LFS data). This indicator shows their share in the total number of people of working age.

The collected data allows to identify trends regarding professional activity in the years 2014-2018 in Belarus, Ukraine and Poland. Complete, comparable data are aggregated at the level of the oblasts in Ukraine and Belarus and the voivodeships in Poland.

In Poland, the economic activity rate shows an upward trend. In 2014, it reached 74.3%, while in 2018 – 76.6%. This indicates that an increasing part of the working age population is gaining employment. Secondly, similar trends in the analysed period are observed in the Podlaskie, Mazowieckie, Lubelskie and Podkarpackie Voivodeships. The biggest dynamic changes are noted in the Podkarpackie Voivodeship, while the smallest – in the Lubelskie Voivodeship.

In Belarus, the situation at the labour market is relatively stable. The economic activity rate is increasing. In 2014 it reached 85,8%, four years later – 87.1%.

An increase in the economic activity rate is also noted in Ukraine. In 2014, the analysed indicator reached 71.4%, in 2018 – 72.7%. The highest positive dynamics of the index value occurred in the Ivano-Frankivska Oblast. In Ukraine, unlike in Poland and Belarus, there were oblasts in which the coefficient decreased in the analysed period. Negative dynamics occurred in the Volynska and Zakarpatska Oblasts.

Comparing the values of the economic activity rate in the three countries, it can be stated that the largest share of economically active people of working age is in Belarus – especially in the Grodno and Minsk oblasts. In Ukraine, the share is lower by a dozen or so percent. In 2018, it reached between 64.8% and 70.8%. On the other hand, the values of the coefficient observed in Poland are in the middle, between Ukraine and Belarus. The latest available data from 2018 show that among all analysed voivodeships and oblasts, the lowest rate of economic activity was observed in the Volynska oblast in Ukraine.

It is also worth noting that subregional data may differ (positively or negatively) from the value of the coefficient noted in the voivodeship or oblast. This applies to, among others, to the Mazowieckie Voivodeship in Poland, where the indicator high value is significantly influenced by Warsaw - the largest labour market in Poland – located in this the voivodeship. For the Ostrołęcki and Siedlecki subregions, the value of this indicator is probably lower. A similar situation may occur in the Ukrainian Lvivska Oblast or the Belarusian Minsk Oblast (Table 4).

Table 4. Professionally active population [%]

SPECIFICATION	Economic activity rate (% , people of working age)				
	2014	2015	2016	2017	2018
POLAND	74.3	74.5	75.2	75.9	76.6
Podlaskie Voivodeship	75.4	72.1	74.3	75.5	76.6
Białostocki subregion	.	.	.	.	.
Suwalski subregion	.	.	.	.	.
Łomżyński subregion	.	.	.	.	.
Mazowieckie Voivodeship	79.7	79.5	79.4	80.2	81.2
Ostrołęcki subregion	.	.	.	.	.
Siedlecki subregion	.	.	.	.	.
Lubelskie Voivodeship	74.8	74.5	74.2	74.6	75.8
Bialski subregion	.	.	.	.	.
Lubelski subregion	.	.	.	.	.
Puławski subregion	.	.	.	.	.
Chełmsko-Zamojski subregion	.	.	.	.	.
Podkarpackie Voivodeship	72.5	72.1	74.3	75.2	74.0
Przemyski subregion	.	.	.	.	.
Rzeszowski subregion	.	.	.	.	.
Tarnobrzeski subregion	.	.	.	.	.
Krośnieński subregion	.	.	.	.	.



SPECIFICATION	Economic activity rate (% , people of working age)				
	2014	2015	2016	2017	2018
BELARUS³	85.8	86.6	86.1	86.9	87.1
Grodno Oblast	86.3	86.6	87.4	87.5	87.7
Brest Oblast	85.3	86.5	84.8	85.9	87.1
Minsk Oblast	85.7	87.6	87.1	88.4	87.6
Gomel Oblast	85.2	86.0	84.9	85.00	86.2
UKRAINE	71.4	71.5	71.1	71.5	72.7
Volynska Oblast	67.8	67.0	65.6	64.2	64.8
Lvivska Oblast	69.0	69.7	69.5	70.2	70.8
Zakarpastka Oblast	70.0	69.3	68.3	68.0	68.7
Rivnenska Oblast	67.8	67.9	66.4	66.2	69.5
Ternopilaska Oblast	66.5	67.0	67.0	66.5	68.2
Ivano-Frankivaska Oblast	64.5	66.1	65.9	66.3	66.9

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus and the Ministry of Foreign Affairs (Belarus) and the State Statistics Service of Ukraine (Ukraine)

Another feature characterising the labour market is the employment structure in three main economic sectors, which traditionally, at the national level, is divided into: agriculture (sector I), industry (sector II) and services (sector III). It can be stated that the high share of one of the sectors determines the economy profile of a country or region. Literature indicates that the dominance of sector I is typical for the pre-industrial societies and economies, the dominance of industry – for industrial economies, and the dominance of the service sector is typical for the post-industrial economies⁴. In addition, the level of sector development, especially the third sector, may affect the level of economic development of the whole country.

Data on the employment structure in the indicated branches of the economy from 2014–2018 were analysed for the entire support area. The situation of the support area in each country is different. In Poland, the share of employees in the respective sectors is relatively stable. The largest part of the population works in services, about a quarter in industry, the least in agriculture. It should also be underlined that the share of employees in services is increasing, while the percentage of people working in agriculture is decreasing, which may indicate that the post-industrial processes are significantly advanced. It should be noted, however, that the situation in the Polish part of the support area is varied, depending on the voivodeship. In the analysed period, in the Mazowieckie Voivodeship services had the largest share in the economy, in the Lubelskie Voivodeship sector I (agriculture) had a very high share, while industry had the highest share in the Podkarpackie Voivodeship. The average share of people

³ Change of methodology: 2015–2015 professionally active population, 2016–2018 labour force participation based on research carried out in accordance with the ILO methodology.

⁴ J. Włodarczyk i in. (2011), *Gospodarki narodowe w procesie przemian strukturalnych*, Katowice, Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach.



working in agriculture in the Polish part of the support area is higher than in the country.

The situation in Belarus is slightly different than in Poland. In 2014–2018, the importance of industry and construction for the economy slightly decreased, while the importance of the service sector increased. The percentage of people employed in agriculture varies depending on the region - in the Brest and Gomel Oblasts it increased, while in the Grodno and Minsk Oblasts it decreased. A relatively high share of employment in industry and the service sector is observed in the examined oblasts. Agriculture is relatively the least important for the economy, as evidenced by the percentage of people employed in it. In the Grodno and Gomel oblasts the highest share among the analysed units, is observed in the service sector. The Minsk oblast notes a high share of industry in the employment structure, while the Brest oblast – a high share of agriculture.

The Ukrainian employment structure has a slightly different character than that observed in Poland and Belarus. The service sector also remains the most important, but on a national level the share of industry and the share of agriculture in the economy are similar – reaching a total of almost two-fifths of the share in the economy. One should also pay attention to the unique tendency in Ukraine, compared to the two other countries where in 2018 vs. 2014, an increase in the share of agriculture and industry can be observed at the expense of the share of employment in the service sector. Among the surveyed Ukrainian oblasts, the highest share of employment in services is noted in the Rivnenska oblast, while the share of employment in agriculture is the highest in the Ternopilska oblast. Employment in industry reaches high values in the Lvivska oblast.

The employment structure according to the three main sectors of the economy is relatively similar in the examined units in Ukraine, Belarus and Poland. Employment in the service sector is dominant in all units, covering at least half of all employees. The Belarusian oblasts compared to the Polish voivodeships and Ukrainian oblasts are characterised by a significant share of people working in industry and construction. The agricultural sector is relatively the least important in the examined units, although subregions with a very high employment in this sector are also observed in Poland (e.g. in Łomżyński, Puławski and Chełmsko-Zamojski subregions). This may indicate a bad economic situation on these regional labour markets. Agriculture is often a reservoir for so-called hidden unemployment⁵ (Table 5).

⁵ W. Kołodziejczak, *Nadwyżka zatrudnienia w polskim rolnictwie – projekcja na tle państw UE. Problemy rolnictwa światowego*, t. 16, zeszyt 1, Wydawnictwo SGGW, Warszawa 2016.



Table 5. Employment structure by sectors (employees by sectors) (in %)

SPECIFICATION	2014			2018		
	Agriculture, forestry and fishing	Industry and construction	Services	Agriculture, forestry and fishing	Industry and construction	Services
POLAND⁶	16.8	26.4	56.8	15.3	26.8	57.9
Podlaskie Voivodeship	31.1	20.1	48.8	28.7	21.7	49.6
Białostocki subregion	17.5	20.6	62.0	15.8	21.6	62.6
Suwalski subregion	38.3	19.8	41.9	35.8	22.0	42.1
Łomżyński subregion	43.0	19.9	37.1	40.8	21.4	37.8
Mazowieckie Voivodeship	12.9	18.8	68.3	11.4	18.3	69.4
Ostrołęcki subregion	37.5	20.7	41.8	34.9	21.8	43.4
Siedlecki subregion	.	.	.	33.4	23.5	43.1
Lubelskie Voivodeship	38.1	17.2	44.7	36.1	18.1	45.8
Bialski subregion	42.0	15.1	42.8	39.8	15.7	44.5
Lubelski subregion	21.5	20.2	58.4	19.9	20.8	59.3
Puławski subregion	46.9	18.4	34.8	44.7	19.3	36.0
Chełmsko-Zamojski subregion	49.6	13.7	36.7	48.0	14.8	37.2
Podkarpackie Voivodeship	32.3	24.3	43.4	30.0	25.8	44.2
Przemyski subregion	41.6	17.0	41.4	39.4	18.5	42.1
Rzeszowski	26.9	22.6	50.6	24.1	23.4	52.5
Tarnobrzeski	29.7	31.2	39.1	27.8	33.1	39.1
Krośnieński	36.0	23.8	40.2	34.2	25.8	40.0
BELARUS	9.4	32.9	57.7	9.3	30.1	60.6
Grodno Oblast	13.9	32.7	53.4	13.0	30.3	56.7
Brest Oblast	13.9	31.8	54.3	14.7	29.3	56.0
Minsk Oblast	13.4	36.9	49.7	12.8	34.4	52.8
Gomel Oblast	10.4	35.5	54.1	11.0	32.3	56.7
UKRAINE	17.1	16.0	66.9	18.0	18.9	63.2
Volynska Oblast	23.4	15.6	61.0	20.0	16.0	64.0
Lvivska Oblast	18.2	21.4	60.4	18.4	21.3	60.4
Zakarpatska Oblast	24.8	16.9	58.3	26.0	17.5	56.5

⁶ Data does not include persons employed in state entities operating in the field of national defense and public security.



SPECIFICATION	2014			2018		
	Agriculture, forestry and fishing	Industry and construction	Services	Agriculture, forestry and fishing	Industry and construction	Services
Rivnenska Oblast	17.8	18.1	64.1	18.1	17.8	64.1
Ternopilaska Oblast	31.3	12.6	56.2	31.3	12.2	56.5
Ivano-Frankivaska Oblast	28.4	17.2	54.5	29.7	16.6	53.7

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus and the Ministry of Foreign Affairs (Belarus) and the State Statistics Service of Ukraine (Ukraine)

3.3.2 UNEMPLOYMENT

The number of unemployed persons as well as unemployment rates are the basis for crisis phenomena analysis in the economy and society. The collected data for the 2014–2018 period are available at the level of countries and units.

Due to comparability of data, the share of unemployed was analysed. According to the International Labour Organisation (ILO) methodology, an unemployed person is a person who meets all following conditions:

- is 15-74 years old,
- does not work during the week in question,
- is actively looking for a job (undertakes specific actions for the duration of two weeks before the survey, including the week of the survey),
- is ready to work within two weeks following the survey.

It turns out that in all examined countries the share of unemployed as defined above is decreasing. In Poland, the dynamics of changes is the highest. In 2014, in Poland the unemployment rate according to the ILO was 9.2%, in 2018 – 4%, while in Belarus in 2016 it was 5.8%, in 2018 – 4.8%. In turn, in Ukraine, in 2014, it was 9.7%, in 2018 – 9.1%. In the latter country progressive changes are observed, but, it should be emphasised that their pace is slower than in Poland and Belarus.

The latest available data show that among the examined voivodeships and oblasts, the best situation on the labour market, due to low unemployment (according to ILO), is in the Podlaskie Voivodeship and the Grodno oblast, where the unemployment rate is 3.3% – close to the natural rate of unemployment known in the economy in a state of equilibrium. However, the most difficult situation is in the Volynska Oblast, where, in 2018, the unemployment rate was 11.6%. In Poland and Belarus, the Podkarpackie Voivodeship and the Gomel Oblast are the units with negative high values (Table 6).



Table 6. Unemployment rate (according to the Labour Force Survey)

SPECIFICATIO N	Number of unemployed (according to ILO methodology, in thousands)					Unemployment rate (according to ILO methodology, in %)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
POLAND⁷	1,410.0	1,210.0	958.0	769.0	649.0	9.2	7.7	6.3	5.0	4.0
Podlaskie Voivodeship	37.0	33.0	24.0	18.0	15.0	9.4	7.2	6.8	4.9	3.3
Białostocki subregion	.	.	.	.	.	.	.	.	.	.
Suwalski subregion	.	.	.	.	.	.	.	.	.	.
Łomżyński subregion	.	.	.	.	.	.	.	.	.	.
Mazowieckie Voivodeship	191.0	187.0	131.0	100.0	98.0	7.3	6.6	5.7	5.0	4.0
Ostrołęcki subregion	.	.	.	.	.	.	.	.	.	.
Siedlecki subregion	.	.	.	.	.	.	.	.	.	.
Lubelskie Voivodeship	101.0	103.0	64.0	73.0	51.0	10.1	9.6	8.3	7.3	6.5
Bialski subregion	.	.	.	.	.	.	.	.	.	.
Lubelski subregion	.	.	.	.	.	.	.	.	.	.
Puławski subregion	.	.	.	.	.	.	.	.	.	.
Chełmsko-Zamojski subregion	.	.	.	.	.	.	.	.	.	.
Podkarpackie Voivodeship	124.0	105.0	83.0	68.0	52.0	14.4	11.9	9.9	8.8	6.7
Przemyski subregion	.	.	.	.	.	.	.	.	.	.
Rzeszowski subregion	.	.	.	.	.	.	.	.	.	.
Tarnobrzeski subregion	.	.	.	.	.	.	.	.	.	.
Krośnieński subregion	.	.	.	.	.	.	.	.	.	.
BELARUS	266.9	272.8	301.8	293.4	244.9	5.1	5.2	5.8	5.6	4.8
Grodno Oblast	22.3	25.6	26.0	24.7	18.2	3.9	4.5	4.6	4.4	3.3
Brest Oblast	43.3	43.4	51.7	54.5	37.5	5.9	5.9	7.2	7.5	5.2

⁷ Fourth quarter of the given year (number of the unemployed), average annual (unemployment rate).



SPECIFICATIO N	Number of unemployed (according to ILO methodology, in thousands)					Unemployment rate (according to ILO methodology, in %)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Minsk Oblast	30.2	30.6	38.5	37.6	33.5	3.9	4.0	5.0	4.9	4.4
Gomel Oblast	43.2	46.5	54.2	44.8	44.6	5.7	6.1	7.3	6.1	6.1
UKRAINE	1,847. 1	1,654. 0	1,677. 5	1,697. 3	1,577. 6	9.7	9.5	9.7	9.9	9.1
Volynska Oblast	44.9	43.1	49.7	52.1	47.9	10.3	10.0	11.7	12.6	11.6
Lvivska Oblast	97.2	92.7	87.9	85.8	78.7	8.8	8.3	7.9	7.7	7.0
Zakarpatska Oblast	53.1	52.5	56.3	58.2	56.1	9.6	9.5	10.3	10.8	10.3
Rivnenska Oblast	56.7	53.7	56.3	60.1	50.6	11.7	11.0	11.7	12.6	10.2
Ternopilaska Oblast	53.1	54.1	52.8	53.9	47.8	12.0	12.0	11.7	12.2	10.7
Ivano- Frankivaska Oblast	48.1	51.2	53.5	51.9	47.9	8.6	8.9	9.2	9.0	8.3

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus and the Ministry of Foreign Affairs (Belarus) and the State Statistics Service of Ukraine (Ukraine)

Another way to determine the crisis on the labour market is to analyse the registered unemployment rate. It is a measure which, according to the Eurostat definition, determines the ratio of the number of unemployed persons to the number of economically active people. The registered unemployment rate is, on average, around 1.5% below the unemployment rate determined according to the ILO methodology⁸, discussed above. The difference is mainly related to the fact that in the Eurostat methodology only persons registered as unemployed in the labour offices are considered unemployed, which is a narrower definition of the category of the “unemployed” than that used by the ILO. In turn, the disadvantage of the broad definition of the unemployed used by the ILO is “the general nature and unclear conditions that must be met by people to be classified as unemployed, which means that the difference between unemployed and professionally inactive people is very fluid in some cases”⁹.

In Poland, in 2014–2018, the registered unemployment rate decreased almost twice. At the beginning of the analysed period it was 11.4%, at the end – 5.8%. Similar downward trends are observed in all examined voivodships and subregions. In 2018, the highest unemployment rate was recorded in the Podkarpackie Voivodeship and the Przemyski

⁸ <https://stat.gov.pl/metainformacje/sloownik-pojec/pojecia-stosowane-w-statystyce-publicznej/2388,pojcie.html>.

⁹ P. Janukowicz (2010), *Bezrobocie rejestrowane a bezrobocie według BAEL*, Olsztyn: Wojewódzki Urząd Pracy w Olsztynie.

subregion located in this voivodeship, where the indicator value significantly deviated from the corresponding values for the country.

In Belarus, despite recorded fluctuations, the value of the registered unemployment rate is also decreasing. In 2014 it was 0.5%, in 2018 0.3%. The examined oblasts reached almost the same values as the country average, the registered unemployment rates remained at steady, low level. The unemployment rate of 1.2% recorded in 2015 in the Gomel oblast can be considered exceptionally high in Belarus.

As in the neighbouring countries, also in Ukraine the registered unemployment rate decreased in 2014–2018. In 2014, the analysed indicator was 2.4%, in 2018 – 1.9%. Among the examined units, the Rivnenska oblast with the unemployment rate of 2.5% in 2018 stands out negatively, while a positively low value of the indicator was recorded in the Zakarpatska Oblast.

To sum up, it should be emphasised that the situation on the Belarusian, Ukrainian and Polish labour market is gradually improving, in terms of the decreasing registered unemployment rates. Among the examined countries, a relatively difficult situation is observed in Poland, where the unemployment rate is the highest. In 2018, the highest value of the analysed indicator was recorded in the Przemyski subregion, the lowest – in the Minsk Oblast. Comparing data of the registered unemployment rate with the size of the unemployment rate according to the ILO methodology, there are clear disproportions between the values corresponding to the countries and oblasts/voivodeships. In Poland, the level of the unemployment rates remains relatively similar, but in Ukraine and Belarus different methodological approaches have brought completely different results of unemployment measures. In Belarus, the number of registered unemployed includes only persons registered in the employment office and does not include the unemployed who are looking for work on their own. Due to the fact that Belarus has a low level of unemployment benefits, the number of unemployed is relatively small. (Table 7).

Table 7. Number of registered unemployed persons and the registered unemployment rate

SPECIFICATION	Number of registered unemployed persons (in thousands)					Registered unemployment rate (%)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
POLAND	1,825.2	1,563.3	1,335.2	1,081.7	968.9	11.4	9.7	8.2	6.6	5.8
Podlaskie Voivodeship	60.4	55.0	48.4	40.0	36.8	12.9	11.8	10.3	8.5	7.7
Białostocki subregion	26.8	24.2	20.8	16.9	15.5	13.3	12.0	10.2	8.3	7.4
Suwalski subregion	14.3	13.2	11.3	9.2	8.9	11.9	10.9	10.0	8.5	7.6
Łomżyński subregion	19.3	17.6	16.2	13.8	12.4	13.5	12.6	10.9	8.8	8.4



SPECIFICATION	Number of registered unemployed persons (in thousands)					Registered unemployment rate (%)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Mazowieckie Voivodeship	249.8	216.5	188.9	154.1	136.5	9.6	8.3	7.0	5.6	4.9
Ostrołęcki subregion	24.5	21.3	19.6	16.5	14.5	15.5	13.5	12.3	10.4	9.2
Siedlecki subregion	20.5	17.8	15.3	12.5	11.3	11.7	10.3	8.7	7.2	6.4
Lubelskie Voivodeship	116.9	107.9	95.6	81.2	74.4	12.6	11.7	10.3	8.8	8.0
Bialski subregion	19.0	17.0	15.3	12.7	11.9	15.4	13.9	12.5	10.5	9.7
Lubelski subregion	32.9	30.7	27.5	23.9	21.5	10.3	9.6	8.5	7.3	6.5
Puławski subregion	26.2	23.3	20.9	16.5	15.8	12.3	11.0	9.8	7.8	7.5
Chełmsko-Zamojski subregion	38.8	36.9	31.9	28.1	25.2	14.3	13.6	11.9	10.6	9.5
Podkarpackie Voivodeship	137.9	123.5	107.6	91.0	82.9	14.6	13.2	11.5	9.6	8.7
Przemyski subregion	29.3	26.5	24.5	21.6	19.5	17.3	15.9	14.7	13.0	11.7
Rzeszowski subregion	38.9	35.5	31.2	26.9	25.6	13.1	12.0	10.4	8.7	8.2
Tarnobrzeski subregion	36.7	32.2	26.6	22.0	19.3	13.9	12.4	10.2	8.5	7.4
Krośnieński subregion	33,1	29.3	25.2	20.5	18.5	15.5	13.9	12.0	9.8	8.8
BELARUS	24.2	43.3	35.3	22.9	12.5	0.5	1.0	0.8	0.5	0.3
Grodno Oblast	3.1	5.4	4.3	2,8	1.8	0.6	1.1	0.9	0.6	0.4
Brest Oblast	4.0	6.6	5.6	4,1	2.2	0.6	1.1	0.9	0.7	0.4
Minsk Oblast	3.3	6.1	5.0	3,3	1.8	0.5	0.9	0.7	0.5	0.3
Gomel Oblast	4.6	7.3	5.8	4,3	2.0	0.7	1.2	1.0	0.7	0.3
UKRAINE	458.6	461.1	407.2	352,5	322.9	2.4	2.7	2.4	2.1	1.9
Volynska Oblast	11.4	11.5	11.0	9,7	8.1	2.6	2.7	2.6	2.3	2.0
Lvivska Oblast	24.1	23.2	20.0	15,9	14.1	2.2	2.1	1.8	1.4	1.3
Zakarpatska Oblast	9.7	9.0	7.3	5,7	5.1	1.8	1.6	1.3	1.1	0.9
Rivnenska Oblast	16.8	17.1	14.9	14,4	12.6	3.5	3.5	3.1	3.0	2.5
Ternopilaska Oblast	15.2	12.4	11.1	9,7	8.7	3.4	2.8	2.5	2.2	1.9
Ivano-Frankivska Oblast	15.9	14.9	12.6	10,7	8.7	2.8	2.6	2.2	1.9	1.5

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus and the Ministry of Foreign Affairs (Belarus) and the State Statistics Service of Ukraine (Ukraine)

One of the key problems correlated with the unemployment phenomenon is long-term unemployment, which determines the share of persons registered in the labour office

as unemployed for over 12 months within the total number of unemployed. Long-term unemployment has a number of negative consequences. It causes, among others, loss or reduction of skills and professional qualifications, as well as reduction of self-esteem, which may result in feeling helpless in life and in losing of motivation to continue looking for a job. Due to the psychological burden, the unemployed is exposed to depression and in extreme cases, may fall into addiction. Long-term unemployment is generally associated with a lower standard of living, which may result in family conflicts and further problems (e.g. poverty). Long-term unemployment is thus a negative social phenomenon which can initiate further problems and social pathologies. It is also a burden for the state, firstly due to the need to support the unemployed by social benefits and, secondly, because it is difficult to bring back a long-term unemployed person to the labour market, which is a burden for institutions supporting the unemployed (e.g. employment offices).

In Poland, in 2014–2018, the share of unemployed people remaining without work for more than 12 months within the total number of the unemployed decreased. In 2014, the indicator for the country was 36.2%, in 2018 – 20%. Similar trends are observed in all analysed voivodeships, however, the pace of change is varied. Positive changes are faster in the Mazowieckie and Podlaskie Voivodeships, they are slower in the Lubelskie Voivodeship. The lowest value of the indicator is observed in the Mazowieckie Voivodeship, the highest in the Lubelskie Voivodeship.

Based on information from 2016–2018, it can be seen that, firstly, in the Brest and Minsk oblasts the value of this indicator is increasing. The share of the long-term unemployed increased significantly in the Brest oblast, which should be a signal to the authorities to introduce or intensify measures to counteract long-term unemployment. Secondly, it turns out that the only examined Belarusian region, in which the share of the unemployed significantly dropped, is the Grodno oblast. On the other hand, in the Gomel oblast the situation is dynamic. Though in 2018, compared to 2016, the percentage of long-term unemployed slightly decreased.

The Ukrainian oblasts were not analysed due to the fact that data on long-term unemployment is gathered only at the state level. They show that in 2014–2018 the percentage of long-term unemployed people increased significantly, from 12.8% at the beginning of the analysed period to 21.6% in 2018 (Table 8).

Table 8. Long-term unemployment

SPECIFICATION	% of unemployed seeking work for over 12 months				
	2014	2015	2016	2017	2018
POLAND	36.2	32.0	27.0	23.6	20.0
Podlaskie Voivodeship	44.7	44.4	34.3	25.0	.
Białostocki subregion	.	.	.	.	.



Suwalski subregion	.	.	.	.	.
Łomżyński subregion	.	.	.	.	.
Mazowieckie Voivodeship	27.6	20.2	18.1	21.4	13.1
Ostrołęcki subregion	.	.	.	.	.
Siedlecki subregion	.	.	.	.	.
Lubelskie Voivodeship	34.3	36.2	34.7	29.9	33.9
Biański subregion	.	.	.	.	.
Lubelski subregion	.	.	.	.	.
Puławski subregion	.	.	.	.	.
Chełmsko-Zamojski subregion	.	.	.	.	.
Podkarpackie Voivodeship	36.5	28.6	27.3	23.1	32.8
Przemyski subregion	.	.	.	.	.
Rzeszowski subregion	.	.	.	.	.
Tarnobrzeski subregion	.	.	.	.	.
Krośnieński subregion	.	.	.	.	.
BELARUS	19.3	18.5	20.8	25.5	24.7
Grodno Oblast	22.7	24.6	24.3	24.8	16.2
Brest Oblast	16.1	10.8	20.0	22.6	30.1
Minsk Oblast	10.9	17.3	16.7	22.2	20.3
Gomel Oblast	20.8	24.8	27.6	31.4	26.4
UKRAINE	12.8	24.0	25.3	26.7	21.6
Volynska Oblast					
Lvivska Oblast					
Zakarpatska Oblast					
Rivnenska Oblast					
Ternopilska Oblast					
Ivano-Frankivska Oblast					

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus and the Ministry of Foreign Affairs and the Ministry of Foreign Affairs (Belarus) and the State Statistics Service of Ukraine (Ukraine)

3.3.3 EDUCATION STRUCTURE OF UNEMPLOYED PERSONS

Another element of labour market characteristics is the education structure of unemployed people. The data obtained for 2016–2018 illustrate the share of unemployed (according to the ILO methodology) with higher, post-secondary and vocational secondary, general secondary, vocational and primary education in the total number of unemployed. In Poland, during two analysed years, the percentage of unemployed with higher and secondary education increased, while the share of unemployed with low education level (primary and vocational) decreased. Despite this, persons with higher and secondary general education are invariably the fewest in the total number of unemployed. Their share is a few percentage points lower than the share of other groups. Similar trends are visible at the regional level. In 2016–2018, the highest share of unemployed with higher education was in the Mazowieckie

Voivodeship (higher in the Ostrołęcki subregion than in the Siedlecki subregion), with secondary education – in the Podkarpackie Voivodeship (especially in the Tarnobrzeski subregion), and with vocational and primary/lower secondary education – in the Podlaskie and Mazowieckie Voivodeships (especially in the Lomżyński and Ostrołęcki subregions).

In Belarus, the situation is partly similar. In 2016–2018, the share of unemployed with higher and secondary education increased, while the percentage of unemployed with vocational and primary education¹⁰ decreased. The education structure of unemployed people shows that the smallest share concerns people with low qualifications, with primary education. In turn, the largest share of unemployed are people with vocational education. The share of unemployed with higher education remains at the same level as in Poland. On the other hand, the share of unemployed Belarusians with secondary education is almost twice as high. In the oblasts, the situation remains the same as that observed in the country. In 2018, the highest number of unemployed with a high level of education (higher and post-secondary education) was recorded in the Grodno oblast, with secondary education – in the Brest oblast, while with vocational and primary education - in the Minsk oblast. Perhaps the high share of highly qualified unemployed persons in the Grodno oblast is one of the consequences of the regional economic development, where sector I (agriculture) and sector II (industry) have a significant share in the economy.

In Ukraine, as in the case of long-term unemployment, the education structure of unemployed is not available in public statistical databases, therefore it is impossible to carry out analyses (Table 9).

Table 9. Education structure of unemployed

SPECIFICATION	2016					2018				
	Higher	Post-secondary,	General secondary	Vocational	Primary/lower secondary	Higer	basic/lower secondary	general secondary	Vocational	Primary/lower secondary
POLAND	13.3	21.7	10.6	26.6	27.9	14.1	22.0	11.3	25.6	27.0
Podlaskie Voivodeship	14.5	22.9	11.5	23.7	27.4	15.1	22.3	12.4	22.9	27.3
Białostocki subregion	17.8	24.1	11.4	22.2	24.4	19.1	23.5	12.6	20.6	24.2
Suwalski subregion	12.7	21.7	11.3	25.1	29.3	12.8	21.3	12.3	24.6	29.1

¹⁰ Nine years of education completed.



Łomżyński subregion	10.9	22.6	11.9	24.3	30.3	11.5	21.7	12.2	24.5	30.1
Mazowieckie Voivodeship	15.4	21.7	11.2	24.1	27.5	16.3	21.6	11.8	23.3	27.0
Ostrołęcki subregion	11.4	23.6	12.6	26.1	26.3	12.8	23.3	13.5	25.2	25.1
Siedlecki subregion	12.8	21.6	13.0	28.3	24.3	13.5	22.3	12.7	27.7	23.7
Lubelskie Voivodeship	15.4	24.5	11.7	24.2	24.3	15.9	24.9	12.4	23.1	23.7
Bialski subregion	13.1	23.8	11.7	26.3	25.0	13.7	23.8	12.4	25.5	24.7
Lubelski subregion	14.5	24.7	11.6	24.7	24.5	14.2	25.9	12.3	23.9	23.8
Puławski subregion	18.5	23.9	11.5	21.8	24.3	20.6	23.6	12.1	20.4	23.3
Chelmsko-Zamojski subregion	14.2	25.2	12.1	25.1	23.4	13.9	25.9	13.0	24.0	23.3
Podkarpackie Voivodeship	15.0	25.4	10.4	29.2	20.1	15.5	26.1	11.2	27.8	19.5
Przemyski subregion	14.0	26.2	7.9	31.7	20.2	13.8	27.1	9.0	30.5	19.5
Rzeszowski subregion	14.0	22.7	12.3	28.8	22.1	14.3	23.1	13.3	27.8	21.4
Tarnobrzeski subregion	16.3	27.6	9.7	27.6	18.8	17.0	28.1	10.4	26.0	18.4
Krośnieński subregion	15.2	24.6	11.8	28.9	19.6	16.2	25.3	12.0	27.6	19.0
BELARUS	15.4	18.2	25.1	38.3	3.1	18.5	18.9	26.2	33.1	3.3
Grodno Oblast	13.2	23.9	20.0	40.4	2.5	20.8	20.4	23.0	32.9	2.9
Brest Oblast	10.6	17.7	33.1	37.4	1.2	15.8	21.0	29.2	33.3	0.8
Minsk Oblast	13.1	13.3	22.1	47.1	4.4	18.5	17.3	25.2	34.1	4.9
Gomel Oblast	10.4	17.6	27.8	40.4	3.8	15.0	19.8	29.5	32.0	3.6

Source: Own study based on data from the Central Statistical Office (Poland) and the National Statistical Committee of the Republic of Belarus (Belarus) (no data or Ukraine)

3.3.4 FREE JOBS

The level of unemployment may be caused by a particular lack of vacancies, therefore, in order to obtain the best possible characteristics of the labour market in Ukraine, Belarus and Poland, data on available job offers were analysed. The available data allow to indicate certain trends, but the possibilities for extended characteristics are limited.

First of all, in the 2014-2018 period, in Poland, Ukraine and Belarus there was an increase in the number of job offers - they almost doubled.



Secondly, as far as the regional level is concerned, it should be noted that the largest number of offers appeared in the Minsk, Grodno and Gomel oblasts in Belarus. The smallest increase in available jobs was observed in the Ternopilska Oblast and the Podkarpackie Voivodeship. A stable situation is recorded in the Lubelskie Voivodeship (Table 10).

Table 10. Number of job offers (in thousand)

SPECIFICATION	Job offers (in thousands)				
	2014	2015	2016	2017	2018
POLAND	39.7	51.2	63.0	66.9	62.7
Podlaskie Voivodeship	0.6	0.7	0.9	1.3	1.2
Białostocki subregion	.	.	.	.	.
Suwalski subregion	.	.	.	.	.
łomżyński subregion	.	.	.	.	.
Mazowieckie Voivodeship	4.0	5.2	6.1	8.0	5.4
Ostrołęcki subregion	.	.	.	.	.
Siedlecki subregion	.	.	.	.	.
Lubelskie Voivodeship	1.6	1.5	1.8	1.9	1.6
Biański subregion	.	.	.	.	.
Lubelski subregion	.	.	.	.	.
Puławski subregion	.	.	.	.	.
Chełmsko-Zamojski subregion	.	.	.	.	.
Podkarpackie Voivodeship	1.3	1.5	2.1	1.8	1.7
Przemyski subregion	.	.	.	.	.
Rzeszowski subregion	.	.	.	.	.
Tarnobrzeski subregion	.	.	.	.	.
Krośnieński subregion	.	.	.	.	.
BELARUS	33.6	28.7	36.0	53.9	74.9
Grodno Oblast	3.6	4.6	5.4	8.0	11.3
Brest Oblast	3.4	2.4	3.4	6.1	8.5
Minsk Oblast	4.9	3.7	5.2	8.9	14.2
Gomel Oblast	3.5	3.3	6.7	8.7	10.1
UKRAINE	25.9	36.0	36.0	50.4	58.4
Volynska Oblast	0.8	1.6	1.6	2.2	2.6
Lvivska Oblast	1.5	2.8	2.8	5.7	6.2
Zakarpatska Oblast	0.2	0.4	0.4	0.8	1.2
Rivnenska Oblast	0.7	0.9	0.9	1.1	1.3
Ternopilska Oblast	1.0	1.1	1.1	1.0	1.2
Ivano-Frankivska Oblast	0.6	0.5	0.5	1.1	1.4

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus and the Ministry of Foreign Affairs (Belarus) and the State Statistics Service of Ukraine (Ukraine)

3.3.5 EDUCATION



The most important basic elements affecting the social development are the education development level, the education system and the quality of educational services. The obligation of compulsory education is generally managed by the education system.

Education in the Republic of Belarus is divided into core, additional and special needs education. Core education includes preschool, general secondary, vocational and technical, secondary specialized, higher and postgraduate education. The country has a well-developed system of preschool education, although it is not compulsory. The general secondary education system is functioning in Belarus. The modern model of general education school includes three stages:

- Stage I - primary education (grades I - IV);
- Stage II - basic education (grades V – IX);
- Stage III - secondary education (grades X - XI).

School education starts at the age of 6. General basic education (grades 1-9) is compulsory. After successfully completing basic school, young people have the opportunity to continue their education at colleges, lyceums and vocational-technical schools, where they receive both general secondary education and vocational training. One can get general secondary education at school also. The General Secondary or Secondary Specialised Education Certificate is the main document entitling people to enter a higher education institution.

In Belarus, higher education institutions may be of different types: classical universities, specialized universities (academy, conservatory), institutes and higher colleges.

Training of scientific and scientific-pedagogical personnel is carried out in postgraduate studies, doctoral studies of institutions (organizations) that implement educational programs of postgraduate education.

In 2002, Belarus introduced a ten-point system for evaluating knowledge in general secondary, vocational-technical, secondary specialized and higher education institutions to replace the five-point system.

Special needs education is designed for children with special needs. Additional education is divided into additional education for children and youth and additional education for adults.

In Poland, the education system includes public and non-public schools: nurseries, kindergartens, primary, upper middle, post-secondary and artistic schools, as well as special schools and educational and guardianship facilities. As the result of the reform of the education system completed in 2019, middle schools were liquidated. The current new structure of Polish education includes: eight-year primary school, four-year general secondary school, five-year technical college, three-year vocational school (1st



degree), three-year special professional school, two-year vocational school (2nd degree), post-secondary school¹¹. Students are rated on a six-grade scale, with six being the highest (excellent) and one being the lowest (unsatisfactory). Compulsory education is carried out by children between 7 and 18 years of age. At the request of parents, a child who is 6 years old can start primary school. Education after 18 years of age is not compulsory. After graduating from secondary school and passing the final exams (matura), Polish students may continue their studies within the higher education system- in public or private institutions.

The Ukrainian education system is slightly different. Currently, the school system has a three-level structure:

1. primary school including classes I-IV,
2. lower secondary school including classes V-IX,
3. higher secondary school including classes X-XII¹².

Compulsory education regards children from 6 to 17 years old. Ukrainian students are graded according to a twelve-point scale – more points mean a higher/better grade¹³. Higher secondary school ends with two final exams, the first written and evaluated at school and the second being an external exam. The external exam allows students to take up post-secondary education. After external exams, higher secondary school graduates may apply for five-year university studies, ending with the title of specialist

One of the basic elements characterising the education system is the number of schools. However, due to the different education systems in Poland, Ukraine and Belarus, data on the number of schools are not comparable. This is why comparative analyses are not justified as they could lead to incorrect conclusions. In Ukraine and Belarus, general schools include primary, middle and secondary schools within three stages of education (I-IV, V-IX, X-XII). In Poland, secondary schools are the second stage of education, after basic, compulsory education. However, in order to make some analyses, the number of schools in Poland was added together, thus obtaining numbers that can be referred to the numbers characterising the education systems in Ukraine and Belarus.

The latest statistical data available show a clear trend recorded in the years 2014–2018. In all countries the number of schools decreased. The pace of these changes is the quickest in Ukraine and slightly slower in Poland. In Belarus the decrease of the number of schools was the slowest. In the Polish part of the support area, the largest number of schools are located in the Mazowieckie Voivodeship, where their numbers do not differ between subregions. In turn, the fewest schools are in the Podlaskie Voivodeship,

¹¹ <http://www.sejm.gov.pl/sejm8.nsf/PrzebiegProc.xsp?nr=1030>.

¹²A. Chłopek (2009), *Zarys szkolnictwa polskiego na Ukrainie*, Postscriptum Polonistyczne nr 1(3).

¹³ Ibidem.



in the Suwalski subregion. The Rzeszowski subregion shows the highest stability in the number of schools, as in 2014-2018 their number did not change.

In Ukraine, most schools are located in the Lvivska Oblast. At the same time, the decrease in the number of schools was the largest there. The smallest number of schools are in the Rivnenska Oblast, while the most stable number of educational institutions is in the Zakarpatska Oblast.

As mentioned earlier, Belarus shows the greatest stability in the number of educational institutions. Most schools are in the Gomel Oblast and almost the same number is in the Minsk Oblast. The smallest number of schools is in the Grodno Oblast, which is also characterised by a high stability of the number of institutions providing educational services (Table 11).

Table 11. Number of schools in 2014–2018

SPECIFICATION	General secondary schools					Primary schools					Middle schools					General secondary schools together				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
POLSKA	x	x	x	x	x	13,528	13,563	13,517	14,571	14,584	7,635	7,684	7,706	1,941	1,695	3,991	3,888	3,818	3,717	3,534
Podlaskie Voivodeship	x	x	x	x	x	414	416	408	437	435	232	233	241	83	71	128	121	123	113	105
Białostocki subregion	x	x	x	x	x	135	140	137	157	157	85	84	89	23	20	48	46	50	49	47
Suwalski subregion	x	x	x	x	x	112	110	108	112	111	65	66	67	24	20	28	27	26	25	23
Lomżyński subregion	x	x	x	x	x	167	166	163	168	167	82	83	85	36	31	52	48	47	39	35
Mazowieckie Voivodeship	x	x	x	x	x	1,761	1,774	1,771	1,954	1,953	1,023	1,038	1,039	262	228	567	553	551	545	537
Ostrołęcki subregion	x	x	x	x	x	222	223	220	224	222	103	104	105	19	16	49	47	47	42	41
Siedlecki subregion	x	x	x	x	x	211	208	203	218	217	124	124	124	23	19	46	45	44	42	41
Lubelskie Voivodeship	x	x	x	x	x	977	971	960	981	978	479	481	480	147	135	253	243	231	220	203
Bialski subregion	x	x	x	x	x	162	158	156	158	154	70	72	72	27	24	35	36	35	30	29
Lubelski subregion	x	x	x	x	x	239	242	240	252	253	116	116	116	42	37	86	80	79	81	77
Puławski subregion	x	x	x	x	x	254	254	252	265	264	129	130	129	35	31	66	65	59	57	48
Chełmsko-Zamojski subregion	x	x	x	x	x	322	317	312	306	307	164	163	163	43	43	66	62	58	52	49
Podkarpackie Voivodeship	x	x	x	x	x	1,092	1,087	1,081	1,115	1,116	578	582	583	109	98	196	196	196	192	179
Przemyski subregion	x	x	x	x	x	222	220	219	228	227	121	122	122	30	28	41	42	41	39	36
Rzeszowski subregion	x	x	x	x	x	312	312	311	327	326	151	151	152	28	25	52	51	52	52	52
Tarnobrzeski subregion	x	x	x	x	x	281	278	277	281	282	152	153	153	31	28	64	64	63	62	56
Krośnieński subregion	x	x	x	x	x	277	277	274	279	281	154	156	156	20	17	39	39	40	39	35
BELARUS¹⁴	3,293	3,230	3,155	3,067	3,035	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Grodno Oblast	378	378	371	364	360	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

¹⁴ General secondary schools include primary, basic, secondary, junior high and secondary schools within three stages of education (I-IV, V-IX, X-XII).

SPECIFICATION	General secondary schools					Primary schools					Middle schools					General secondary schools together				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Brest Oblast	563	554	541	538	535	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Minsk Oblast	572	558	552	545	543	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Gomel Oblast	585	579	571	564	563	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
UKRAINE¹⁵	17,604	17,337	16,858	16,180	15,521	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Volynska Oblast	773	753	708	656	629	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Lvivska Oblast	1,399	1,386	1,363	1,262	1,208	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Zakarpatska Oblast	670	669	667	668	665	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Rivnenska Oblast	680	677	659	641	608	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Ternopilaska Oblast	849	837	828	762	726	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Ivano-Frankivska Oblast	744	740	727	719	705	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

¹⁵ General secondary schools include primary, basic, secondary, junior high and secondary schools within three stages of education (I-IV, V-IX, X-XII).



Another important issue regarding the education system in the surveyed units is the number of universities and students covered by statistics. In 2014–2018, the number of universities in Poland, Ukraine and Belarus remained at a relatively stable level. In Poland and Belarus it slightly decreased, while in Ukraine it increased. The largest number of universities are in Poland, the fewest in Belarus. At the regional level, the Mazowieckie Voivodeship – with Warsaw being the country’s biggest university centre. In other voivodeships, the difference in the number of universities in relation to the Mazowieckie Voivodeship is visible. In the Podkarpackie, Lubelskie and Podlaskie Voivodeships, there are a dozen or so higher education institutions offering studies, thus several times fewer than in the Mazowieckie Voivodeship, where in 2019 there were 97 facilities. In Ukraine, the largest number of universities are located in the Lvivska Oblast, while in Belarus – in the Gomel Oblast.

In addition to the decreasing number of universities in two countries covered by the Programme, in 2014–2018, in Poland, Ukraine and Belarus the (nominal) number of students also decreased. In order to obtain comparable data, the number of students in each of the examined units was divided by 10,000 inhabitants, which made the relationship between the countries and regions possible to observe. It turns out that, in 2018, in Poland the largest number of students per 10,000 inhabitants was in the Mazowieckie Voivodeship (457), but at the subregional level this indicator was the highest in the Lubelskie subregion (856). In the Ukrainian and Belarusian oblasts, the number of students per 10,000 population reached lower values. In Ukraine, the region with the highest indicator value was the Lvivska Oblast (432 in 2018). In Belarus the largest amount of higher education students per 10,000 inhabitants was in the Gomel and Grodno Oblasts (213 and 211 respectively in 2018).

The general trend in the number of universities in all surveyed units is analogous to that observed in the analysis of primary and secondary schools. The number of educational institutions has been decreasing in recent years. In the case both of universities and lower education institutions, this is probably due to the decreasing number of students. It is a consequence of negative demographic trends, primarily, the decreasing number of people of working and pre-working age (Table 12).

Table 12. Higher education

SPECIFICATION	Higher education institutions					Students (in thousands)					Students per 10,000 population				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
POLAND	434	415	390	397	392	1,468.4	1,403.8	1,347.5	1,290.2	1,228.7	382	365	351	336	320
Podlaskie Voivodeship	16	16	16	16	16	38.4	35.7	34.2	31.5	29.8	322	300	288	266	252
Białostocki subregion	10	10	10	10	10	32.6	30.3	29.1	26.4	24.8	638	594	568	515	483
Suwalski subregion	1	1	1	1	1	1.8	1.7	1.5	1.4	1.3	65	61	56	53	49
Łomżyński subregion	5	5	5	5	5	4.0	3.7	3.6	3.6	3.6	99	92	90	91	91
Mazowieckie Voivodeship	105	102	94	96	97	282.9	275.4	269.7	258.9	246.8	530	515	503	481	457
Ostrołęcki subregion	2	2	2	2	1	1.0	0.8	0.7	0.6	0.6	26	21	17	16	14
Siedlecki subregion	2	2	2	2	2	8.7	7.4	6.6	6.4	6.3	206	176	157	153	149
Lubelskie Voivodeship	18	18	18	17	17	82.0	78.4	74.6	72.5	69.9	382	366	350	341	330
Bialski subregion	1	1	1	1	1	4.9	4.5	4,3	4.0	3.7	161	147	142	133	122
Lubelski subregion	9	9	9	9	9	69.7	67.3	64.3	63.0	61.0	978	946	904	884	856
Puławski subregion	3	3	3	2	2	2.4	2.6	2.6	2.3	2.1	49	54	55	47	43
Chełmsko-Zamojski	5	5	5	5	5	5.0	3.9	3.3	3.1	3.1	78	62	52	50	50
Podkarpackie Voivodeship	14	14	14	17	18	59.3	56.1	52.6	49.5	46.9	279	264	247	233	220
Przemyski subregion	5	5	4	5	6	5.2	5.0	4.1	3.9	3.6	132	127	105	99	91
Rzeszowski subregion	4	4	5	6	6	45.9	43.9	41.9	40.0	37.9	729	696	660	627	591
Tarnobrzeski subregion	2	2	2	3	3	3.7	3.3	2.7	1.8	1.7	60	53	44	30	28
Krośnieński subregion	3	3	3	3	3	4.4	3.9	3.9	3.8	3.7	91	81	80	79	77
BELARUS	54	52	51	51	51	371.8	346.6	325.0	299.3	282.8	392	365	342	315	298
Grodno Oblast	3	3	3	3	3	27.7	26.4	25.2	23.2	21.9	263	251	240	222	211
Brest Oblast	4	4	4	4	4	30.0	27.4	25.6	22.7	20.8	216	197	184	164	151
Minsk Oblast	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Gomel Oblast	7	7	6	6	6	43.6	39.2	35.4	32.1	30.1	306	275	249	226	213
UKRAINE	277	288	287	289	282	1,438.0	1,375.2	1,369.4	1,330.0	1,322.3	335	322	322	314	314
Volynska Oblast	4	4	4	4	4	19.8	18.9	19.3	18.2	18,1	190	181	185	175	175

SPECIFICATION	Higher education institutions					Students (in thousands)					Students per 10,000 population				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Lvivska Oblast	21	21	21	22	23	114.0	111.0	111.1	108.7	109.0	449	438	438	413	432
Zakarpatska Oblast	6	5	5	5	5	19.7	18.7	19.5	20.7	21.0	156	149	155	165	167
Rivnenska Oblast	5	5	5	5	4	31.8	28.5	28.2	26.1	26.2	274	245	243	225	226
Ternopil'ska Oblast	8	8	8	6	6	33.5	32.9	34.6	33.5	34.1	313	309	327	318	326
Ivano-Frankiv'ska Oblast	5	5	5	5	5	32.4	31.0	31.1	30.5	30.9	234	224	225	221	225

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus and the Ministry of Foreign Affairs (Belarus) and the State Statistics Service of Ukraine (Ukraine)



3.3.6 HEALTH

The World Health Organization (WHO) defines health as a state of physical, mental and social well-being. This definition is very broad and not very precise, which means that statistical analyses of population health do not have a specific methodological framework. For the purposes of this analysis, the health category will be operationalised with regards to the following elements:

- average (further) life expectancy in the years 2014–2018,
- number of deaths by main causes in 2014 and in the years 2017–2018,
- selected diseases per 100,000 inhabitants (diagnosed in a given year) in the years 2014–2018,
- analysis of the healthcare system in terms of the number of medical centres, doctors and available places in hospitals in the years 2014–2018.

The first topic analysed was the life expectancy in Poland, Ukraine and Belarus for the years 2014–2018. For Poland, data showing the average life expectancy of citizens without a gender breakdown are not available, these data however are available in Ukrainian and Belarusian statistics. The indicator determines the average number of remaining years of life for an individual at a given age and in a given group (according to the WHO definition). Differences in life expectancy may depend, among others, on the accessible health care, poverty levels and environmental living conditions. Lifestyle, genetics or occupation may also influence people's health.

Secondly, it should be emphasised that the examined period is relatively short, therefore the differences between the initial year and the last year will not be significant. This is due to the advancement of living and hygiene conditions, which in the region of Central and Eastern Europe remain at a relatively high level, and their condition did not change drastically during the examined period.

The longest average life expectancy is observed in Poland, but a significant disproportion occurs between men and women: women (81.7 years) are expected to live almost 10 years longer than men (73.8 years). There is no significant difference between the regions. The longest life expectancy, both for men and women, is recorded in the Podkarpackie Voivodeship, the shortest for women in the Mazowieckie Voivodeship and for men in the Lubelskie Voivodeship.

In Belarus, life expectancy slightly increased in the four-year period amounting to 74.5 in 2018. The longest life expectancy, both for women and men, was noted in the Brest Oblast, the shortest in the Minsk oblast.

In Ukraine, the value of the indicator in 2014 was 71.4, while in 2018 – 71.8. Thus the average life expectancy increased in this period. However, there are some



disproportions between the regions: the longest life expectancy is in the Ivano-Frankivska Oblast, the shortest – in the Zakarpatska Oblast. Ukrainian women live the longest in the Ternopilska Oblast, while men – in the Ivano-Frankivska Oblast. The shortest life expectancy for men is recorded in the Volynska and for women in the Zakarpatska Oblast.

The spatial distribution of data shows that citizens of central units, in which large urban agglomerations are located, live the shortest. This is the case in Poland and Belarus. The statistics indicate that living in a metropolitan environment may have a negative impact on health and thus on life expectancy (Table 13).

Table 13. Average life expectancy

SPECIFICATION	Average life expectancy					
	Total		Men		Women	
	2014	2018	2014	2018	2014	2018
POLAND	.	.	73.8	73.8	81.6	81.7
Podlaskie Voivodeship	.	.	74.0	74.1	82.8	82.7
Białostocki subregion	.	.	74.5	75.2	82.8	82.6
Suwalski subregion	.	.	73.5	73.3	82.4	83.0
Łomżyński subregion	.	.	73.6	73.2	82.9	82.5
Mazowieckie Voivodeship	.	.	74.0	74.0	81.8	82.0
Ostrołęcki subregion	.	.	73.0	72.9	81.7	82.3
Siedlecki subregion	.	.	x	73.5	x	82.0
Lubelskie Voivodeship	.	.	73.2	73.5	82.2	82.3
Bialski subregion	.	.	72.6	72.3	81.4	82.0
Lubelski subregion	.	.	74.0	74.1	82.1	82.3
Puławski subregion	.	.	72.6	73.5	82.5	82.4
Chełmsko-Zamojski subregion	.	.	73.3	73.3	82.2	82.4
Podkarpackie Voivodeship	.	.	75.1	75.6	82.8	83.2
Przemyski subregion	.	.	74.5	74.4	82.1	82.9
Rzeszowski subregion	.	.	75.1	76.3	82.9	83.4
Tarnobrzeski subregion	.	.	75.0	75.2	83.0	83.3
Krośnieński subregion	.	.	75.6	76.0	82.7	83.1
BELARUS	73.2	74.5	67.8	69.2	78.4	79.4
Grodno Oblast	73.3	74.0	67.9	68.6	78.5	79.2
Brest Oblast	73.7	74.7	68.4	69.7	78.8	79.4



Minsk Oblast	72.0	73.5	66.4	68.2	77.7	78.7
Gomel Oblast	72.5	73.9	66,9	68.5	77.9	79.1
UKRAINE	71.4	71.8	66.3	66.7	76.4	76.7
Volynska Oblast	71.4	71.5	65.7	66.0	77.1	77.2
Lvivska Oblast	73.1	73.4	68.2	68.3	77.9	78.4
Zakarpatska Oblast	71.2	71.0	67.0	66.8	75.3	75.2
Rivnenska Oblast	71.2	71.9	65.7	66.9	76.7	76.9
Ternopilaska Oblast	73.2	73.4	68.3	68.2	78.0	78.6
Ivano-Frankivaska Oblast	73.1	73.7	68.3	68.8	77.8	78.5

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

Another key element of the characteristics, as already mentioned, is the analysis of the number and causes of deaths.

The latest available data – from 2017 for Poland and from 2018 for Ukraine and Belarus – show that the number of deaths was the highest in Ukraine, the lowest in Belarus.

In all the examined countries, the most common cause of death was cardiovascular diseases. In Poland their share in the total number of deaths is 41.5%, in Belarus – 55.5%, and in Ukraine – 56.5%. The highest percentage of deaths due to cardiovascular diseases is recorded in the Puławy subregion, as well as in the Grodno and Ternopilaska Oblasts.

In Poland and Belarus the second cause of death is cancer, dominating in the Krośnieński subregion and the Gomel Oblast. In Ukraine “other causes” are in second place. The highest values are noted in the Lvivska and Zakarpatska Oblasts.

It should be observed that there is a significant regularity in the regions – the percentage of deaths due to cardiovascular diseases is significantly higher in all Ukrainian and Belarusian oblasts than in Poland.

Other causes of death, such as diseases of digestive or respiratory systems, included in the statistics, are less common in all examined units. Their percentages in the oblasts and voivodeships do not exceed 10% (Table 14).

Table 14. Deaths by causes [in %]

SPECIFICATION	Total			Total cancers			Total cardiovascular diseases			Total respiratory diseases			Total digestive tract diseases			Total external illness and death causes			Other reasons		
	2014	2017	2018	2014	2017	2018	2014	2017	2018	2014	2017	2018	2014	2017	2018	2014	2017	2018	2014	2017	2018
POLAND	100.0	100.0	.	26.6	26.5	.	45.1	41.5	.	5.4	6.5	.	4.1	4.2	.	5.7	4.8	.	13.1	16.5	.
Podlaskie Voivodeship	100.0	100.0	.	23.7	23.4	.	44.8	44.5	.	6.2	7.6	.	4.4	4.0	.	6.5	5.5	.	14.4	14.9	.
Białostocki subregion	100.0	100.0	.	23.3	24.8	.	45.1	43.0	.	6.1	7.3	.	4.6	4.1	.	5.9	5.3	.	15.0	15.4	.
Suwalski subregion	100.0	100.0	.	25.6	24.3	.	41.3	42.9	.	6.4	7.8	.	4.6	4.1	.	7.9	5.5	.	14.2	15.4	.
Łomżyński subregion	100.0	100.0	.	23.0	21.3	.	46.6	47.0	.	6.3	7.9	.	4.1	3.8	.	6.3	5.7	.	13.7	14.2	.
Mazowieckie Voivodeship	100.0	100.0	.	26.1	26.0	.	46.7	37.6	.	7.8	8.1	.	4.4	4.3	.	6.5	4.6	.	8.5	19.5	.
Ostrołęcki subregion	100.0	100.0	.	24.1	23.6	.	46.9	37.0	.	6.6	7.0	.	3.7	4.6	.	8.3	6.5	.	10.5	21.4	.
Siedlecki subregion	100.0	100.0	.	24.0	23.6	.	51.2	41.5	.	6.9	7.6	.	4.7	5.0	.	6.6	5.9	.	6.6	16.3	.
Lubelskie Voivodeship	100.0	100.0	.	23.2	23.5	.	47.0	44.6	.	5.3	4.7	.	3.7	2.9	.	5.5	5.0	.	15.3	19.3	.
Bialski subregion	100.0	100.0	.	21.3	22.5	.	46.1	44.0	.	6.0	5.0	.	3.9	3.2	.	7.3	5.4	.	15.4	19.9	.
Lubelski subregion	100.0	100.0	.	24.4	24.7	.	48.1	43.8	.	5.5	5.3	.	3.9	3.1	.	4.8	3.6	.	13.2	19.6	.
Puławski subregion	100.0	100.0	.	23.2	22.1	.	49.3	48.2	.	4.8	4.2	.	3.8	2.7	.	5.4	4.4	.	13.4	18.4	.
Chełmsko-Zamojski subregion	100.0	100.0	.	22.9	23.7	.	44.6	43.0	.	5.0	4.3	.	3.2	2.9	.	5.4	6.7	.	18.8	19.5	.
Podkarpackie Voivodeship	100.0	100.0	.	23.2	25.1	.	46.1	43.1	.	3.7	6.3	.	2.8	3.7	.	5.0	4.5	.	19.2	17.3	.
Przemyski subregion	100.0	100.0	.	22.1	24.3	.	48.2	44.8	.	3.3	5.4	.	3.0	3.7	.	4.8	3.9	.	18.6	17.8	.
Rzeszowski subregion	100.0	100.0	.	24.0	25.4	.	42.4	41.6	.	3.7	7.0	.	2.6	3.3	.	5.0	4.3	.	22.2	18.4	.
Tarnobrzeski subregion	100.0	100.0	.	22.5	24.5	.	47.9	44.1	.	3.3	5.7	.	2.4	3.9	.	5.1	4.5	.	18.6	17.3	.
Krośnieński subregion	100.0	100.0	.	24.1	26.1	.	46.7	42.4	.	4.5	6.9	.	3.4	3.9	.	4.8	5.0	.	16.6	15.6	.
BELARUS	100.0	100.0	100.0	26.6	15.7	.	45.1	55.5	.	5.4	1.6	.	4.1	2.9	.	5.7	6.7	.	13.1	17.7	.
Grodno Oblast	100.0	100.0	100.0	12.5	13.4	12.8	57.6	56.6	57.6	1.9	2.1	2.1	3.3	3.2	3.1	7.6	6.3	6.4	17.1	18.4	18.0
Brest Oblast	100.0	100.0	100.0	13.0	14.1	14.3	56.8	55.3	57.1	1.0	1.3	1.5	2.7	2.4	2.6	7.3	6.0	6.4	19.2	20.9	18.1
Minsk Oblast	100.0	100.0	100.0	12.3	13.8	14.9	54.5	58.2	55.8	1.6	1.6	2.3	3.2	3.1	3.3	9.0	7.0	6.8	19.4	16.3	16.9

SPECIFICATION	Total			Total cancers			Total cardiovascular diseases			Total respiratory diseases			Total digestive tract diseases			Total external illness and death causes			Other reasons		
	2014	2017	2018	2014	2017	2018	2014	2017	2018	2014	2017	2018	2014	2017	2018	2014	2017	2018	2014	2017	2018
Gomel Oblast	100.0	100.0	100.0	14.4	16.2	16.0	56.2	58.9	56.5	1.1	1.2	1.4	3.1	2.8	3.1	7.4	6.8	6.3	17.8	17.1	12.6
UKRAINE	.	.	100.0	.	.	13.4	.	.	66.7	.	.	2.2	.	.	4.2	.	.	5.3	.	.	8.3
Volynska Oblast	.	.	100.0	.	.	11.3	.	.	67.4	.	.	3.3	.	.	5.2	.	.	6.4	.	.	6.3
Lvivska Oblast	.	.	100.0	.	.	13.4	.	.	62.0	.	.	2.9	.	.	4.3	.	.	5.2	.	.	12.1
Zakarpatska Oblast	.	.	100.0	.	.	12.4	.	.	61.7	.	.	2.7	.	.	5.7	.	.	5.4	.	.	12.1
Rivnenska Oblast	.	.	100.0	.	.	13.1	.	.	71.9	.	.	1.9	.	.	3.6	.	.	5.2	.	.	4.3
Ternopiiska Oblast	.	.	100.0	.	.	12.4	.	.	72.5	.	.	3.5	.	.	3.0	.	.	4.0	.	.	4.6
Ivano-Frankivska Oblast	.	.	100.0	.	.	12.6	.	.	71.0	.	.	1.4	.	.	3.8	.	.	4.1	.	.	7.1

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus and the Ministry of Foreign Affairs (Belarus) and the State Statistics Service of Ukraine (Ukraine)

Another examined feature, describing the “health” category, are selected diseases, such as cancer, HIV, syphilis and tuberculosis per 100,000 inhabitants in the period 2014–2018.

The first observation is that malignant tumors are increasing in all countries. Currently the highest percentage is noted in the Gomel Oblast, the lowest in the Zakarpatska subregion. In 2014–2018, only in the Podkarpackie Voivodeship and in the above-mentioned Zakarpatska Oblast a decrease in the rate of malignant tumors per 100,000 inhabitants was recorded. Attention should also be paid to the Gomel Oblast, where over the years the value of the analysed indicator changed significantly: from 522.5 in 2014 to 631.4 in 2018.

Secondly, the share of HIV incidence per 100,000 inhabitants remains at a stable, low level in Poland, at a significantly higher level in Ukraine, where it slightly decreased, and in Belarus where it increased by about 5 percentage points. Recent available data show that the indicator is particularly high in the Volynska Oblast.

The third examined element, is the incidence of syphilis per 100,000 inhabitants. In Ukraine and Belarus this indicator is decreasing in all oblasts (except for the Ukrainian Zakarpatska Oblast), while in Poland it is increasing. At the regional level, the highest indicator value was recorded in the Mazowieckie Voivodeship and the Volynska Oblast (Table 15).

Table 15. Morbidity of selected diseases in a given year per 100,000 inhabitants

SPECIFICATION	Malignant Tumors		HIV		Syphilis		Tuberculosis	
	2014	2018	2014	2018	2014	2018	2014	2018
POLAND¹	405.7	419.2	0.3	0.3	3.0	4.3	17.4	14.3
Podlaskie Voivodeship	340.8	355.0	0.4	0.3	1.3	0.4	11.2	7.2
Białostocki subregion	.	.	.	.	.	.	.	.
Suwalski subregion	.	.	.	.	.	.	.	.
Łomżyński subregion	.	.	.	.	.	.	.	.
Mazowieckie Voivodeship	328.3	356.0	0.3	0.2	6.6	9.7	18.2	17.8
Ostrolęcki subregion	.	.	.	.	.	.	.	.
Siedlecki subregion	.	.	.	.	.	.	.	.
Lubelskie Voivodeship	401.5	420.4	0.1	0.0	1.4	2.1	26.5	23.3
Białski subregion	.	.	.	.	.	.	.	.
Lubelski subregion	.	.	.	.	.	.	.	.
Puławski subregion	.	.	.	.	.	.	.	.
Chełmsko-Zamojski subregion	.	.	.	.	.	.	.	.
Podkarpackie Voivodeship	436.7	400.3	0,1	0.2	0.6	1.4	15.8	12.4
Przemyski subregion	.	.	.	.	.	.	.	.



SPECIFICATION	Malignant Tumors		HIV		Syphilis		Tuberculosis	
	2014	2018	2014	2018	2014	2018	2014	2018
Rzeszowski subregion	.	.	.	.	.	.	.	.
Tarnobrzeski subregion	.	.	.	.	.	.	.	.
Krośnieński subregion	.	.	.	.	.	.	.	.
BELARUS	484.3	554.5	19.1	24.8	9.2	4.9	34.5	20.2
Grodno Oblast	453.4	513.2	.	.	4.4	2.6	37.4	18.7
Brest Oblast	434.6	522.8	.	.	4.8	3.7	31.1	18.6
Minsk Oblast	472.9	543.2	.	.	7.7	4.0	38.5	21.6
Gomel Oblast	522.5	631.4	.	.	20.1	5.9	47.4	30.6
UKRAINE²	314.0	320.1	45.1	43.1	8.6	6.5	59.6	49.3
Volynska Oblast	273.6	282.2	25.4	25.4	14.0	9.1	68.6	54.6
Lvivska Oblast	334.9	344.4	19.4	18.3	4.8	3.5	71.9	49.0
Zakarpatska Oblast	251.5	248.6	6.6	9.5	8.0	8.6	58.2	58.1
Rivnenska Oblast	269.7	256.0	22.3	18.2	9.8	8.1	55.7	42.0
Ternopilaska Oblast	305.4	323.5	9.9	9.1	7.7	3.5	46.8	35.2
Ivano-Frankivaska Oblast	279.3	286.8	13.3	12.1	9.5	8.8	63.9	49.3

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus and the Ministry of Foreign Affairs (Belarus) and the State Statistics Service of Ukraine (Ukraine)

The last analysed issue affecting the state of population health is the healthcare system. In this regard, the number of health medical centres, number of doctors and number of beds in hospitals were analysed. Numerical results were divided per 10,000 inhabitants in order to maintain methodological correctness and to enable the comparison of the obtained indicators.

As far as the number of medical centres per 10,000 inhabitants is concerned, the situation is improving in Ukraine and Poland, as evidenced by the increasing value of the indicator. In Belarus, stabilisation is observed in this respect. At the regional level, the lowest value of the indicator was recorded in the Lvivska Oblast, the highest – in the Białostocki subregion in the Podlaskie Voivodeship.

In 2014–2018, the indicator of the number of doctors per 10,000 inhabitants increased in all examined units. Extreme values of the indicator are noticed in the Polish subregions: the highest was in the Lubelski subregion (109 in 2018), significantly above the values in other units, while the lowest in the Łomżyński subregion, where the number of doctors per 10,000 inhabitants was 26.

The last analysed element is the number of beds in hospitals per 10,000 inhabitants. The biggest number of beds was observed in the Gomel Oblast (90.5 in 2014 and 87.2 in 2018). The smallest number of places in hospitals per 10,000 inhabitants was recorded in the Ostrołęcki subregion, where there were less than twice the number of



beds than in the leading Gomel Oblast. The value of the indicator in the Ostrołęcki subregion in 2014 was 37.7, while in 2018 – 38.7. It should also be emphasised that general trends observed at the national level are pessimistic, as in Belarus, Ukraine and Poland there is a decrease in the number of places in hospitals per 10,000 inhabitants. Only in the Podlaskie Voivodeship the indicator value slightly increased (Table 16).

Table 16. Health system – basic data

SPECIFICATION	Medical centres		Medical centres per 10,000 inhabitants		Doctors		Doctors per 10,000 inhabitants		Beds in hospitals		Beds per 10,000 per inhabitants	
	2014	2018	2014	2018	2014	2018	2014	2018	2014	2018	2014	2018
POLAND¹⁶	20,052	21,881	5.0	6.0	201,338	221,752	52	58	188,116	181,732	48.9	47.3
Podlaskie Voivodeship	753	758	6.0	6.0	5,830	6,115	49	52	5,893	5,888	49.4	49.6
Białostocki	408	416	8.0	8.0	3,879	4,108	76	80	2,888	2,754	56.5	53.8
Suwalski	124	122	4.0	4.0	884	961	32	35	1,274	1,405	46.2	51.2
Łomżyński	221	220	5.0	6.0	1,067	1,046	26	26	1,731	1,729	42.7	43.1
Mazowieckie Voivodeship	2,623	3,046	5.0	6.0	36,365	41,626	68	77	26,147	25,770	49.0	48.0
Ostrołęcki	186	197	5.0	5.0	1,292	1,257	33	33	1,468	1,498	37.7	38.7
Siedlecki	209	221	5.0	5.0	1,615	1,777	38	42	1,606	1,715	38.1	40.8
Lubelskie Voivodeship	1,180	1,261	5.0	6.0	12,547	12,746	58	60	11,367	10,988	52.9	51.9
Bialski	148	151	5.0	5.0	1,059	1,041	35	35	1,548	1,566	50.5	51.5
Lubelski	462	508	6.0	7.0	7,623	7,766	107	109	4,749	4,540	66.7	63.8
Puławski	253	260	5.0	5.0	1,849	1,941	38	41	2,114	2,022	43.2	41.8
Chełmsko-Zamojski	317	342	5.0	5.0	2,016	1,998	31	32	2,956	2,860	46.2	45.2
Podkarpackie Voivodeship	1,125	1,229	5.0	6.0	8,365	9,727	39	46	10,289	9,935	48.3	46.7
Przemyski	209	223	5.0	6.0	1,289	1,291	33	33	1,869	1,562	47.3	39.8
Rzeszowski	397	447	6.0	7.0	3,583	4,433	57	69	3,145	3,305	49.9	52.1
Tarnobrzeski	281	301	5.0	5.0	1,835	2,025	30	33	2,964	2,852	47.9	46.2
Krośnieński	238	258	5.0	5.0	1,658	1,978	34	41	2,311	2,216	47.6	45.8
BELARUS	2,309	2,230	2.4	2.4	38,671	42,524	41	45	82,314	79,536	86.8	83.9
Grodno Oblast	273	275	2.6	2.6	5,063	5,498	48	53	9,537	8,656	90.6	83.3

¹⁶ Doctors by workplace.

SPECIFICATION	Medical centres		Medical centres per 10,000 inhabitants		Doctors		Doctors per 10,000 inhabitants		Beds in hospitals		Beds per 10,000 per inhabitants	
	2014	2018	2014	2018	2014	2018	2014	2018	2014	2018	2014	2018
Brest Oblast	370	353	2.7	2.6	5,157	5,680	37	41	11,647	11,222	83.9	81.3
Minsk Oblast	373	375	2.6	2.6	4,249	4,934	30	35	12,649	12,112	89.8	84.8
Gomel Oblast	309	322	2.2	2.3	5,311	5,906	37	42	12,882	12,298	90.5	87.2
UKRAINE¹⁷	9,773	10,373	2.3	2.5	185,945	185,675	43	44	335,835	301,576	78.2	71.5
Volynska Oblast	205	215	2.0	2.1	3,900	3,917	37	38	8,409	7,249	80.6	70.0
Lvivska Oblast	427	449	1.7	1.8	14,265	13,597	56	54	23,403	19,649	92.2	77.9
Zakarpatska Oblast	358	385	2.8	3.1	5,081	4,863	40	39	8,963	8,292	71.2	66.0
Rivnenska Oblast	257	273	2.2	2.4	4,764	4,808	41	42	9,513	8,450	81.9	73.0
Ternopil'ska Oblast	275	292	2.6	2.8	5,658	5,570	53	53	9,694	8,737	90.6	83.5
Ivano-Frankiv'ska Oblast	293	308	2.1	2.2	8,251	8,264	60	60	11,355	10,213	82.1	74.4

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

¹⁷ Data on the number of medical centres from 2017.



3.3.7 SUMMARY

Studies show that the situation on the labour markets in the voivodeships and oblasts is relatively good. The economic activity rate increased in almost all units. The exception was the Ukrainian Volynska and Zakarpatska Oblasts. In the analysed period, the highest dynamics of changes were recorded in the Brest Oblast in Belarus, indicating rapid changes taking place on the labour market there. The Polish units are relatively stable.

Despite some regional economic differences, the general trend observed in all units is the increase in the share of the service sector, which is typical for the developed and developing economies, and the decrease in the share of sector I (agriculture) and II (industry).

The most important problem of the labour market is the level of unemployment. This, as indicated, may take different values due to the adopted definition of the unemployed (narrow definition promoted by Eurostat or broad definition used by the International Labour Organisation). A good situation is observed in the Polish voivodeships and Belarusian Oblasts, where in most cases, the level of unemployment is close to the so-called natural rate of unemployment. A relatively bad situation is observed on the Ukrainian labour market, especially in the Volynska Oblast which is characterised by a high level of unemployment (regardless of the adopted methodology). Perhaps the occurring phenomena would be even more alarming if regional statistics of long-term unemployment were available. The trends visible at the national level in Ukraine indicate a significant increase of long-term unemployment, therefore it is likely that an analogous process also takes place in the Zakarpatska Oblast, creating a need for implementation of intensive actions to reduce the negative social effects of this problem.

The disproportions between the analysed oblasts and voivodeships (and subregions) result from their particular conditions, primarily from the location of a large urban agglomeration within their borders, which can be the reason of high indicator values. A good example is the Mazowieckie Voivodeship, where the capital and largest Polish city is located, featuring high indicator values, while in the Ostrołęcki and Siedlecki subregions they reach lower values. A similar situation, as already mentioned, can take place in the Ukrainian Lvivska Oblast or the Belarusian Minsk Oblast.

Education was another analysed issue. Due to the differences in education systems in Poland, Ukraine and Belarus, it is difficult to draw general conclusions indicating similarities, differences and other dependencies. In all examined units there is a clear tendency of a decrease of educational institutions, probably caused by a decrease in

the number of students, which in turn, is a consequence of the negative demographic trends and a decreasing number of people of working and pre-working age. However, universities in the support area should be considered as a potential for enabling joint research and development activities as well as international student exchanges.

A very important element of the analysis from the point of view of Programme intervention is the state of health of the population in the support area. First of all, the indicator of average life expectancy was analysed. It turned out that the spatial distribution of data showed that citizens of the central districts with large urban agglomerations are expected to live shorter. That is the case in Poland and Belarus. These statistics show that living in a metropolitan environment may have a negative impact on health and thus on life expectancy. Secondly, regardless of the location of the oblasts or voivodeships, the main cause of deaths (in about half the cases in all three countries) is cardiovascular diseases.

The following key elements of the health system were analysed: the number of medical centres, doctors and beds in hospitals (nominal values were divided per 100,000 inhabitants in order to get comparable data). At the regional level, there is an upward trend in the number of medical centres and doctors. In turn, in all examined units the number of available places in hospitals is decreasing.

Conclusions drawn from the labour market, education, health and social inclusion analyses are following:

- Except for the Volynska and Zakarpatska Oblasts, the economic activity rate is increasing in all units.
- Increase of the service sector share in the economic structure is a general trend.
- In the Polish and Belarusian part of the support area, the level of unemployment is close to the so-called natural rate of unemployment, while in Ukraine the unemployment rate is high.
- The number of unemployed with higher and post-secondary education is growing.
- There are significant disproportions on the labour market between units with large urban agglomerations and others.
- In all examined units, the number of educational institutions is decreasing, which is a consequence of negative demographic trends.
- Citizens of the central districts, in which large urban agglomerations are located, live shorter.
- Cardiovascular diseases are the main cause of death in all regions.



- The number of medical centres and doctors is increasing, while the number of available places in the hospitals is decreasing.



3.4 ECONOMY, HERITAGE RESOURCES AND TOURISM

3.4.1 ECONOMY, COMPETITIVENESS AND DIGITALISATION

General economic situation (including specific nature of the respective units)

Gross domestic product (GDP) is a basic index indicating the size and condition of the economy. Despite many limitations, it is a measure characterized by comprehensiveness, relative ease of interpretation and its advantages include the availability of data. In 2017, the total value of goods and services produced in the eligible area of the Programme reached EUR 86.3 billion, of which EUR 53.6 billion (62.1%) in the support areas located in Poland, EUR 19.5 billion (22, 6%) in four analysed Belarusian oblasts and EUR 13.2 billion (15.3%) in the Ukrainian units. Compared to 2014, the Polish share increased significantly (from 56.2%, i.e. by over 5.9 percent), while the contribution value for the Belarusian and Ukrainian counterparts decreased (by -5.6 and -0.3 percent, respectively). The changes in this area are a consequence of the pace of development of individual economies. While in Poland, in the analysed period, a dynamic increase in the value of GDP, ranging from 3.1% to 4.9% (annual average of 3.8%), was observed, there was a fall in the share of some Belarusian and Ukrainian oblasts as the effect of the economic downturn observed in Belarus in 2015–2016 and Ukraine in 2014–2015. In the latter case, it is undoubtedly a consequence of the political crisis and armed conflict in Donbas. In annual average terms, in 2014–2017, the value of GDP generated in Belarus fell by 0.5%, while in Ukraine by 2.9%. However, it should be emphasised that in the years 2016–2018, in both countries, a relatively rapid growth was again observed (Table 17).

Table 17. Dynamics of gross domestic product

SPECIFICATION	GDP growth (compared to the previous year) in constant prices				GDP growth in 2014–2017 (geometric mean)
	2014	2015	2016	2017	
POLAND	103.3	103.8	103.1	104.9	103.8
Podlaskie Voivodeship	102.6	101.6	101.5	105.4	102.8
Mazowieckie Voivodeship	103.7	104.2	104.2	105.6	104.4
Lubelskie Voivodeship	101.8	101.2	102.9	103.9	102.4
Podkarpackie Voivodeship	102.3	103.6	102.7	104.6	103.3



BELARUS	101.7	96.2	97.5	102.5	99.4
Grodno Oblast	104.6	94.2	98.4	102.7	99.9
Brest Oblast	102.0	95.2	99.3	103.5	99.9
Minsk Oblast	105.0	98.4	99.4	104.9	101.9
Gomel Oblast	102.8	95.5	95.2	103.1	99.1
UKRAINE	93.4	90.2	102.4	102.5	97.0
Volynska Oblast	101.1	95.3	108.2	105.3	102.4
Lvivska Oblast	100.9	95.2	99.3	103.8	99.8
Zakarpatska Oblast	102.8	93.5	97.3	103.1	99.1
Rivnenska Oblast	102.6	93.4	100.3	103.5	99.9
Ternopilaska Oblast	108.0	93.7	98.5	105.6	101.3
Ivano-Frankivska Oblast	97.6	92.0	99.0	107.1	98.8

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

Despite some positive trends presented above, a negative phenomenon of a lower growth rate of the eastern voivodships of Poland, compared to the country growth, is observed. Only in the Mazowieckie Voivodship (among NUTS1 units), as well as in the Ostrołęcki, Rzeszowski and Puławski subregions (NUTS3), in the period 2014–2017, the growth dynamics exceeded the national average. As a consequence, in 2014–2017, the share of the support area in Poland in generating the country GDP decreased from 11.6% to 11.4%. To a greater extent, the same decline happened to the qualified area in Belarus, where in 2014–2018 a decline in the share of the country GDP dropped from 44.3% to 42.5%. A similar situation occurred in the majority of the Ukrainian oblasts covered by the Programme. Only in the case of the Lvivska and Volynska Oblasts the contribution to the country's GDP increased. These figures suggest a weakening economic position of the territorial units covered by the Programme in relation to the reference countries and a growing distance between them and the most-developed regions (divergence process), and thus testify to their gradual peripheralisation.

The unfavourable economic situation of the eligible area compared to the reference countries (Poland, Belarus and Ukraine) is also illustrated by the key index of economic development, i.e. gross domestic product per capita. In the years 2014–2017 the GDP per capita was clearly lower than the average in the respective countries as well as in the European Union. Out of all the units covered by Programme only in the Minsk oblast GDP per capita was at a similar level as the national average, which is caused by



the fact that Minsk benefits from being the state capital. In other Belarusian oblasts, in 2018, the value of the indicator ranged from 64.6% (Brest Oblast) to 75.0% (Grodno Oblast), in each case being lower than in 2014. In the analysed Ukrainian oblasts the value of the indicator ranged from 48.7% to 82.9% of the national average. The lowest value was noted in the Zakarpastka Oblast, where, in 2017, GDP per capita reached EUR 1,139.9 making it the least-developed region of the entire eligible area (Table 18).

Table 18. GDP per capita

SPECIFICATION	Value of GDP per capita in EUR (current prices)				Value of GDP per capita (current prices), country = 100			
	2014	2015	2016	2017	2014	2015	2016	2017
POLAND	10,681.7	11,189.1	11,102.1	12,160.8	100.0	100.0	100.0	100.0
Podlaskie Voivodeship	7,730.1	7,953.3	7,862.5	8,708.4	72.4	71.1	70.8	71.6
Białostocki	8,943.2	9,222.0	9,115.6	9,933.8	83.7	82.4	82.1	81.7
Suwalski	6,713.9	6,861.5	6,779.4	7,518.1	62.9	61.3	61.1	61.8
Łomżyński	6,896.0	7,093.4	7,008.6	7,953.1	64.6	63.4	63.1	65.4
Mazowieckie Voivodeship	17,135.4	17,863.2	17,733.0	19,523.4	160.4	159.6	159.7	160.5
Ostrołęcki	7,833.1	8,153.2	7,911.3	9,022.2	73.3	72.9	71.3	74.2
Siedlecki	8,393.1	8,537.2	8,407.6	9,311.6	78.6	76.3	75.7	76.6
Lubelskie Voivodeship	7,452.9	7,666.8	7,649.5	8,387.8	69.8	68.5	68.9	69.0
Bialski	6,404.5	6,561.1	6,596.4	7,252.7	60.0	58.6	59.4	59.6
Lubelski	10,099.9	102,41.6	10,221.4	11,168.7	94.6	91.5	92.1	91.8
Puławski	6,445.3	6,953.6	6,810.8	7,461.0	60.3	62.1	61.3	61.4
Chełmsko-Zamojski	5,782.3	5,869.2	5,911.1	6,504.4	54.1	52.5	53.2	53.5
Podkarpackie Voivodeship	7,560.9	7,929.7	7,821.2	8,476.1	70.8	70.9	70.4	69.7
Przemyski	5,724.7	5,890.2	5,865.7	6,329.4	53.6	52.6	52.8	52.0
Rzeszowski	9,326.4	9,968.5	9,725.8	10,524.9	87.3	89.1	87.6	86.5
Tarnobrzeski	7,806.3	8,197.6	8,220.1	8,824.7	73.1	73.3	74.0	72.6
Krośnieński	6,461.1	6,593.8	6,410.3	7,077.5	60.5	58.9	57.7	58.2
BELARUS	6,265.3	5,380.1	4,541.2	5,111.0	100.0	100.0	100.0	100.0
Grodno Oblast	4,806.2	3,857.3	3,354.3	3,814.7	76.7	71.7	73.9	74.6
Brest Oblast	4,114.3	3,415.2	2,968.4	3,435.3	65.7	63.5	65.4	67.2
Minsk Oblast	6,411.2	5,480.2	4,416.8	5,109.1	102.3	101.9	97.3	100.0
Gomel Oblast	4,577.9	3,756.7	3,011.7	3,489.1	73.1	69.8	66.3	68.3
UKRAINE	2,348.2	1,915.6	1,975.8	2,340.8	100.0	100.0	100.0	100.0
Volynska Oblast	1,477.3	1,254.2	1,212.7	1,666.0	62.9	65.5	61.4	71.2



SPECIFICATION	Value of GDP per capita in EUR (current prices)				Value of GDP per capita (current prices), country = 100			
	2014	2015	2016	2017	2014	2015	2016	2017
Lvivska Oblast	1,828.1	1,541.1	1,601.8	1,940.4	77.9	80.4	81.1	82.9
Zakarpatska Oblast	1,219.8	948.8	909.3	1,139.9	51.9	49.5	46.0	48.7
Rivnenska Oblast	1,575.6	1,252.6	1,200.3	1,401.1	67.1	65.4	60.7	59.9
Ternopilska Oblast	1,287.1	1,030.3	1,033.8	1,286.3	54.8	53.8	52.3	54.9
Ivano-Frankivska Oblast	1,732.8	1,369.0	1,315.6	1,543.5	73.8	71.5	66.6	65.9

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

The Polish border areas also differed from each other, although their characteristic feature was GDP per capita clearly lower than the national average. Particularly low values were recorded in the Przemyski (52% of the national average), Chełmsko-Zamojski (53.5%), Krośnieński (58.2%) and Bialski (59.6%) subregions, which makes them one of the least-developed areas throughout the European Union and confirms the negative impact of the so-called “border effect”. In the subregions in which the largest urban centres were located, i.e. the capitals of the voivodships (Lublin, Rzeszów and Białystok), GDP was lower than the country average, although relatively high compared to other subregions. A more detailed analysis for the Polish part of the eligible area, possible due to the availability of data at the subregional level, indicates not only the divergence of eastern areas of Poland with the rest of the country, but also their internal polarisation between metropolitan and peripheral areas. This is manifested by the concentration of various resources (such as financial or human capital) in the largest borderland centres and their gradual decrease in peripheral areas, especially areas directly bordering Ukraine and Belarus. This phenomenon seems to be also confirmed by a systematically growing economic position of the Lvivska oblast in the Ukrainian part of the support area.

The relatively low level of economic development of the respective units covered by the Programme becomes even more evident when compared to the EU country value of GDP per capita adjusted by purchasing power parity (PPP)¹⁸. In 2017, in the Polish voivodeships of the cross-border area belonging to the poorest EU regions, the value of this indicator was about half of the EU average, ranging from 49.0% in the Lubelskie,

¹⁸ Due to the conversion method based on the purchasing power parity conversion rate by the International Monetary Fund, expressed in the so-called international dollar, the indicator values may slightly differ from the data for Poland published by Eurostat.



through 49.5% in Podlaskie, to 50.9% in Podkarpackie Voivodeships. However, the voivodeships of eastern Poland are marked by a high internal diversity. In three subregions, where the voivodeship capitals are located, GDP per capita adjusted by PPP reached from 58.0% (Białostocki subregion) to 65.3% (Lubelski subregion) of the EU average, while in the Przemyski and Chełmsko-Zamojski subregions it did not exceed 40% of the reference value. With the exception of the Minsk oblast, where in 2018 GDP per capita adjusted by PPP reached almost half of the EU average, the ratio of the development level of other Belarusian oblast covered by the Programme to the EU area was around one third (Chart 1).

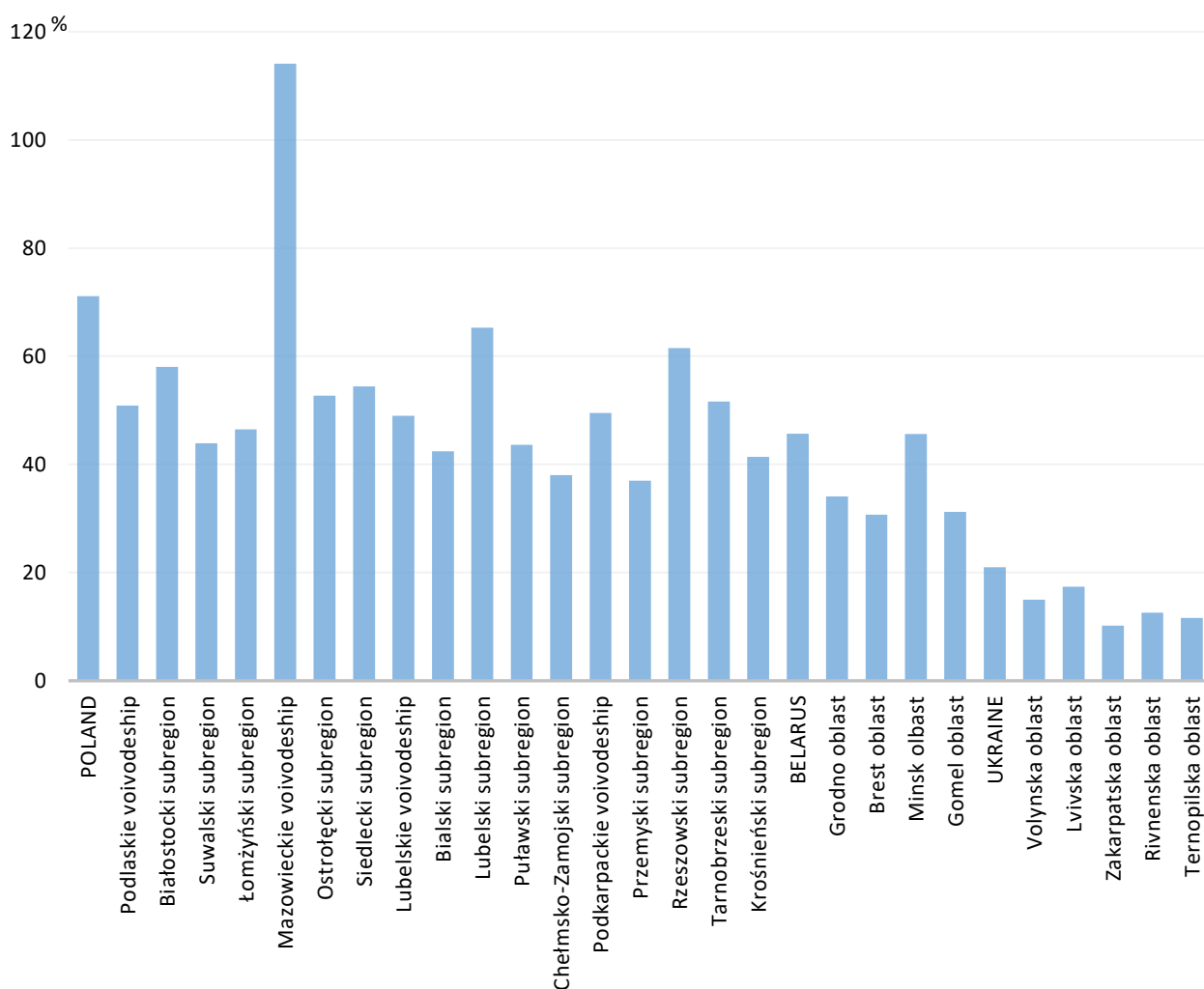


Chart 1. (UE28=100) GDP per capita compared to the European Union average in 2017 (EU28 = 100)

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)



The Ukrainian oblasts of the cross-border area showed the largest distance from the 28 EU countries. In the case of the Zakarpatska Oblast, the difference of GDP per capita adjusted by PPP in relation to the EU average was as much as ten times lower. Also in the case of the Ternopilska, Rivnenska and Ivano-Frankivska Oblasts, the value of the index did not exceed 15% of the EU average, while in the Lvivska Oblast, being in the best situation in this respect, it reached 17.4%. This means that administrative units supported by the Programme located in Poland belong to the least developed regions in the European Union. At the same time, differences in GDP per capita adjusted by PPP between the Polish and Belarusian and Ukrainian parts of the eligible area indicate a significant development disproportion between Eastern and Western Europe. It is important to note that in 2014-2017 this disproportion did not diminish rather, on the contrary, it clearly increased. This indicates a progressive and very unfavourable (also in view of the eastern border areas of the EU) cross-border divergence process.

Economic structure (based on gross value added)

The economic development of the eligible area (compared to the reference countries and the European Union) is, to some extent, a consequence of the unfavourable economic structure. In 2017, services had the largest share in generating gross value added (GVA) in the Polish and Ukrainian parts, while in the Belarusian part a significant share of industry and construction was a characteristic feature, often exceeding the contribution of the service sector. In the Polish part, the highest share of services in generating GVA was observed in the metropolitan subregions (about 70% in the Białostocki and Lubelski subregions), while in Ukraine it was the case in the Lvivska Oblast. A relatively low contribution of services in GVA (around 50%) were noted in the administrative units of eastern Poland and south-western Ukraine, areas distinguished by a relatively large share of agriculture.

The eligible area is also distinguished by an uneven level of industrialisation. In addition to the already mentioned Belarusian oblasts, where industry (without construction) generated 32.1% of GVA in the Brest Oblast, it also plays a particularly important role in the Minsk oblast (42.8% of GVA) and the Tarnobrzeski subregion (41.5% of GVA), the latter located in Poland. Among the Ukrainian regions, in the Ivano-Frankivska Oblast this sector had a relatively high share in GVA. At the same time, in the Ukrainian part of the cross-border area (Ternopilska, Zakarpatska and Volynska Oblasts) and in the Polish border subregions (Bialski and Chełmsko-Zamojski subregions) the units with the smallest share of the industrial sector are located, which indicates a correlation between the industrialisation and their economic development.



Among all sectors of the economy, the largest spatial differentiation in terms of GVA was observed in the agricultural sector, including agriculture, forestry, hunting and fishing. It was of greatest importance for the regional economies of the Ukrainian and Belarusian oblasts. In the case of the Ternopil'ska Oblast it generated as much as 28.1% of gross value added. A characteristic feature is the inverse relationship between the importance of agriculture and the level of urbanisation. Therefore, the particularly important role of the agricultural sector concerned sparsely populated subregions of eastern Poland, including the Ostrołęcki, Siedlecki, Łomżyński, Suwalski and Bialski subregions (Chart 2.)

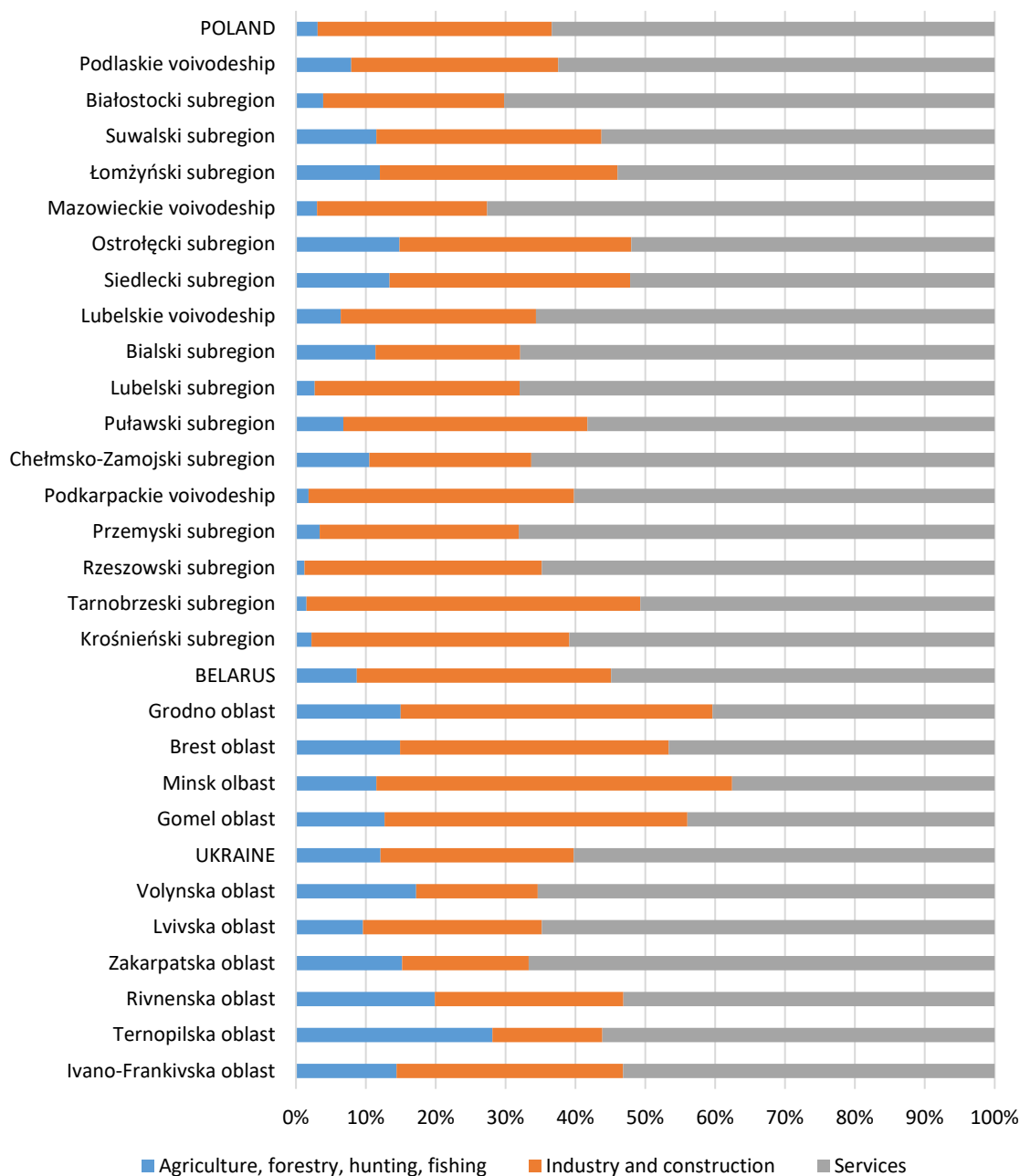




Chart 2. Structure of gross value added in 2017 (in %)

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

The structure of gross value added of the support area is generally featured by a larger share of agriculture and a smaller share of services, and with the exception of the Belarusian qualified area, with a larger share of industry and construction. This is important because the structure of gross value added is related to lower labour productivity, associated with a large share of an inefficient agricultural sector. That is especially visible in the Polish and Ukrainian part of the eligible area, which proves their relative economic backwardness. In that respect, the Podkarpackie Voivodeship and the Belarusian oblasts stand out. In the former the share of agriculture in generating GDP is clearly lower than in the country, while the share of industry is higher. In the latter the high importance of the industrial sector translates into a lower than average share of the service sector in the country.

Economic activity, competitiveness and innovation

Enterprises play a key role in the economic activation of the areas. In 2018, 374,600 entities of the national economy with legal personality (excluding natural persons and partnerships) were registered in the eligible area, of which 182,200 in the Ukrainian part, 126,200 in the Polish part and 66,200 in the Belarusian part. At the same time over 804,900 businesses were operated by natural persons, of which 397,600 in the Polish part of the eligible area, 284,700 in the Ukrainian part and 122,500 in the Belarusian part. Various types of economic activity indexes determine the competitiveness of a given area, manifesting itself in the ability to create favourable conditions for establishing and conducting business activity, including attracting external investment.

The respective parts of the eligible area belonging to the different countries, as well as administrative units within the respective countries significantly differ as far as enterprise saturation. First of all, the value of the entrepreneurship ratio for entities of the national economy (excluding natural persons' businesses and civil law partnerships) per 10,000 inhabitants in almost all supported units was lower than in the reference countries. In that respect the exceptions are the Lvivska Oblast (Ukraine) and the Minsk Oblast (Belarus). Furthermore, the level of enterprise saturation clearly correlated with the level of economic development. The lowest indicator value was noted in the least-developed Zakarpatska Oblast (89 entities with legal personality per 10,000 population). In turn, the highest values were observed in the Lvivska Oblast (Ukraine) as well as in the Lubelski, Rzeszowski and Białostocki subregions (Poland).



Similar regularities can be noted for the entrepreneurship indicator referring to natural persons running a business activity (per 10,000 population). In 2018 saturation with natural persons' businesses in the Polish part of the support area was on average over two and a half times higher than in the Belarusian part (638 to 250 natural persons per 10,000 population) and almost twice as high as in the Ukrainian part (339 entities per 10,000 population). This indicates higher economic activity of the population of the Polish the cross-border area and a greater propensity to take risks related to running own business. At the same time, it should be emphasised that in eastern Polish voivodeships, natural persons' entrepreneurship was clearly lower than the country average (with the exception of the Lubelski subregion). On the other hand, in almost all western Ukraine oblasts covered by the Programme (except for the Zakapatska Oblast) the indicator value was clearly higher than the country average.

A very important factor favouring the development of entrepreneurship is appropriate conditions created for enterprises and entrepreneurs to conduct business. A comprehensive country assessment in this respect is provided by the "Doing Business" report, developed each year by the World Bank. According to the latest edition (2020), Poland was ranked 40th worldwide, Belarus – 49th, and Ukraine – 64th¹⁹. Thus, all countries belong to the group with a moderate level of economic freedom. However, while Ukraine has been successively growing in recent years, Poland has been marked by a significant growth, and Belarus with a slight decrease compared to 2016.

Innovations are also a very important feature and catalyst for entrepreneurship development. They allow for more effective actions in the world of modern, dynamically changing economy and manifest themselves in new products, innovative technologies or unconventional management methods. Due to the broad sense of the term and various research methodologies in this regard, the direct comparison of findings for Poland, Belarus and Ukraine is not possible. However, internal differences within each country can be observed. In 2014-2018, in the case of the Polish part of the eligible area, the average percentage of innovative enterprises (i.e. those that showed innovative activity) in the total number of enterprises ranged from 15.4% in the Podlaskie Voivodeship to 19.0% in the Lubelskie Voivodeship. In the Lubelskie and Podkarpackie Voivodeships this indicator value was higher than the national average.

Industrial enterprises were marked by a higher average annual level of innovation. Also in this case, the highest percentage of innovative enterprises were located in the Lubelskie Voivodeship (22.9%). Despite that, expenditure for innovation activity in enterprises of the Lubelskie and Podlaskie Voivodeships in relation to GDP were very

¹⁹ World Bank 2020, *Doing Business 2020*.



low (0.9% to 2.2% of the country average). Clearly higher expenditure was recorded in the Podkarpackie Voivodeship, where its share in GDP exceeded the country average and amounted to 2.7% (annual average). Significant disparities related to innovation activities can also be observed in Belarus. In 2018, a higher percentage of industrial enterprises incurring expenditure on innovation activities were noted in two regions bordering Poland (Brest Oblast – 30.4% and Grodno Oblast – 21.9%). In the case of the Brest Oblast it was above the national average. As for the Ukrainian oblasts covered by the support, industrial innovative enterprises concentrated in the Lvivska Oblast (44 entities).

Size structure of enterprises

One of the key characteristics regarding entrepreneurship is the size structure of economic entities. Different construction of registers and data classifications do not allow direct comparison of the respective parts of the cross-border area. Data for the Polish part cover all categories of the national economy entities. A consequence of a large number of natural persons' businesses is a very high share of micro-enterprises (i.e. employing less than 10 people), which ranges from 95.5% to 96.6% of the total entities. The SME sector, which also includes so-called small enterprises (i.e. entities employing from 10 to 49 people), constitute over 99.0% of enterprises in each unit of the support area. At the same time, the number of medium-sized (employing 50–249 people) and large (employing 250 and more) enterprises amounted to 3,600 and 400, respectively, the most in the Podkarpackie and Lubelskie Voivodeships. While in the years 2014-2018 a constant, dynamic growth of the smallest entities was observed, the number as well as the share of small, medium and large entities were decreasing.

The size structure of business entities to be classified as SMEs in Belarus differs from the Polish one. According to Belarusian legislation, SMEs include individual entrepreneurs registered in Belarus (individuals engaged in entrepreneurial activity without establishing a legal entity), as well as legal entities: microenterprises (0-15 employees), small enterprises (16-100 employees) and medium enterprises (101-250 employees). The share of micro-, small and medium-sized enterprises in the total number of enterprises ranges from 71.6% in the Gomel oblast to 79.6% in the Minsk oblast (excluding the capital city area). Despite the fact that SMEs dominate in the total number of enterprises, large enterprises employ more workers.

The size structure of the national economy entities in the Ukrainian units shows more similarities to Poland, however its assessment is solely based on enterprises. The share of the SME sector ranges from 94.0% to 96.1%, and the total number of medium and large entities does not exceed 2,500. The percentage of small and medium-sized



enterprises would certainly be much higher if cross-section analyses included the so-called natural persons' businesses.

Digitalisation, information and communication technologies

In the modern information economy, information processing, exchange and dissemination by means of information and communication technologies is a significant economic, social and cultural value and is becoming an indispensable development factor. In 2019 the percentage of enterprises with Internet access in the Polish eastern border voivodeships was similar to the national average (from 96.0% to 97.1%), although the share of entities using the fastest connections (above 100Mbit/sec) was clearly lower²⁰. Approx. 85% of enterprises used a fixed connection (DSL or other fixed broadband connection, e.g. ADSL, SDSL, VDSL, cable television network, fibre optic network), although the percentage of enterprises using mobile cellular networks through mobile devices was also relatively high, reaching about 70% (from 69.9% in the Lubelskie Voivodeship to 71.1% in the Podlaskie Voivodeship). In 2018, in the analysed Belarusian oblasts, a similar share of entities used the Internet (97.5% in the Gomel Oblast, 97.6% in the Minsk Oblast, 98.6% in the Brest Oblast and 98.8% in the Grodno Oblast). Almost all enterprises had access to broadband Internet. Nearly half of the entities also had access to wireless Internet, one third of which to wireless broadband Internet. About half of the enterprises used connections with a speed of over 10 Mbit/sec.

In the modern information economy, websites play a very important role in building the company market position and in marketing communication. In the Podkarpackie and Lubelskie voivodeships, 64.3% and 64.4% of the enterprises, respectively, had their own website. In the Podlaskie Voivodeship it was 68.3%, and in the Mazowieckie Voivodeship – 75.8%, compared to about 70% of the national average. Similar indicator values characterise the activity of Belarusian entities. 61.2% of entities has a website in the Gomel Oblast, 61.7% in the Minsk Oblast, 66.1% in the Brest oblast and 72.5% in the Grodno Oblast.

In the case of Ukraine, data is available only at the national level. It showed that 98.1% of all enterprises had access to the Internet, and 51.6% of entities had a website. Given the small internal differences in both Poland and Belarus, it seems that also in Ukraine there were small spatial differences in this area.

²⁰ Central Statistic Office (2020), The use of information and communication technologies in public administration units, enterprises and households in 2019, <https://stat.gov.pl/obszary-tematyczne/nauka-i-technika-spoleczenstwo-informacyjne/spoleczenstwo-informacyjne/use-technology-information-communication-in-units-public-administration-enterprises-enterprise-home-in-2019-2019-3,18.html> (access: Feb. 13, 2020).



To sum up, it can be stated that Internet accessibility for the enterprises in the qualified area is almost universal, although the access to networks with the highest speed remained varied. In the voivodeships of eastern Poland a similar use of information technologies by enterprises to other regions was observed. In the case of both Belarusian regions bordering Poland, i.e. the Grodno and Brest Oblasts, the use was higher than the national average.

Polish-Belarusian and Polish-Ukrainian economic cooperation (including the SME sector)

Foreign investments play a very important role in the economy, especially in the Central and Eastern European countries, where for historical and systemic reasons there had been no accumulation of sufficiently large capital. According to the assumptions of the so-called multiplier effect, the inflow of investments has additional and positive economic effects that go well beyond the actual investment amount, manifesting itself in creating jobs, providing access to know-how and technologies, as well as in generating tax revenues, among others.

Due to limited endogenous resources and a relatively low area development, the inflow of external capital is particularly desirable. Due to various factors, including the peripheral location, its absorption in the support areas remained low. For example, in three voivodeships of eastern Poland (Lubelskie, Podkarpackie and Podlaskie), only 2.8% of the total foreign investment value in Poland was accumulated. That also largely concerned the Belarusian and Ukrainian support regions.

However, the growing economic network in the cross-border area is showed by a relatively significant share of capital from the respective neighbouring countries, primarily Polish capital. In 2018 the total value of Polish foreign investments in Belarusian and Ukrainian oblasts in the support area amounted to USD 372.9 million (USD 122.1 million in the Belarusian part and USD 250.9 million in the Ukrainian part), with over one third invested in the Lvivska Oblast. A relatively high level of Polish investments also regarded the Ivano-Frankivska and Volynska Oblasts (Ukraine) as well as the Brest and Grodno Oblasts (Belarus). In each of these units, the value of capital placed Polish investors among the most important – they were the second largest group in the Volynska and Lvivska Oblasts, the third – in the Zakarpatska and Ivano-Frankivska Oblasts and the fourth - in the Brest and Grodno Oblasts. In 2015–2018, the value of Polish investments in Belarus showed an upward trend, while in Ukraine it remained at a similar level. On the other hand, the value of Belarusian investments in Ukraine as well as Ukrainian investments in Belarus was very modest, slightly exceeding the total amount of USD 10 million in 2018.



Foreign trade is a very important part of the economy, and the development of trade relations is an important factor illustrating the scale of functional connections of the analysed territorial units. In 2018, the trade turnover of the support Belarusian oblasts with Poland amounted to almost USD 1.5 billion (with a small surplus in the trade balance). In the Ukrainian oblasts it reached almost USD 3 billion (with a slight negative balance on the Ukrainian side). At the same time, the value of imports and exports from the Brest, Grodno, Gomel and Minsk Oblasts to Ukraine has exceeded USD 1.6 billion with a surplus of USD 0.3 billion. The trade turnover of six analysed Ukrainian regions with Belarus was marked by a negative balance, with a total value of approx. 0.6 billion dollars.

In 2014–2018, the trade exchange value was subject to large fluctuations and was conditioned by the economic situation in Ukraine and Belarus. The entry into force of the agreement between Ukraine and EU on the Deep and Comprehensive Free Trade Agreement (DCFTA) on January 1, 2016 became a big impulse for the development of Polish-Ukrainian trade relationships. Since then, a significant increase in exports from the Ukrainian support regions to Poland has been observed, as a result of which in 2018 trade exchange in the Volynska and Lvivska Oblasts was balanced, while in the Rivnenska, Ternopilaska and Ivano-Frankivaska Oblasts surpluses in bilateral trade were noted. Undoubtedly, the increase in exports may strongly stimulate the development of the Ukrainian cross-border underdeveloped regions. On the other hand, the import of cheaper agricultural products from Ukraine to Poland and the European Union is sometimes perceived as a threat to the economy of the Polish eastern regions, where agricultural production is also relatively important.

Although Poland is the most important trade partner of the Lvivska, Volynska, Rivnenska and Ternopilaska Oblasts (Ukraine) and the second most important in the case of the Brest and Grodno Oblasts (Belarus), one should be aware that the overall trade exchange in the support area is relatively low. Its development is limited by existing customs barriers (especially in Belarus), various regulations and infrastructural barriers.

3.4.2 RESEARCH AND DEVELOPMENT

Research and development (R&D) is of key importance for the growth of innovative economies. Benefits resulting from conducted research give entrepreneurs a chance to increase the competitiveness of their activities. In 2018, in the entire support area 34,500 employees worked in the R&D sector (with the exception of the Mazowieckie



Voivodeship, where their number was almost as high). Compared to 2016, there was a clear increase by 7%. Research and development activities were of greatest importance (expressed in the number of people employed in the sector per 10,000 inhabitants) in the Lubelskie Voivodeship, Lvivska Oblast and Podkarpackie Voivodeship. This was primarily a consequence of the location, in the above-mentioned units, of the largest academic centres of the Polish-Belarusian-Ukrainian cross-border area. In the case of the remaining Ukrainian and western Belarusian oblasts (Brest and Grodno Oblasts), up to 10 times less people (per 10,000 inhabitants) worked in the R&D sector.

One of the key indexes enabling the assessment of the importance of research and development in the regional economy is the share of expenditure on the R&D in GDP. In Poland, the value of this indicator was 1.2%, clearly lower than the strategic assumptions of Poland and the European Union. At the same time, the share of expenditure on the R&D in Belarus was twice lower than in Poland, while in Ukraine – four times. Importantly, in all units covered by the Programme, the indicator values were lower than in the reference countries. For some time (2014–2016) the Podkarpackie and Lubelskie Voivodeships were exceptions in this respect. The method of financing research which is dependent on public funds, is also a certain weakness of the area. The future development of the R&D sector should rely on the widest possible interaction with business and the increase of private funds in financing research and development conducted in response to market needs.

3.4.3 CULTURAL AND NATURAL HERITAGE RESOURCES

Natural heritage

The Polish-Belarusian-Ukrainian border area is marked by valuable natural heritage resources. The area is famous for a varied landscape (e.g. postglacial relief forms in the northern Podlaskie Voivodeship, limestone and loess highlands in the Lubelskie Voivodeship or the Eastern Carpathians). It is also characterised by a high biodiversity and well-preserved natural environment. Protected areas occupy a significant part of the area covered by the Programme.

The border location of the largest protected nature complexes is an advantage for creating cross-border nature protection networks. The Białowieża Forest, covering extensive primeval forests, stretches across the Polish-Belarusian border. Its greater part, i.e. approx. 58%, is located in Belarus. The Bug River Valley is another key element



of the cross-border ecosystem. The total area of the river basin is almost 40,000 sq. km, of which almost 50% is located on the Polish territory. In 1993 the western part of this area was incorporated into the Bug River Landscape Park, while in 1994 in its eastern part into the Podlasie Bug Gorge Landscape Park. In Belarus, the basin area is 9,200 sq. km, while in Ukraine it is 10,800 sq. km. The Bug is the border river of the three countries. For cooperation in the field of environmental protection at the Polish-Ukrainian borderland also important are: Western Polesie, Roztocze and the Eastern Beskids. They constitute an environmentally and culturally coherent area, and, at the same time, they are an important tourist potential of the neighbouring countries²¹.

These area features are important endogenous factors adding to its competitive advantage. The quality of the natural environment of the cross-border area is the key aspect of the inhabitants' high quality of life, it also determines the tourist attractiveness.

²¹ B. Kawałko, 2011, *Wybrane problemy polsko-ukraińskiej współpracy transgranicznej*, Barometr Regionalny No. 2(24).



Cultural heritage

The number of monuments listed as the UNESCO World Heritage Site can, undoubtedly, prove the cultural richness of a country. There are 16 such landmarks in Poland, of which three are located in the Polish-Belarusian-Ukrainian border area. In the support area there are also three out of the seven most valuable monuments of Ukraine and all the World Heritage Sites in Belarus (Table 19).

Table 19. Monuments on the UNESCO World Heritage List in the support area of the Cross-Border Cooperation Programme Poland-Belarus-Ukraine 2021–2027

POLAND	BELARUS	UKRAINE
Old City of Zamość	Białowieża Forest	Ensemble of the Historic Centre in Lviv
Wooden tserkvas in the Podkarpackie Voivodeship	Mir Castle	Wooden tserkvas in the Lvivska and Ivano-Frankivska Oblasts
Białowieża Forest	Nesvizh Castle	Primeval beech forests in the Carpathians
	Struve Geodetic Arc	

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

The support area is culturally rich. The eastern border of Poland is important as far as social and ethnic issues are concerned as it separates the areas inhabited by historically and culturally close populations²². However, such a statement may seem too simplistic. Though historical experiences are largely common, they have left a slightly different mark on the current awareness of the respective social groups, i.e. nations. The modern shape of the borders is related to the memory of dramatic events of the WW II and its consequences²³. That is why, it is extremely important to continue deepening cooperation of the border areas to maintain and cultivate common positive traditions. Activities in the field of cooperation are also important from the point of view of the national minorities living in this area. The Belarusian minority lives in the area of Białystok, Hajnówka, Bielsk Podlaski and Biała Podlaska (where also the Ukrainian minority is present). Whereas Poles live in the western part of Belarus (in the Grodno and Brest Oblasts) and in western Ukraine (Lvivska and Volynska Oblasts)²⁴.

²² Kawałko B., *Granica wschodnia jako czynnik ożywienia i rozwoju społeczno-ekonomicznego regionów przygranicznych – Synteza*.

²³ Szwed R., (2010), *Kultura i tożsamość wschodniego pogranicza Polski. Sprawy Narodowościowe*, 36, pp. 51-75.

²⁴ Kawałko B., *Granica wschodnia jako czynnik ożywienia i rozwoju społeczno-ekonomicznego regionów przygranicznych – Synteza*.



The development of cooperation regarding natural and cultural heritage can be indicated by the EU projects implemented in the previous financial perspective 2014–2020, whose total co-financing amounted to EUR 23,283,782.6²⁵. The Polish side was most often took on the role of project leader. The Ukrainian side was the project leader less often, whereas the Belarusian side was the project leader only in few projects. The projects focused on the following issues:

- protection of natural heritage, e.g. Protecting the Lake Solina and Schodnica's sources of the healing waters and Nature without borders – preservation of the common natural heritage in the Dobromil (Ukraine) and Zagórz (Poland) communes;
- supporting tourism potential, e.g. Two castles: common history, common promotion, an incentive to strengthen cooperation, tourist flows and economic growth;
- cultivating cultural and historical heritage implemented together with strengthening social capital and youth cooperation, e.g. Restoration of common cultural heritage as a base for youth and creative groups from Poland and Belarus cross-border cooperation.

The subject and the number of the implemented projects in the field of cultural and natural heritage may indicate both awareness of having a large potential to be taken care of, but also great financial needs related to the modernisation and maintenance of cultural heritage monuments, in particular. This problem is especially vital in Belarus and Ukraine. Many valuable cultural assets have been destroyed or have disappeared. This also regards Polish monuments that survived until the collapse of the USSR. Unfortunately, most of them have not been secured or restored until now. This regards for instance the Pidhirtsi Castle in Ukraine, called the Versailles of the East²⁶, or the Radziwiłł Triumphal Arch in the Grodno Oblast in Belarus. Another problem is the quality of conservation measures if only superficial restoration works are performed (e.g. renovation of the facade only) or the loss of authentic details in the architecture and art monuments.

There are several reasons for complex problem described. First of all, still insufficient awareness of the need to protect common heritage is observed. Moreover, the financial burden is often a barrier that cannot be overcome. Also the quality of education in the field of monument conservation is considered insufficient. Regarding the last problem,

²⁵ Keep.eu, European Union, access Feb. 6, 2020.

²⁶ Konończuk, W. (2017) *Polskie zabytki na wschodzie niszczeją. Z każdym rokiem liczba strat się powiększa*, *Polityka* <https://www.polityka.pl/tygodnikpolityka/swiat/1689530,1,polskie-zabytki-na-wschodzie-niszczaja-z-kazdym-rokiem-liczba-strat-sie-powieksza.read>.



the National Heritage Board of Poland in cooperation with the Belarusian Institute of Culture in Minsk established the Nieśwież Academy, which aims to train conservation staff of Eastern Europe²⁷.

To summarise, the border area is characterised by very rich natural and cultural heritage resources. In addition, it is inhabited by communities interrelated by a common history, culture and experiences, often which were very difficult. These premises should be a special incentive for joint actions in the field of heritage protection as well as for supporting tourist potential of the area, which are already being undertaken. The Cross-Border Programme, under which many valuable initiatives have been implemented, is an important platform facilitating this cooperation.

3.4.4 TOURIST TRAFFIC

The distribution of tourist facilities in the respective countries is generally uneven. It primarily depends on the location of significant tourist attractions and on the demand for them²⁸. The largest territorial concentration of accommodation facilities is in the Belarusian part of the cross-border area. In 2018 it represented 63% of the entire country collective accommodation facilities. This means that the Belarusian border area is an extremely valuable touristic resource and has great potential for economic development. Poland has the smallest share of the facilities in the support area in relation to the whole country (13%), despite the fact that their number is about 10 times higher than in Belarus. In Poland, the phenomenon of spatial dispersion is particularly pronounced. The Małopolskie, Zachodniopomorskie, Pomorskie and Dolnośląskie Voivodeships are marked by exceptionally large number of tourist facilities. In the Ukrainian border area, this share in relation to the whole country accounts for 27%.

Due to the attractiveness of the Eastern Beskids located in the Polish part of the support area, most accommodation facilities are located in the Krośnieński subregion. In the Belarusian part, the tourist accommodation is most developed in the Minsk region, while in Ukraine in the Lvivska Oblast (Table 20).

²⁷ Konończuk, W. (2017) *Polskie zabytki na wschodzie niszczeją. Z każdym rokiem liczba strat się powiększa*, Polityka <https://www.polityka.pl/tygodnikpolityka/swiat/1689530,1,polskie-zabytki-na-wschodzie-niszczeja-z-kazdym-rokiem-liczba-strat-sie-powieksza.read>.

²⁸ Świstak E., Sawicka B., Świątkowska M. (2013) Baza noclegowa jako czynnik rozwoju turystyki w województwie warmińsko-mazurskim. *Studia i Materiały CEPL w Rogowie*, zeszyt 37/4, pp. 313-320.



Table 20. Tourist accommodation availability

SPECIFICATION	Tourist accommodation establishments					Accommodation places (in thousand)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
POLAND	9,885	10,024	10,509	10,681	11,076	694.0	710.3	749.2	774.0	798.7
Podlaskie Voivodeship	248	269	263	259	281	12.8	13.5	14.0	14.0	14.6
Białostocki subregion	61	72	72	68	73	3.9	4.2	4.3	4.2	4.3
Suwalski subregion	107	112	108	108	120	6.0	6.1	6.3	6.5	6.8
Łomżyński subregion	80	85	83	83	88	3.0	3.2	3.4	3.3	3.5
Mazowieckie Voivodeship	476	486	528	554	614	47.9	49.0	53.4	56.7	62.7
Ostrołęcki subregion	25	27	28	30	34	1.4	1.5	1.5	1.5	1.7
Siedlecki subregion	48	49	49	50	55	3.5	3.6	3.6	4.0	4.8
Lubelskie Voivodeship	363	369	422	445	472	20.8	21.8	24.6	26.0	26.6
Bialski subregion	87	85	99	100	106	4.7	4.7	5.8	6.0	6.1
Lubelski subregion	75	81	95	107	116	4.8	5.6	6.1	6.5	7.2
Puławski subregion	93	92	98	103	108	5.8	5.7	6.1	6.4	6.1
Chełmsko-Zamojski subregion	108	111	130	135	142	5.6	5.9	6.6	7.0	7.3
Podkarpackie Voivodeship	513	527	582	582	642	27.6	28.7	30.7	33.0	34.7
Przemyski subregion	77	77	80	70	72	3.8	4.1	4.4	3.9	4.1
Rzeszowski subregion	88	101	110	110	113	5.2	6.3	6.5	7.8	7.6
Tarnobrzeski subregion	72	71	75	79	80	3.3	3.3	3.7	3.9	4.0
Krośnieński subregion	276	278	317	323	377	15.4	15.0	16.3	17.3	19.0
BELARUS	996	1,014	1,052	1,072	1,077	82.3	84.0	85.7	86.8	87.2
Grodno Oblast	110	110	117	119	122	7.3	7.8	7.6	7.8	7.9
Brest Oblast	136	143	141	152	157	11.2	11.5	11.1	11.3	11.7
Minsk Oblast	252	265	267	287	282	24.5	25.2	25.2	26.1	26.6
Gomel Oblast	118	117	124	120	117	10.7	10.6	10.6	10.5	10.3
UKRAINE²⁹	4,572	4,341	4,256	4,115	1,591	406.0	402.7	375.6	359.0	.
Volynska Oblast	138	139	137	131	72	6.2	6.2	6.3	6.1	.
Lvivska Oblast	340	331	343	337	129	32.7	33.6	30.9	32.9	.
Zakarpatska Oblast	355	311	376	374	54	17.9	16.9	15.9	15.3	.
Rivnenska Oblast	65	59	58	52	17	4.2	3.9	4.1	3.8	.
Ternopilaska Oblast	70	68	70	66	14	4.1	4.3	4.6	4.1	.
Ivano-Frankivska Oblast	243	230	257	274	67	12.4	12.2	14.4	14.7	.

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

²⁹ In case of Ukraine, the change in the accommodation facility number between 2018 and 2017 is due to the change in the research methodology.



In order to assess the directions and the development of tourist accommodation in the support area, one should examine trends in the accommodation changes in the analysed period. In Poland, most subregions located in the cross-border area are marked by above-average positive changes, higher than the national average. This means that tourist facilities are constantly being developed. However, the Łomżyński, Tarnobrzeski and Przemyski subregions were below this value. In the latter, even a decrease in the number of accommodation facilities was noted over a period of five years.

Similar trends have been observed in Belarus. Within the country, the increase in the number of accommodation facilities was 2% on average (only less than 1 percent less than in Poland). Tourist accommodation developed the most in the Brest Oblast. A reverse phenomenon, i.e. a drastic reduction in the number of tourist accommodation establishments, was observed in the examined period in Ukraine. However, it should be noted that it may be the result of methodological changes regarding data collection in 2017 and 2018 in Ukraine (Table 21).

Table 21. Average rate of changes in the number of tourist accommodation establishments in the years 2014–2018

SPECIFICATION	Tourist accommodation establishments
	Average rate of changes [%]
POLAND	2.9%
Podlaskie Voivodeship	3.3%
Białostocki subregion	5.0%
Suwalski subregion	3.1%
Łomżyński subregion	2.5%
Mazowieckie Voivodeship	6.6%
Ostrołęcki subregion	8.0%
Siedlecki subregion	3.5%
Lubelskie Voivodeship	6.9%
Bialski subregion	5.3%
Lubelski subregion	11.6%
Puławski subregion	3.9%
Chełmsko-Zamojsk subregioni	7.2%
Podkarpackie Voivodeship	5.9%
Przemyski subregion	-1.4%
Rzeszowski subregion	6.6%
Tarnobrzeski subregion	2.7%
Krośnieński subregion	8.3%
BELARUS	2.0%
Grodno Oblast	2.6%
Brest Oblast	3.7%
Minsk Oblast	2.9%
Gomel Oblast	-0.1%



SPECIFICATION	Tourist accommodation establishments
	Average rate of changes [%]
UKRAINE	-17.9%
Volynska Oblast	-12.5%
Lvivska Oblast	-15.6%
Zakarpatska Oblast	-19.4%
Rivnenska Oblast	-22.1%
Ternopilaska Oblast	-21.1%
Ivano-Frankivaska Oblast	-15.6%

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

In the Polish part of the support area, the degree of the accommodation use measured by the number of nights spent in the analysed area in relation to the entire country is on average only 8%. This indicates the lack of full use of the area tourist potential, because, as indicated above, this part of Poland possesses 13% of the country accommodation base. In this respect, the situation is much better in Ukraine, where the level of the accommodation use in relation to the whole country is the same as the share of the accommodation establishments and amounts to 27%. However, it should be noted that, in 2014–2018, in the Polish part of the cross-border area a constant increase in the number of overnight stays is observed, ranging from 0.2% in the Białostocki subregion to 26.9% in the Siedlecki subregion. In Ukraine, however, a downward trend in the use of accommodation is observed.

No drastic changes were observed in the number of overnight stays in Belarus. The largest number of accommodated tourists was observed in Minsk Oblast but there were also the largest decrease during the analyzed period. The smallest number of overnight stays was noted in the Grodno Oblast.

Table 22. The number of overnight stays located in the collective living quarters of the Belarusian part of the support territory for 2014-2018. (thousands of units)

	2014	2015	2016	2017	2018
Belarusian part of the support territory	9 761,40	8 721,00	8 497,50	8 379,10	8 792,30
Brest Oblast	1 861,00	1 722,90	1 693,70	1 663,30	1 804,50
Gomel Oblast	2 083,10	1 900,50	1 829,80	1 824,50	1 850,80
Grodno Oblast	1 194,50	1 099,70	1 140,30	1 183,80	1 246,70
Minsk Oblast	4 622,80	3 997,90	3 833,70	3 707,60	3 890,20

Own study based on data from the National Statistical Committee of the Republic of Belarus and the Ministry of Foreign Affairs (Belarus)

In the support area, in the respective countries, various trends in the field of tourism are observed. In the Polish part a constant increase in the influx of tourists took place,

proving country development in the field of tourism. Most tourists visited the Białostocki and Krośnieński subregions. On the other hand, the Ostrołęcki and Siedlecki subregions were the least popular.

In Belarus, the number of tourists in the examined period was quite stable. A decrease was recorded in 2015, especially in the Grodno and Brest Oblasts. Starting from 2016, number of persons accommodated in collective accommodation facilities in the Belarusian part of the support area has been increasing. In general, over the analyzed period, the largest number of accommodated tourists was observed in Minsk Oblast and the smallest number - in the Grodno Oblast.

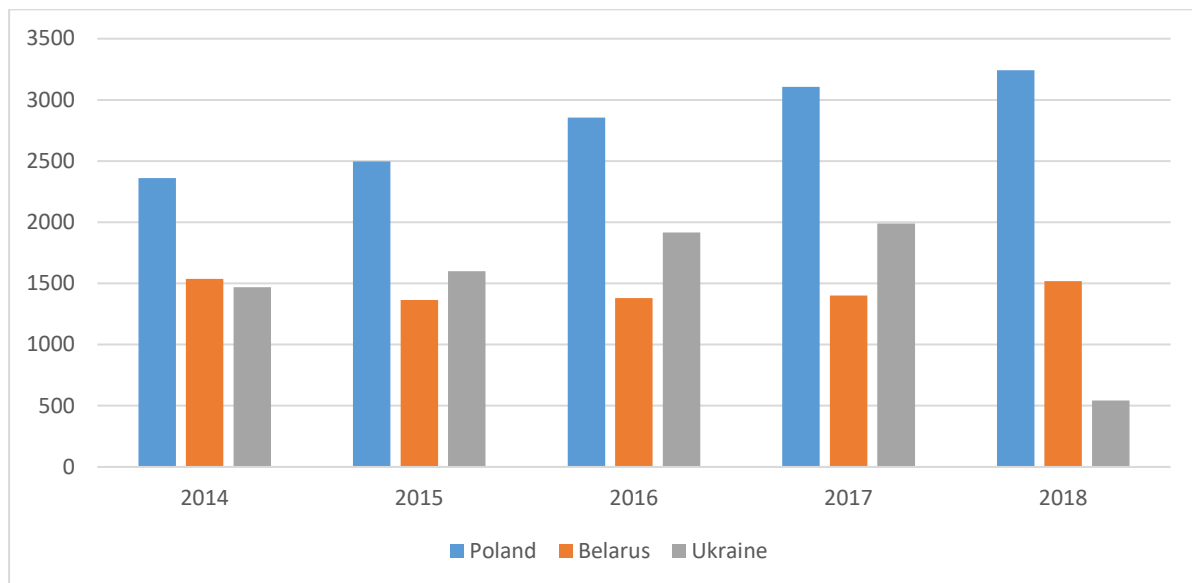


Chart 3. Total number of tourists in the support area in the years 2014–2018 [in thousand]

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

While analysing tourism in the support area, special attention should be paid to Ukraine. In 2018, after a relatively stable four-year period of systematic slow growth or stabilisation in the number of incoming tourists, this trend drastically broke down (Chart 4).

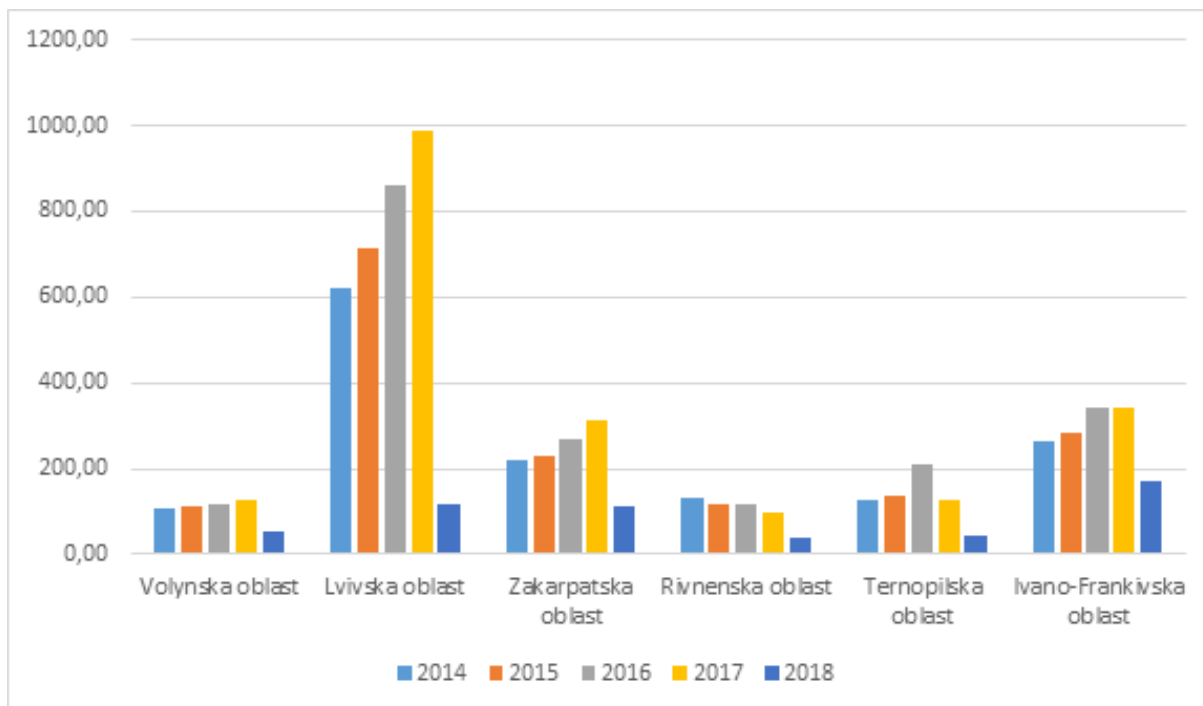


Chart 4. Total number of tourists in the support area of the Programme in Ukraine in the period 2014–2018 [in thousand]

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

The analysis of the tourism structure also provides valuable information. As a rule, the vast majority of tourism in the support area is generated by the inhabitants of a given country. Foreign tourists constitute 30.3% of all in Belarus, 16% in Poland and the least - 8% in Ukraine (Chart 5).

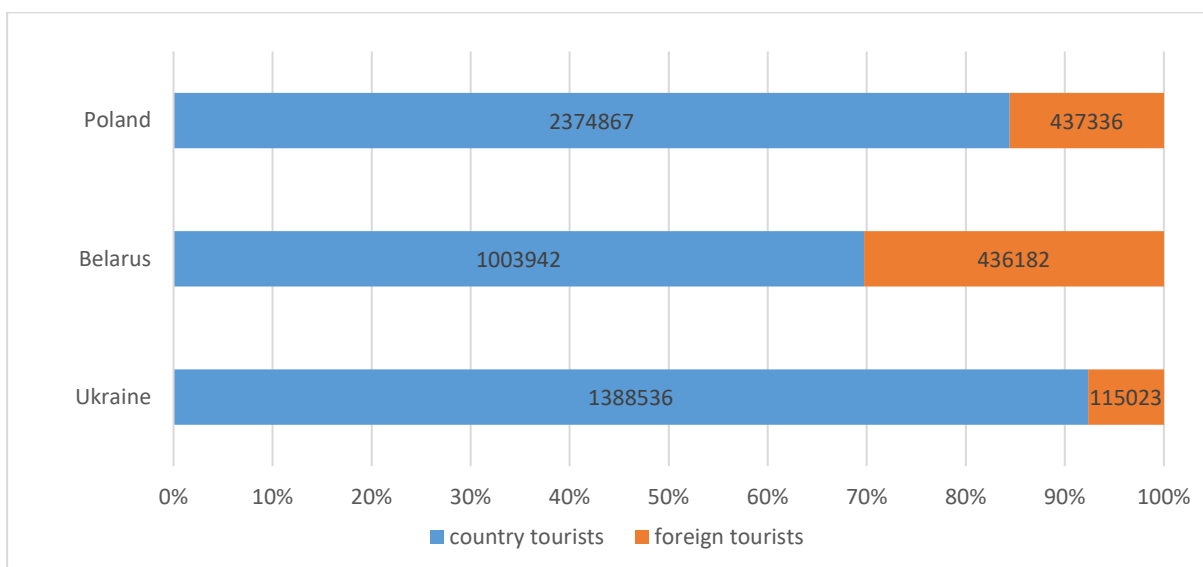


Chart 5. The ratio of tourists in the support area of the Programme in the years 2014–2018

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

As far as the directions of foreign inbound tourism are concerned, the countries of the analysed support area show some similarities. Russia is one of the most popular countries from which tourists come to Poland, Ukraine and Belarus. Russian tourists most often visit Belarus. They are the third largest group in Ukraine and the fourth in Poland. In addition, tourists from the cross-border area often visit each other (Figure 1).



Figure 1. Foreign inbound tourism to Poland by countries³⁰

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

However, significant differences regarding inbound tourism in the support area of the Programme can be observed. Poland largely directs its tourist offer to Western and Southern Europe. As a result, its major target markets are Germany, Great Britain, Italy, France and Spain. Often, US citizens are the recipients of tourist services in Poland. Inbound tourism in Belarus focuses on the Baltic States (Lithuania, Latvia), while in Ukraine – on Central and Eastern European countries (Hungary, Romania, Slovakia) (Figure 2 and Figure 3).

³⁰ In order to obtain comparable data on the inflow of foreign tourists by countries, the entire territories of Poland, Ukraine and Belarus were compared, due to the lack of data for the respective oblasts in Ukraine and Belarus.



Figure 2. Foreign inbound tourism to Belarus by counties³¹

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)



Figure 3. Foreign inbound tourism to Ukraine by countries³²

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

³¹In order to obtain comparable data on the inflow of foreign tourists by countries, the entire territories of Poland, Ukraine and Belarus were compared, due to the lack of data for the respective oblasts in Ukraine and Belarus.

³²In order to obtain comparable data on the inflow of foreign tourists by countries, the entire territories of Poland, Ukraine and Belarus were compared, due to the lack of data for the respective oblasts in Ukraine and Belarus.



In economic terms, tourism is an important sector that can significantly affect the dynamics of the country's economic development. This is usually manifested by new jobs, reducing unemployment, stimulating investment and budget revenues, and improving the local community quality of life by facilitating access to a variety of products created for increasing tourist attractiveness³³. Thanks to tourism, it is possible to economically make use of the natural and cultural competitive advantages of specific territories.

The importance of tourism in the economy of a given country can be measured by the contribution of tourism to GDP. Globally, this sector is treated as a priority. In 2018, in terms of importance, tourism was third in the structure of the global economy, generating 10.4% of global GDP³⁴. In the support area, tourism is the most important in Ukraine, where its contribution to the country economy is 5.4%, in Poland with 4.5%. In Belarus the GDP direct contribution of the tourism sector was 2.2% in 2016 (according to the results of construction of Tourism Satellite Account).

3.4.5 SUMMARY

The main conclusions from the analysis of the economy, competitiveness and digitisation issues are the following:

- The area is characterised by significant disparities in the economic development between Polish and Belarusian, Polish and Ukrainian as well as Belarusian and Ukrainian parts.
- In addition to significant differences in the development at the international level, significant development disparities at the internal country level are also visible, especially between the metropolitan and peripheral areas.
- The contribution of the qualified area regional economies to gross value added of Poland, Belarus and Ukraine decreased in 2014-2017, which indicates deepening development disparities at the internal country levels.
- The eastern border subregions of Poland reached one of the lowest values of GDP per capita adjusted by purchasing power parity in the whole European Union.
- The structure of the respective regional economies in the support area is characterised by a significant share of the agricultural sector in generating GVA,

³³ Seweryn R. (2017) Wkład turystyki w PKB Polski na tle innych krajów Unii Europejskiej, *Handel wewnętrzny*, 4(369), pp. 220-232.

³⁴ Status for 2019 based on World Travel & Tourism Council data.



while in the case of the Belarusian oblasts and the Podkarpackie Voivodeship by a relatively high share of the industrial sector.

- The qualified area is heterogeneous in terms of saturation with national economy entities. The highest entrepreneurship level is noted in the Polish part of the support area, moderately high in the Ukrainian part and low in the Belarusian part which also has a relatively high share of small and medium entities.
- Enterprises from the Lubelskie and Podkarpackie Voivodeships and the Brest Oblast are marked by a relatively high level of innovation (higher than in Poland and Belarus, respectively).
- Enterprises in the Polish part of the eligible area used information technologies at a similar level than other regions in the country, while in the case of both regions of Belarus bordering Poland, i.e. the Grodno and Brest Oblasts, they were higher than the average in Belarus.
- The volume of foreign investment in the eligible area should be considered very small compared to the average in the respective countries, although the involvement of capital from Poland, Belarus and Ukraine in the border regions of the above-mentioned neighbouring countries is visible.
- The volume of trade exchange indicates relatively strong economic connections of the support areas with Poland, Belarus or Ukraine.

The main conclusions regarding the cultural and natural heritage resources and tourist traffic are the following:

- There is a significant tourist potential in the support area. It is unique in the scale of the respective countries. This is particularly visible in the Belarusian support area, where 63% of the whole country's collective accommodation facilities are concentrated (in 2018). In Ukraine, it constitutes one third of the entire tourist facilities, which were fully used in the analysed period. In Poland, tourist facilities are the most dispersed, therefore in the support area their share is only 13%. It should be noted that however, that in Poland it is not fully used (share of the accommodation use in relation to the whole country is 8% on average).
- Generally, in the entire support area, the economic importance of tourism is much smaller than globally, in Poland tourism contributes the least to GDP. Therefore, it is essential to intensify promotional tourism activities.
- In terms of general tourism development trends, positive phenomena can be observed in Poland and Belarus, where the number of tourist facilities as well as



the number of tourists in the examined period increased or was stable. On the contrary, in Ukraine, downward trends were observed. A particularly drastic decline in tourism was noticed in 2018. Undoubtedly, the reasons of this negative phenomenon were of political nature.



3.5 ENVIRONMENT

Issues related to the natural environment are becoming increasingly important in shaping policy in Poland, Belarus and Ukraine. Strategic documents of the supported countries increasingly draw attention to the need to take measures in the rational use of environmental resources.

3.5.1 AIR

One of the basic issues to be examined when analysing the state of the natural environment is air pollution.

To begin with, it should be noted that between the support areas of Poland and Belarus and Ukraine there are significant differences in the methodology for collecting data on air pollution emissions. Aggregating and comparing this data would be incorrect, therefore it was decided to analyse data for Poland separately and separately for Belarus and Ukraine.

EMISSION OF MAJOR POLLUTANTS

Emission of pollutants from particularly onerous factories³⁵ is analysed in Poland through dust and gas pollutants. The quantity of the latter definitely dominates over dust pollution. An alarming trend is the increase in gaseous emissions in the analysed period in all voivodeships. The largest increase was recorded in the Mazowieckie Voivodeship – by 11 percent, the lowest in the Podlasie Voivodeship – by 1 percent. Analysing the data broken down by subregions, the highest values of the indicator were recorded in the Ostrołęka subregion (2, 822,000 tonnes of produced gas pollutants in 2018) and in the Puławy and Chełmsko-Zamość subregions (2001 and 1992,000 tonnes respectively of produced gas pollutants in 2018) (Table 22).

³⁵ According to the definition of the Central Statistical Office of Poland, particularly onerous factories are so-called point sources of pollutant emissions, which include all organizational units that meet the criteria related to the amount of pollutant emissions based on legal acts

Table 23. Emission dust and gas pollutants from particularly onerous factories

	Emission of gas pollutants (th. t./year)					Emission of dust pollutants (th. t./year)				
	2014	(t. /year)	2016	2017	2018	2014	2015	2016	2017	2018
Poland	209 067	211 566	210 849	213 921	213 214,234	47 392	44 264	38 598	35 564	31 827
Podlaskie Voivodeship	2 014,57	1 978,19	2 208,09	2 065,19	2 039,77	934	921	815	701	691
Białostocki subregion	1 177,09	1 176,46	1 132,32	960,906	930,048	159	181	182	120	104
Suwałski subregion	2 94,865	281,294	520,875	550,61	564,826	398	413	341	347	376
Łomżyński subregion	5 42,609	520,445	554,891	553,677	544,896	377	327	292	234	211
Mazowieckie Voivodeship	2 8435,5	28 568	28 771,3	29 125,8	31 629,741	4 532	3 890	2 794	2 747	2 582
Ostrołęcki subregion	4 157,43	3 197,73	2 894,1	2 886,44	2 822,499	765	611	409	430	364
Siedlecki subregion	2 57,956	261,761	267,168	279,733	261,943	205	187	141	115	114
Lubelskie Voivodeship	4971,18	5 000,21	5 097,02	5 069,72	5 088,064	1 922	1 975	1 728	1 711	1 438
Bialski subregion	191,586	182,503	188,606	185,781	180,179	170	149	130	125	108
Lubelski subregion	778,12	860,655	996,098	992,971	913,784	369	233	177	154	162
Puławski subregion	2 084,26	2 073,28	2120,6	1 934,55	2 001,692	791	1 049	926	940	702
Chełmsko-zamojski subregion	1 917,21	1 883,77	1 791,72	1 956,42	1 992,409	592	544	495	492	466
Podkarpackie Voivodeship	2 525,58	3 053,37	2 806,07	2 815,05	2 777,991	1 420	1 370	1 316	1 276	1 189
Przemyski subregion	297,26	290,137	295,753	308,029	303,388	161	163	120	125	73
Rzeszowski subregion	5 18,226	587,541	608,616	627,299	625,622	475	327	317	323	280
Tarnobrzeski subregion	1 343,14	1 792,19	1 513,51	1 479,34	1 447,746	455	578	614	583	597
Krośnieński subregion	366,956	383,508	388,197	400,375	401,235	329	302	265	245	239

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

In order to determine the air quality in the support area, it is worth looking at changes in pollutant emissions from stationary sources³⁶ over the years. According to the collected data, Ukraine emits five to six times more pollution, depending on the year, compared to Belarus. However, a general downward trend is observed. In the case of Belarus, it dropped by 2% (data from 2017 compared to 2014), while in the case of Ukraine by 12% (data from 2018 compared to 2015). According to the most current data regarding the Belarusian part of the support area, the most pollution is emitted by the Gomel Oblast (105,600 tonnes), and the least by the Brest oblast (50,600 tonnes). In the case of the Ukrainian part, the largest emission is recorded in the Ivano-Frankivska Oblast (221,400 tonnes), while the smallest in the Zakarpatska Oblast (4,000 tonnes), which is a huge difference. Therefore, the Ukrainian part is the larger emitter of air pollution in the support area (Table 24). Due to incomparability of data, the table for Poland is omitted.

Table 24. Air pollution emissions from stationary sources (in thousand tonnes)

SPECIFICATION	2014	2015	2016	2017	2018
BELARUS	462.8	458.3	453.1	453.4	453.3
Grodno Oblast	58.8	56.5	53.8	60.3	58.8
Brest Oblast	51.8	50.3	51.5	50.6	53.1
Minsk Oblast	74.5	75.9	74.9	68.6	70.6
Gomel Oblast	101.6	99.6	104.6	105.6	100.4
UKRAINE		2,857.4	3,078.1	2,584.9	2,508.3
Volynska Oblast		4.7	4.7	5.1	5.1
Lvivska Oblast		102.4	103.1	109.1	106.7
Zakarpatska Oblast		4.4	4.9	3.2	4.0
Rivnenska Oblast		10.2	9.1	9.6	9.1
Ternopilaska Oblast		8.5	9.0	10.6	10.2
Ivano-Frankivksa Oblast		223.9	196.7	198.3	221.4

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

Throughout the Belarus, the value of this indicator decreased in 2017, compared to 2014. A similar trend is observed in the Grodno and Gomel Oblasts. The highest percentage of retained and neutralised pollutants, more than 90% of generated pollutants, was recorded in the Minsk Oblast (Chart 6).

³⁶ They include, among others domestic stoves, local boiler rooms, power plant chimneys

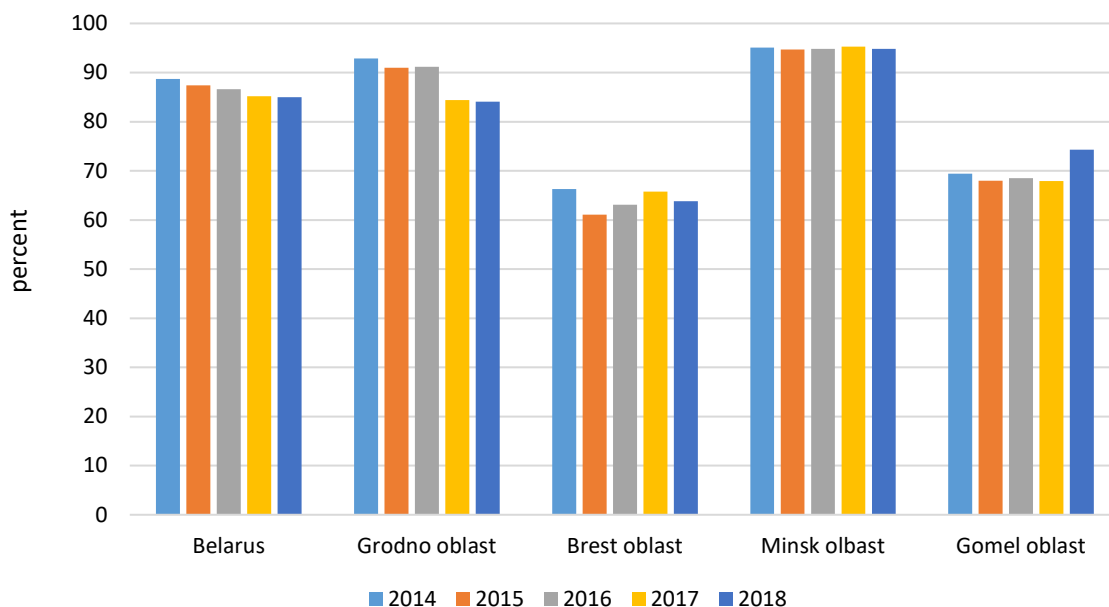


Chart 6. Pollutants retained and neutralised in air cleaning systems in 2014-2017 in % of pollutants generated in Belarus

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus

In Ukraine, the sources of air pollution are very diverse in the respective oblasts. Pollution resulting from the supply of electricity (as well as gas, steam and air conditioning) is the largest in the Ivano-Frankivska Oblast where it reaches 92%. In the Rivnenska Oblast, 76% of pollution comes from the processing industry, while in the Zakarpatska Oblast 65% of pollution results from transport, storage, postal and courier activities. The most common source of pollution in all oblasts, situated in the Ukrainian part of the support area, is the supply of electricity, gas, steam and air conditioning, followed by the processing industry (Chart 7).

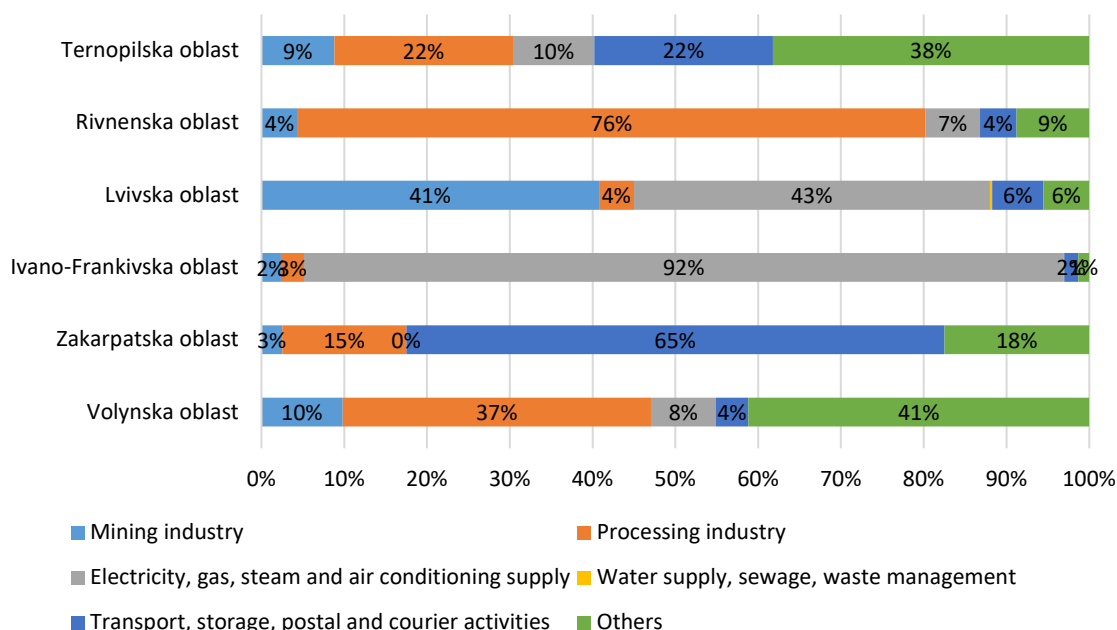


Chart 7. Air pollution from the stationary sources in 2018 by the economic activities in Ukraine

Source: Own study based on data from State Statistics Service of Ukraine (Ukraine)

3.5.2 WATER

When analysing the total water consumption in Poland, Ukraine and Belarus, a clear downward trend is observed in the examined years. It is most visible in the case of Ukraine (a decrease of approx. 25% compared to 2014), followed by Belarus (approx. 9%) and Poland (approx. 8%). However, an in-depth regional analysis shows that the trend is maintained mainly in Ukraine and Belarus. In the case of Poland, only four subregions note a decline (Ostrołęcki, Puławski, Chełmsko-Zamojski and Tarnobrzieski subregions). Other subregions note the same values or even higher compared to previous years, contrary the general trend. However, looking at the overall water consumption in the cross-border area, it can be concluded that environmental awareness has increased over the years.

Table 25. Total water consumption (in million m³)

SPECIFICATION	2014	2015	2016	2017	2018
POLAND	10,244	10,059	10,139	9,656	9,435
Podlaskie Voivodeship	86	87	88	85	89
Białostocki subregion	30	31	31	28	30
Suwalski subregion	28	28	28	28	29
Łomżyński subregion	27	28	29	29	30
Mazowieckie Voivodeship	2,933	2,785	2,748	2,614	2,460
Ostrołęcki subregion	615	488	467	446	455
Siedlecki subregion	32	33	34	34	34



SPECIFICATION	2014	2015	2016	2017	2018
Lubelskie Voivodeship	330	317	314	304	292
Bialski subregion	32	33	34	32	35
Lubelski subregion	52	53	55	56	56
Puławski subregion	178	170	161	161	154
Chełmsko-Zamojski subregion	68	60	65	55	47
Podkarpackie Voivodeship	246	267	236	232	225
Przemyski subregion	29	26	30	29	28
Rzeszowski subregion	27	26	26	25	27
Tarnobrzeski subregion	178	203	168	165	158
Krośnieński subregion	12	12	12	12	13
BELARUS	1,371	1,270	1,302	1,264	1,247
Grodno Oblast	148	146	143	145	139
Brest Oblast	250	236	222	231	224
Minsk Oblast	302	237	315	292	278
Gomel Oblast	183	176	164	156	165
UKRAINE	9,817	7,125	7,169	6,853	7,363
Volynska Oblast	72	54	52	58	54
Lvivska Oblast	175	120	119	123	125
Zakarpatska Oblast	33	30	29	22	24
Rivnenska Oblast	159	102	89	98	91
Ternopilska Oblast	61	38	37	37	38
Ivano-Frankivska Oblast	86	78	74	75	83

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

The percentage of the population using the sewage network in the support area is definitely the largest on the Belarusian side (93.9 in total). In Poland it is 70.8, while in Ukraine it is 59.3. It is noted that higher values are observed in urban areas compared to the rural ones (no detailed data for Belarus). At the level of the subregions, in Poland the total values range between 44.2 and 79.0, in the case of Ukraine they are between 49.3 and 74.6 (again no detailed data for Belarus). The values are therefore comparable. In urban areas, the highest values are reached in the Białostocki subregion in Poland (94.2), while the lowest values are in the Ivano-Frankivska Oblast in Ukraine (74.4). In rural areas, the highest values are recorded in the Zakarpastka Oblast in Ukraine (71.3), the lowest – in the Łomżyński subregion in Poland (14.5). Values recorded in rural areas are therefore more diverse than in urban ones (Table 26).

Table 26. Percentage of population using the sewage network in 2018

SPECIFICATION	Total	Urban areas	Rural areas
Poland	70.8	90,3	41.3
Podlaskie Voivodeship	64.5	91.7	22.5
Białostocki subregion	79.0	94.2	35.0



SPECIFICATION	Total	Urban areas	Rural areas
Łomżyński subregion	49.5	88.3	14.5
Suwalski subregion	59.3	89.5	22.7
Mazowieckie Voivodeship	69.4	90.7	30.8
Ostrołęcki subregion	47.4	87.8	24.5
Siedlecki subregion	50.3	88.1	27.5
Lubelskie Voivodeship	53.0	88.9	21.8
Bialski subregion	50.3	85.7	27.1
Lubelski subregion	65.2	92.0	22.0
Puławski subregion	44.2	87.0	17.7
Chełmsko-Zamojski subregion	47.1	86.4	22.2
Podkarpackie Voivodeship	70.4	89.9	56.8
Przemyski subregion	75.4	89.5	66.9
Rzeszowski subregion	72.7	91.1	58.5
Tarnobrzeski subregion	67.5	88.4	49.4
Krośnieński subregion	66.9	90.9	54.8
Belarus	93.9	98.6	81.6
Grodno Oblast			
Brest Oblast			
Minsk Oblast			
Gomel Oblast			
Ukraine	59.3	76.5	28.5
Volynska Oblast	55.9	77.4	34.0
Lvivska Oblast	70.1	90.5	39.6
Zakarpatska Oblast	74.6	79.2	71.3
Rivnenska Oblast	49.3	74.2	27.8
Ternopilaska Oblast	50.5	81.6	25.9
Ivano-Frankivaska Oblast	51.5	74.4	32.8

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

Trends in water and wastewater management are different in countries of the Programme area. The output of wastewater treatment plants decreased by 7.3% in Ukraine and 1.6% in Poland. In Belarus, on the contrary, it increased by 9%. In the case of Poland, when analysing the phenomenon at the subregional level, it should be stated that productivity increased only slightly in the Białostocki, Ostrołęcki, Siedlecki and Krośnieński subregions. In other subregions in the support area, the capacity decreased or remained at the same level during the examined period. In Ukraine, there is a slight increase in the Volynska, Lvivska and Zakarpatska Oblasts, while the others show a slight decline. In the case of Belarus, a significant increase in the efficiency of sewage treatment plants is recorded in all oblasts. It is thus impossible to present a clear trend in water and sewage management in the whole support area (Table 27).



Table 27. Efficiency of sewage treatment plants (in million m³ per year)

SPECIFICATION	2015	2016	2017	2018
POLAND	5,227	5,250	5,187	5,143
Podlaskie Voivodeship	110	111	110	111
Białostocki subregion	53	53	53	54
Suwalski subregion	22	22	22	22
Łomżyński subregion	35	35	35	35
Mazowieckie Voivodeship	485	517	517	520
Ostrołęcki subregion	41	45	46	46
Siedlecki subregion	26	27	27	27
Lubelskie Voivodeship	178	176	176	177
Bialski subregion	15	15	15	15
Lubelski subregion	68	68	68	68
Puławski subregion	52	50	50	50
Chełmsko-Zamojski subregion	43	43	43	43
Podkarpackie Voivodeship	300	293	275	277
Przemyski subregion	30	29	30	30
Rzeszowski subregion	52	44	41	41
Tarnobrzeski subregion	172	172	158	158
Krośnieński subregion	46	47	47	47
BELARUS	1,873	1,845	1,885	2,043
Grodno Oblast	215	212	210	227
Brest Oblast	318	332	326	347
Minsk Oblast	271	227	225	286
Gomel Oblast	240	241	267	279
UKRAINE	5,801	5,690	5,415	5,378
Volynska Oblast	78	77	83	83
Lvivska Oblast	269	270	278	279
Zakarpatska Oblast	44	50	50	50
Rivnenska Oblast	124	116	116	117
Ternopilaska Oblast	59	51	51	51
Ivano-Frankivaska Oblast	130	110	111	124

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

Discharge of untreated sewage constitutes a large share of water pollution. In this respect the situation in Belarus is most favourable among countries of the support area. The percent of annual untreated wastewater discharged into the waters within the total wastewater discharged into the waters is below 3% in all subregions. A similar situation occurs in all subregions in Poland.



The Ukrainian oblasts are characterised by a varied percent of untreated wastewater discharged into the waters within the total wastewater discharged into the waters, from 0% in the Volynska Oblast to 25% in the Lvivska Oblast in 2018 (Table 28).

Table 28. Percentage of untreated wastewater discharged annually into the waters in total wastewater discharged into the waters

SPECIFICATION	2014	2015	2016	2017	2018
POLAND	5%	5%	5%	5%	5%
Podlaskie Voivodeship	0%	0%	0%	0%	0%
Białostocki	0%	0%	0%	0%	0%
Suwalski	0%	0%	0%	0%	0%
Łomżyński	0%	0%	0%	0%	0%
Mazowieckie Voivodeship	2%	3%	1%	1%	2%
Ostrołęcki	0%	0%	0%	0%	0%
Siedlecki	2%	2%	3%	3%	2%
Lubelskie Voivodeship	1%	1%	0%	0%	1%
Bialski	0%	0%	0%	0%	0%
Lubelski	0%	0%	0%	0%	1%
Puławski	1%	1%	1%	1%	1%
Chełmsko-Zamojski	2%	1%	0%	0%	0%
Podkarpackie Voivodeship	2%	2%	2%	1%	1%
Przemyski	0%	0%	0%	0%	0%
Rzeszowski	3%	3%	2%	2%	2%
Tarnobrzegi	1%	0%	1%	0%	0%
Krośnieński	3%	2%	3%	3%	3%
BELARUS	0%	1%	1%	0%	0%
Grodno Oblast	0%	0%	0%	0%	0%
Brest Oblast	0%	0%	0%	0%	0%
Minsk Oblast	2%	3%	2%	2%	2%
Gomel Oblast	0%	0%	1%	0%	0%
UKRAINE		16%	13%	21%	18%
Volynska Oblast		0%	0%	2%	0%
Lvivska Oblast		22%	22%	43%	25%
Zakarpatska Oblast		6%	12%	11%	11%
Rivnenska Oblast		10%	9%	7%	8%
Ternopilska Oblast		7%	7%	10%	8%
Ivano-Frankivska Oblast		2%	2%	2%	2%

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus, Environmental protection in the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

3.5.3 PROTECTED AREAS AND BIODIVERSITY



The protected area network is marked by an uneven spatial distribution. The share of the legally protected areas in the respective units takes on different values. It ranges from 0% in the Lvivska Oblast up to 75% in the Krośnienski subregion.

The Polish part of the support area is positively distinguished by a high share of protected areas in the total area. These high surface result from the spatial structure of Poland, among others. The infrastructure of the eastern part of the country remains less developed, and the subregions are more sparsely populated, which allowed to preserve the natural environment. As a consequence, it is characterised by a large number of valuable natural areas. In three voivodeships, i.e. Podkarpackie, Lubelskie and Podlaskie there are eight national parks. The percentage share of protected areas in most voivodeships reaches over 20%. The exceptions are the Ostrołęcki, Bialski and Tarnobrzeski subregions, where this share is similar to the Belarusian and Ukrainian parts of the support area.

In the Belarusian part of the area covered by the support there are three national parks: Białowieża Forest, Narachansky National Park and Pripyatsky National Park. The share of the legally protected areas in Belarusian oblasts ranges from 7% to 15%.

In Ukraine this value reaches between 0% and 12%. Although these values are the lowest, the development of the protected area systems has been observed in recent years. The undertaken measures included enlarging the area of existing national parks, creating new parks as well as creating other forms with a milder protection regime³⁷ (Chart 8).

³⁷ <https://www.president.gov.ua/documents/decrees>.

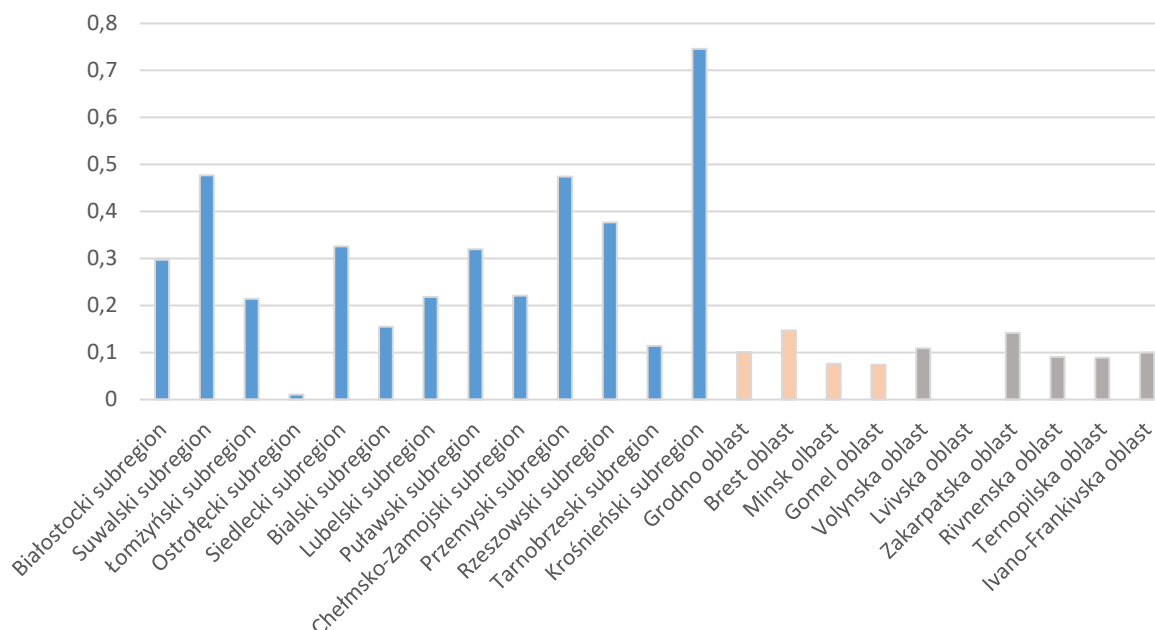


Chart 8. Share of the legally protected areas in the total area in 2016

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

In the support area there are following national parks (Map 7.)

In Poland:

- Wigry National Park
- Biebrzański National Park
- Narwiański National Park
- Białowieża National Park
- Poleski National Park
- Roztocze National Park
- Magura National Park
- Bieszczady National Park

In Belarus:

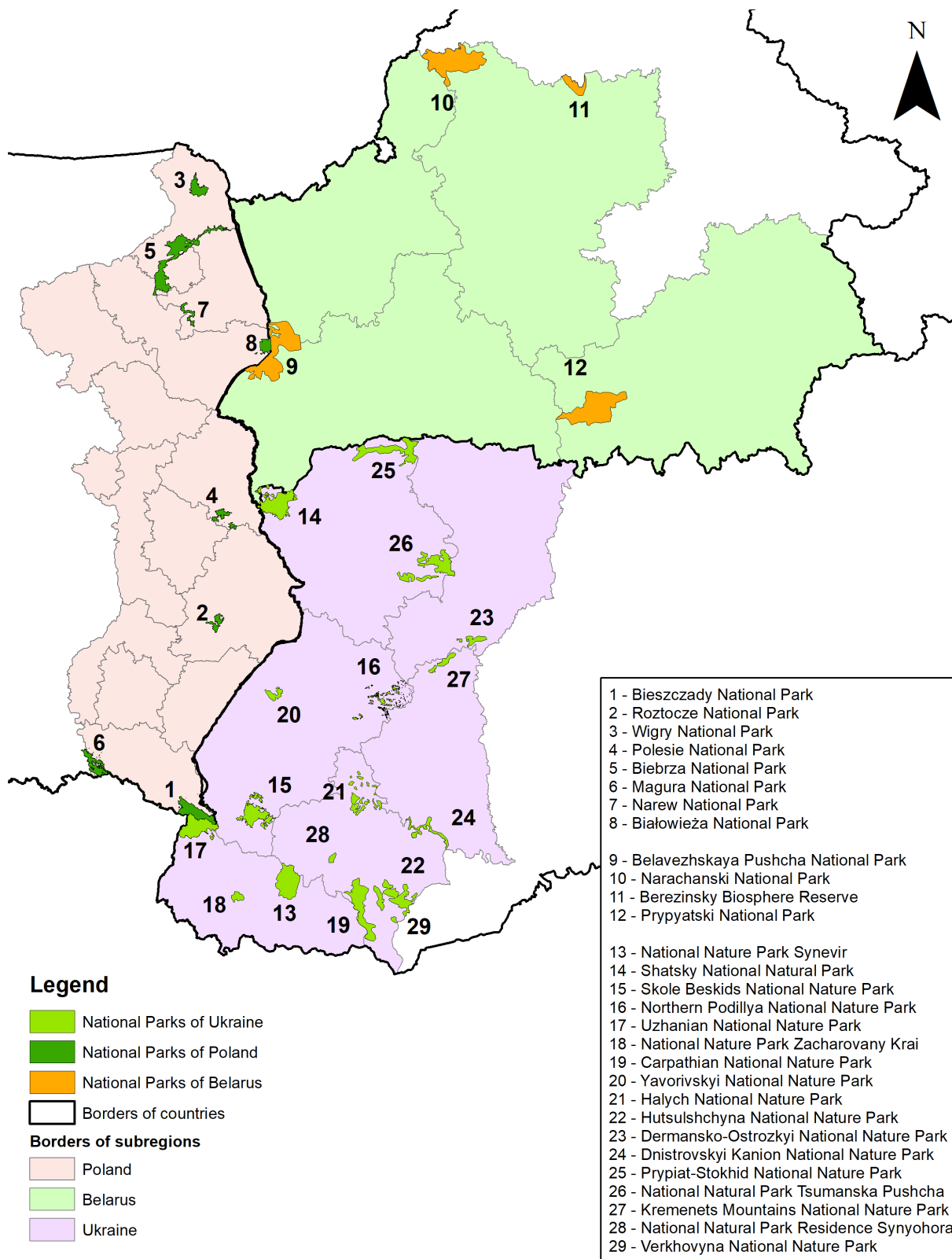
- Belavezhskaya Pushcha National Park
- Narachansky National Park
- Berezinsky Biosphere Reserve
- Prip'yatsky National Park

In Ukraine:

- National Nature Park "Synevyr"
- Shatsky Nature National Park



- National Nature Park "Skole Beskids"
- Northern Podillya National Nature Park
- Uzhanian National Nature Park
- National Nature Park Zacharovanyi Krai
- Carpathian National Nature Park
- Yavorivskiy National Nature Park
- Halych National Nature Park
- Hutsulshchyna National Nature Park
- Dermansko – Ostrozkyi National Nature Park
- Dnistrovskiy Kanion National Nature Park
- Prypiat-Stokhid National Nature Park
- National Nature Park Tsumanska Pushcha
- Kremenets Mountains National Nature Park
- National Nature Park Residence Synyohora
- Verkhovyna National Nature Park



Map 7 National parks in the support area

Source: Own study



3.5.4 WASTE MANAGEMENT

Waste management market is an important component of local government organisation. This sector is marked by constant adoption of new standards and legal solutions. At the same time trends among waste producers can change dynamically, as it was the case in Poland in 2013, when a year after the increase in municipal waste collection prices, the amount of generated waste dropped significantly in comparison to the previous year. The issue requires attention as well as organisational and investment activities which are adapted to the changing needs.

Data on the volume of waste generated show different trends observed in the Polish, Ukrainian and Belarusian parts of the support area. In Poland, apart from the Siedlecki and Lubelski subregions, there is a downward trend in the waste generated in the five-year period.

In Ukraine, in the years 2014–2018, the amount of generated waste increased in the Zakarpatska and Ternopilska Oblasts. In the Ternopilska Oblast the increase was over two times bigger.

No clear trends in the volume of waste generated are noted in Belarus. In 2014–2018 the amount of generated waste increased in all oblasts.

As for the values of the indicator for the respective oblasts, voivodeships and subregions, significant differences are observed, which result from the different sizes of the analysed areas, as well as the different number of entities from the construction, production, mining and mining industries located there. The volume is primarily related to the degree of economic development, which results from data regarding the subregions in which large cities are located. In the Lubelski subregion, the number of waste generated in 2018 was 6,853 tonnes, respectively (Table 29).

Table 29. Waste generated (in thousand tonnes)

SPECIFICATION	2014	2015	2016	2017	2018
POLAND	131,256.1	130,985.2	128,306.9	113,792.8	115,338.7
Podlaskie Voivodeship	1,266.7	871.1	662.0	1,076.0	884.6
Białostocki subregion	504.5	393.3	260.3	565.0	437.2
Suwalski subregion	492.0	290.7	218.8	315.7	293.6
Łomżyński subregion	270.2	187.1	182.9	195.3	153.8
Mazowieckie Voivodeship	7,096.2	5,784.8	5,369.1	5,595.5	6,017.7
Ostrołęcki subregion	671.2	592.6	594.1	662.1	647.2
Siedlecki subregion	131.0	106.1	117.9	137.7	169.8
Lubelskie Voivodeship	6,652.5	6,837.8	8,110.9	6,385.9	7,397.9
Bialski subregion	83.5	55.8	63.2	42.9	48.1



SPECIFICATION	2014	2015	2016	2017	2018
Lubelski subregion	5,888.0	6,040.9	7,445.8	5,879.9	6,853.5
Puławski subregion	333.2	257.3	244.9	221.4	235.6
Chełmsko-Zamojski subregion	347.8	483.8	357.0	241.7	260.7
Podkarpackie Voivodeship	1,099.1	2,329.5	1,393.5	805.3	814.7
Przemyski subregion	70.7	395.8	415.9	45.9	54.4
Rzeszowski subregion	187.0	1,277.4	416.5	143.3	160.7
Tarnobrzeski subregion	711.2	539.1	435.5	486.5	489.9
Krośnieński subregion	130.2	117.2	125.6	129.6	109.7
BELARUS	52,529.3	49,865.3	49,448.2	55,506.0	60,723.4
Grodno Oblast	1,863.7	1,785.8	2,072.4	2,348.5	2,528.1
Brest Oblast	1,449.1	1,244.0	1,579.4	1,487.7	1,973.7
Minsk Oblast	38,210.1	36,600.9	36,565.3	40,714.1	43,316.0
Gomel oblast	3,702.1	3,097.4	2,867.1	3,114.3	4,638.5
UKRAINE	-	312,267.6	295,870.1	330,932.2	352,333.9
Volynska Oblast	-	638.9	684.0	733.1	555.4
Lvivska Oblast	-	2,953.3	2,773.8	2,483.1	2,139.3
Zakarpatska Oblast	-	133.7	155.6	173.4	186.3
Rivnenska Oblast	-	843.3	713.2	457.7	484.2
Ternopilaska Oblast	-	808.9	862.2	1,905.8	1,651.8
Ivano-Frankivaska Oblast	-	2,124.8	1,935.4	1,948.8	1,969.8

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus, Environmental protection in the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

3.5.5 ENERGY AND CLIMATE

The energy sector has a significant impact on the state of the natural environment. One of the objectives of the European Union Cohesion Policy is to reduce emissions, which can be achieved by increasing the production of energy from renewable sources. Generally, the level of renewable energy use in the support area is low. In all regions in Belarus it does not exceed a few percent, while the country average is 1.83%.

In the case of Poland, the situation is similar in the Mazowieckie Voivodeship, while in the Lubelskie and Podkarpackie Voivodeships almost a quarter of energy comes from renewable energy sources. On the other hand, the best situation is in the Podlaskie Voivodeship, where 68.3% of energy is obtained from renewable sources.

Significant disproportions occur in Ukraine. There, the share of the use of energy from renewable sources ranges from 0% in the Rivnenska and Volynska Oblasts to 99.5% in the Zakarpatska Oblast, where the Tereblia-Rika hydropower station is located.



The data obtained for Belarus and Poland allow to assess the trends regarding renewable energy use. A several percentage increase between 2014 and 2018 was observed. In the Mazowieckie Voivodeship, on the other hand, the indicator value is steadily decreasing. In the remaining units, no significant changes were recorded in the examined period (Table 29.)

Table 30. Share of energy from renewable sources in the total energy production [%]

SPECIFICATION	Total electricity production					Share of energy from renewable sources in the total energy production [%]				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
POLAND	159,057.8	164,944.5	166,634.4	170,465.4	170,039.4	25.7	26.8	27.3	27.2	26.8
Podlaskie Voivodeship	938.4	1,213.7	1,226.9	1,186.1	1,051.2	69.8	70.1	66.5	54.7	68.3
Mazowieckie Voivodeship	23,907.5	23,641.6	24,289.5	24,916.2	30,441.0	8.3	7.9	5.9	6.6	4.8
Lubelskie Voivodeship	938.4	1,213.7	1,226.9	1,186.1	1,051.2	4.4	5.3	18.7	23.5	22.9
Podkarpackie Voivodeship	1,968.6	2,897.2	2,687.6	2,627.1	2,462.0	23.4	19.8	24.3	25.7	23.1
BELARUS	34,737.0	34,232.0	33,572.0	34,522.0	38,927.0	0.73	0.87	1.13	2.17	1.83
Grodno Oblast	2,514.0	2,612.0	2,770.0	2,924.0	2,946.0	3.54	3.25	4.44	5.27	4.92
Brest Oblast	4,883.0	5,210.0	5,397.0	5,362.0	5,535.0	0.96	0.92	1.0	1.17	1.16
Minsk Oblast	11,479.0	11,070.0	10,901.0	10,383.0	12,300.0	0.38	0.51	0.54	0.66	0.58
Gomel Oblast	3,058.0	3,115.0	3,312.0	3,313.0	3,674.0	0.2	0.32	0.6	2.32	2.94
UKRAINE	-	-	-	156,032.3	159,852.8					
Volynska Oblast	-	-	-	92.8	74.1	-	-	-	-	0.0
Lvivska Oblast	-	-	-	3,379.3	3,032.4	-	-	-	-	2.03
Zakarpatska Oblast	-	-	-	170.8	170.5	-	-	-	99.6	99.5
Rivnenska Oblast	-	-	-	19,841.2	17,599.1	-	-	-	-	0.0
Ternopilska Oblast	-	-	-	69.7	71.2	-	-	-	-	26.27

Ivano-Frankivska Oblast	-	-	-	9,349.0	10,322.8	-	-	-	-	0.7
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Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)



3.5.6 SUMMARY

The main conclusions drawn from the environment area analysis are the following:

- The support area is marked by unsatisfactory air quality. The most common source of pollution is the supply of electricity, gas, steam and air conditioning, followed by the processing industry.
- The Minsk Oblast in Belarus is characterised by the highest percentage of retained and neutralised pollutants (over 90%).
- In recent years, water consumption in the support area has been decreasing.
- The percentage of population using the sewage network in the support area is by far the largest on the Belarusian side. It is noted that the values are higher in urban areas compared to the rural ones.
- The Polish part of the support area is definitely distinguished from the other two countries by a large share of protected areas in the total area.
- Trends in waste management are varied. In the examined period, the amount of waste generated in Poland decreased, in Ukraine it increased, while in Belarus no clear trends were noted.
- The use of renewable energy in the support area is low.

3.6 TRANSPORT AND INFRASTRUCTURE

3.6.1 ROAD AND RAIL TRANSPORT

Transport accessibility as an element of spatial organisation is an important factor for the economic development and the inhabitants' quality of life. Transport infrastructure is particularly important for the development of border areas. In the support area in Poland, Ukraine and Belarus, this is an important aspect for creating cross-border regional cohesion and a component supporting European integration, so far strongly supported by Interreg Programmes.

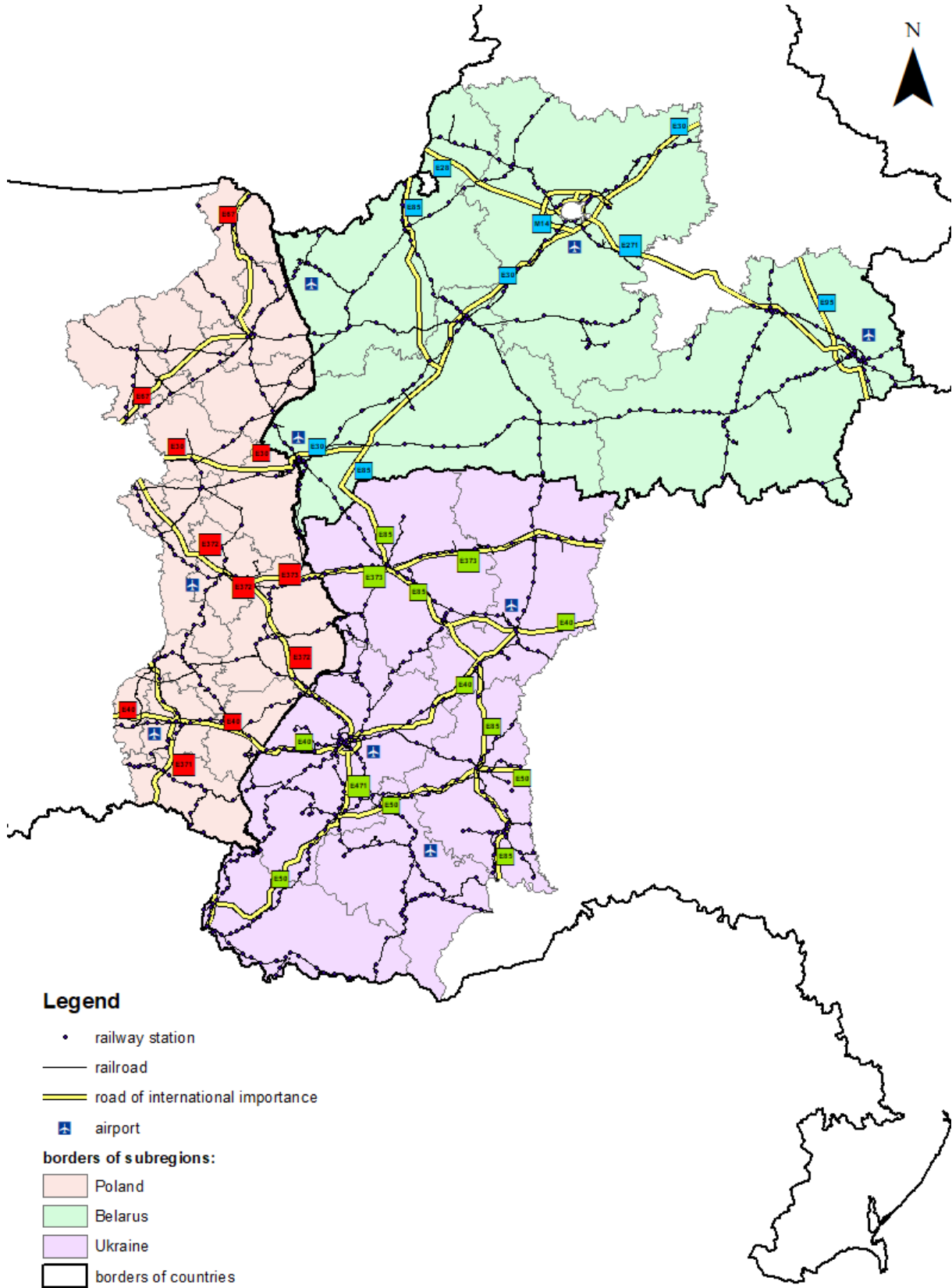
The most important transnational road corridors in the analysed area are:

- international route **E30** (includes the national road No. 2 with the sections of the A2 motorway on the Polish territory and the M1 main road on the territory of Belarus): Berlin – Poznań – Warsaw – Siedlce – Biała Podlaska – Brest – Minsk – Smolensk – Moscow, forming one of the key transport east-west corridors in Europe (Pan-European Transport Corridor II);



- international route **E40** (includes the A4 highway on the territory of Poland and the international road M10 leading to Lviv), forming the longest European route from France to Kazakhstan;
- international route **E372** (includes the national road No. 17 with the sections of the S17 expressway on Polish territory and the international road M09 on the territory of Ukraine): Warsaw – Lublin – Zamość – Lviv, located along the planned Via Intermare transport corridor, forming the shortest connection between the Baltic Sea (Gdańsk) and the Black Sea (Odessa);
- international route **E373** (includes a section of the national road No. 12 together with the sections of the S12 expressway on the Polish territory and the international road M07 on the territory of Ukraine): Lublin – Chełm – Kovel – Sarny – Korosten – Kiev, which is the shortest route connecting Kiev with Western Europe.

Attention should be paid to a small number of existing cross-border road connections of international importance between Poland and Belarus. At present, only one route of this rank can be distinguished, i.e. the Pan-European Transport Corridor II. The transport network in these areas is currently being developed. In the Podlaskie Voivodeship the express road leading to the Kuźnica – Bruzgi border crossing with Belarus is being constructed, as part of the Via Carpathia route - the transport route along the eastern border of the European Union. Between Poland and Ukraine, in turn, there are three roads of international importance, which are part of the strategic routes (Map 8.)



Legend

- railway station
- railroad
- road of international importance
- ✈ airport
- borders of subregions:**
 - Poland
 - Belarus
 - Ukraine
- borders of countries

Map 8. Map of transport infrastructure in the support area

Source: Own study based on data from Geopublic and OpenStreetMap

As for the length of public roads, in the majority of the support area gradual, systematic increase is observed. However, it should be pointed out that the road density in the Ukrainian and Belarusian parts of the support area is insufficient.

In Poland, the value of this indicator increased in each voivodeship. In the years 2014–2018, it ranged from 0.9 km per 100 sq. km in the Podlaskie Voivodeship to 12.5 km per 100 sq. km in the Lubelskie Voivodeship.

In Belarus, the density of the road network also increased over the years. The process is however a bit slower. In the years 2014–2018, the value of the indicator increased from 0.5 to 1.0 km per 100 sq. km. On the other hand, a slight decrease was noted in the Gomel Oblast.

Generally, no changes in the Ukrainian part of the area were observed. The exceptions are the Zakarpatska and Rivnenska Oblasts, where a gradual increase in the road density is noted. At the same time, a general trend is different for the country, where the road density is slightly decreasing. The existing road infrastructure in Ukraine was built, to a large extent, in the 1980s and its technical condition is rather poor³⁸ (Table 31).

Table 31. Length of public roads in km per 100 sq. km

SPECIFICATION	2014	2015	2016	2017	2018
Poland	133.4	134.2	134.4	135.1	135.8
Podlaskie Voivodeship	131.2	131.8	131.4	133.4	132.1
Białostocki					
łomżyński					
Suwalski					
Mazowieckie Voivodeship	150.3	152.3	153.0	153.8	154.7
Ostrołęcki					
Siedlecki					
Lubelskie Voivodeship	139.2	144.1	145.3	147.3	151.7
Bialski					
Lubelski					
Puławski					
Chełmsko-Zamojski					
Podkarpackie Voivodeship	116.0	116.8	118.2	117.5	118.4
Przemyski					
Rzeszowski					
Tarnobrzeski					
Krośnieński					

³⁸ Infrastruktura drogowa Ukrainy, Wydział Promocji Handlu i Inwestycji Ambasady RP w Kijowie, Kijów 2014.



SPECIFICATION	2014	2015	2016	2017	2018
Belarus	48.9	48.9	49.1	49.3	49.4
Grodno Oblast	58.8	58.9	58.9	59.3	59.5
Brest Oblast	40.3	40.8	40.8	41.1	41.3
Minsk Oblast	55.2	55.2	55.4	55.8	55.7
Gomel Oblast	36.9	36.3	36.5	36.5	36.7
Ukraine	27.0	27.0	27.0	27.0	26.8
Volynska Oblast	30.8	30.8	30.8	30.8	30.8
Lvivska Oblast	38.5	38.5	38.5	38.5	38.5
Zakarpatska Oblast	25.8	25.8	25.8	25.8	26.6
Rivnenska Oblast	25.5	25.5	25.5	25.5	26.0
Ternopilska Oblast	36.2	36.2	36.2	36.2	36.2
Ivano-Frankivska Oblast	29.5	29.5	29.5	29.5	29.5

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

Railway infrastructure is also an important component of transport accessibility. As one of the reports indicates that "regional railways connecting neighbouring countries not only complement the main transport system of the continent, but also make a significant contribution to the economic development of border areas"³⁹. In addition, currently, the development of an intermodal transport network is one of the objectives of EU policy. Railways are an important element in creating this transport standard.

The most important cross-border rail routes in the analysed area include⁴⁰:

In Poland-Ukraine:

- Dorohusk - Jagodin
- Medyka – Mostyska (*Mościska*)
- Werchrata – Rava-Ruska

In Poland-Belarus:

- Kuźnica Białostocka – Grodno
- Siemianówka – Svislach (*Świsłocz*)
- Terespol – Brest Central
- Terespol – Brest North

³⁹ Dr Michał Beim, dr Andrzej Soczówka, „Rozwój kolejowych, regionalnych połączeń transgranicznych w Polsce” https://www.researchgate.net/publication/320805715_Rozwój_kolejowych_regionalnych_polaczen_transgranicznych_w_Polsce.

⁴⁰ <https://www.plk-sa.pl/dla-klientow-i-kontrahentow/warunki-udostepniania-infrastruktury-i-regulaminy/podstawowe-informacje-o-warunkach-korzystania-z-odcinkow-transgranicznych/ukraina>.

In addition, there is the Zubki Białostockie rail border crossing point where only freight traffic is allowed.

In the border area in Poland, Ukraine and Belarus, apart from active crossing points, there are also unused railway infrastructure and closed rail border crossing points. In Ukraine, such facilities include the Hrebenne – Rava-Ruska checkpoint, which after the accession of Poland to the European Union and the introduction of visas noted a significant decrease in the number of travellers. Consequently, it was closed in 2005. Krościenko – Khyriv (*Chrynów*) is another transition route that ceased to serve cross-border journeys in 2010, when trains were suspended. A similar situation occurred at the border crossing point Hrubieszów – Volodymyr-Volynskiy (*Włodzimierz Wołyński*), where currently passenger trains do not run.

At the Polish-Belarusian border, a decrease in the number of railway border crossing points is also observed. Passenger traffic has been suspended through the Czeremcha – Vysokaye (*Wysokolitowsk*) checkpoint since 2011.

The analysis of the length of railway tracks expressed in kilometres allows to state that in most units it remained unchanged. Slight deviations occur in the Zakarpatska and Rivnenska Oblasts, as well as in the Podlaskie, Mazowieckie and Lubelskie Voivodeships, where the railway infrastructure is being developed (Table 32).

Table 32. Length of railway tracks in km

SPECIFICATION	2014	2015	2016	2017	2018
Poland	19,240	19,231	19,132	19,209	19,235
Podlaskie Voivodeship	656	654	654	-	759
Mazowieckie Voivodeship	1,677	1,702	1,712	-	1,716
Lubelskie Voivodeship	1,041	1,042	1,046	-	1,048
Podkarpackie Voivodeship	978	978	978	-	978
Belarus	5,491	5,491	5,480	5,480	5,480
Grodno Oblast	677	677	677	677	677
Brest Oblast	1,013	1,013	1,013	1,013	1,013
Minsk Oblast	871	871	871	871	870
Gomel Oblast	911	911	911	911	911
Ukraine	20,948	20,954	20,952	19,777	-
Volynska Oblast	593	593	593	593	-
Lvivska Oblast	1,263	1,263	1,263	1,263	-
Zakarpatska Oblast	598	602	602	602	-
Rivnenska Oblast	577	579	578	578	-
Ternopilaska Oblast	564	564	564	564	-
Ivano-Frankivska Oblast	494	494	494	494	-

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus, Ministry of Foreign Affairs (Belarus) and the State Statistics Service of Ukraine (Ukraine)

Another component of the analysis is the length of the railway network per 1,000 sq. km of the area, which illustrates the availability of this means of transport. The density of the railway network in the support area is 20 to 60 km per 1,000 sq. km of the area. The indicator reaches the lowest values in the Belarusian part of the support area – in the Minsk, Gomel and Grodno Oblasts, while the highest in the Lvivska Oblast and the Podkarpackie Voivodeship.

An analysis of this mode of transport was also made on the basis of scientific papers regarding cross-border rail connections. They confirm the need to develop comprehensive solutions for border checks, including, for example, crossing the border at the train platforms while changing trains. Problems that need to be addressed include, among others, the issue of potential train damages by smugglers and border services, which, in turn, is the reason for the low profitability of the connections as well as the low attractiveness of this form of transport for other passengers⁴¹ (Chart 9).

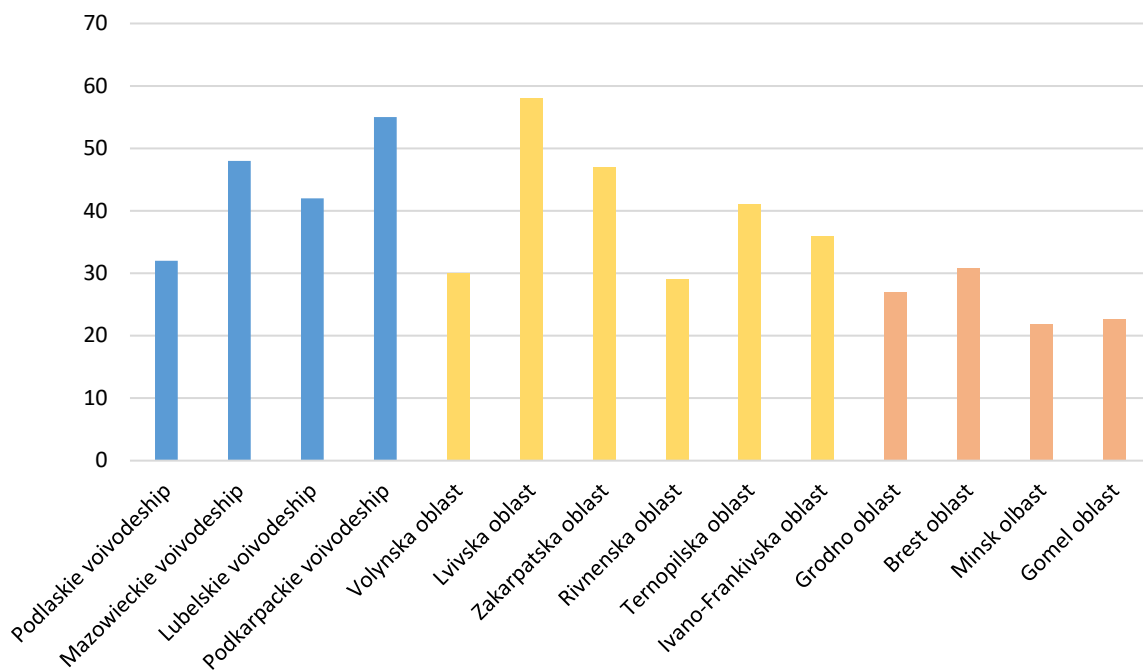


Chart 9. Length of the railway network per 1,000 sq. km of the area

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus (Belarus) and the State Statistics Service of Ukraine (Ukraine)

⁴¹ Dr Michał Beim, dr Andrzej Soczówka, „Rozwój kolejowych, regionalnych połączeń transgranicznych w Polsce” https://www.researchgate.net/publication/320805715_Rozwoj_kolejowych_regionalnych_polaczen_transgranicznych_w_Polsce.



3.6.2 CIVIL AVIATION

There are eight airports located in the support area. The biggest number, i.e. four, are situated in the Ukrainian part of the support area.

The following airports are located in the Polish part of the support area:

- Lublin Airport,
- Rzeszów-Jasionka Airport.

In the Belarusian part of the support area:

- Grodno Airport,
- Brest Airport⁴².

In the Ukrainian part of the support area:

- Ivano-Frankivsk Airport,
- Ternopil Airport,
- Rivne Airport,
- Lviv Danylo Halytskyi Airport.

3.6.3 WATER TRANSPORT

In relation to water transport, the concept of restoring the E-40 waterway was developed as part of the project "Restoration of the E40 waterway on the Dnieper – Vistula section: from strategy to planning" implemented under the Cross-Border Cooperation Programme Poland-Belarus-Ukraine 2007–2013. According to the plans, the E-40 road would connect the Baltic Sea with the Black Sea. The analysis pointed to the benefits of the navigable river connection from the Baltic to the Black Sea. It was noted that such activities could become an impulse for the socio-economic development of less developed areas. As for industrial centres located in the area, the waterway would be a profitable transport solution in the logistics supply chain⁴³. The plan for the development of Vistula - one of the last unregulated large rivers in Europe, however, is not widely accepted, due to the fact that the river performs significant environmental services. By regulating this river these services could not be performed. Another obstacle are the existing forms of nature protection, the Natura 2000 areas and landscape parks, among others. Attention is also paid to the significant financial costs that make such an investment unprofitable.

⁴²Source: <https://www.gov.pl/web/dyplomacja/bialorus> (access: Feb., 14 2020).

⁴³ Odbudowa drogi wodnej E40 na odcinku Dniepr-Wiśła: od strategii do planów.

3.6.4 PUBLIC TRANSPORT

While in Poland a general increase in the number of passengers using public transport is observed, it varies in the respective voivodeships. Both in the Mazowieckie and Podkarpackie Voivodeships public transport is more frequently used, while in the Podlaskie and Lubelskie Voivodeships the number of the passengers is getting lower. Apart from the positive trends in the number of public transport users, the Mazowieckie Voivodeship is characterised by its scale, several times higher than in other areas.

The number of passengers using public transport is steadily decreasing in Belarus. That applies to all oblasts in the Belarusian support area.

The situation is similar in Ukraine, where in 2014-2018, with the exception of the Rivnenska Oblast, a decrease in the number of the public transport passengers was recorded (Table 33).

Table 33. Passengers using public transport in millions

SPECIFICATION	2014	2015	2016	2017	2018
Poland	3,711.1	3,672.2	3,766.3	3,739.4	3,774.1
Podlaskie Voivodeship	108.8	108.9	108.5	106.3	101.8
Mazowieckie Voivodeship	908.7	930.2	924.7	937.7	975.2
Lubelskie Voivodeship	140.6	143.5	142.1	141.3	128.8
Podkarpackie Voivodeship	53.4	52.6	55.5	59.6	63.3
Belarus	2,255.4	2,094.1	1,971.4	1,967.4	1,979.2
Grodno Oblast	163.5	154.0	145.4	143.4	141.4
Brest Oblast	228.8	208.1	194.4	194.2	193.0
Minsk Oblast	137.7	129.5	126.0	129.0	127.6
Gomel Oblast	313.7	293.1	274.2	272.9	268.2
Ukraine	4,117.4	3,507.5	3,287.2	3,332.6	3,238.5
Volynska Oblast	65.6	70.6	66.6	63.4	63.3
Lvivska Oblast	190.4	188.9	171.4	168.3	173.5
Zakarpatska Oblast	-	-	-	-	-
Rivnenska Oblast	90.0	96.6	89.8	109.0	103.6
Ternopilaska Oblast	55.4	58.5	54.1	49.3	41.7
Ivano-Frankivska Oblast	67.7	65.9	48.0	50.5	55.7

Source: Own study based on data from the Central Statistical Office (Poland), the National Statistical Committee of the Republic of Belarus, Ministry of Foreign Affairs (Belarus) and the State Statistics Service of Ukraine (Ukraine)

3.6.5 BORDER CHECKPOINTS

POLAND-UKRAINE

The Polish border with Ukraine is over 535 km, running through the Podkarpackie (239 km) and Lubelskie (296 km) Voivodeships, and bordering the following Ukrainian units: the Volynska and Lvivska Oblasts as well as a small section of the Zakarpatska Oblast.

There are in total ten border checkpoints between Poland and Ukraine, divided into road and rail crossing points.

The road border crossing points include:

- Dorohusk – Jagodin (*Jagodzin*) checkpoint,
- Hrebenne – Rava-Ruska (*Rawa Ruska*) checkpoint,
- Dołhobyczów – Ugriniv (*Uhrynów*) checkpoint,
- Zosin – Ustyluh (*Ustług*) checkpoint,
- Medyka – Shehyni (*Szeginie*) checkpoint,
- Korczowa – Krakovets (*Krakowiec*) checkpoint,
- Krościenko - Smolnitsa (*Smolnica*) checkpoint,
- Budomierz – Grushiv (*Hruszów*) checkpoint⁴⁴.

The railway border crossing points include:

- Dorohusk - Jagodin (*Jagodzin*) checkpoint,
- Przemyśl - Mostyska (*Mościska*) checkpoint⁴⁵.

In 2018, a total of 21,586,800 crossings of the Polish-Ukrainian border were recorded. The most frequented was the Medyka – Shehyni checkpoint, where a total of 5.2 million checks were carried out. This is 23.9% of all checks on the Polish-Ukrainian border and the number was by 6% lower compared to the previous year. The next frequented road crossing points were: Korczowa - Krakovets (3.7 million checks, 17.3% of all crossings on the Polish-Ukrainian border), Dorohusk - Jagodin (3 million checks, 14% of all crossings on the Polish-Ukrainian border) and Hrebenne - Rava-Ruska (3 million checks, 14% of all crossings on the Polish-Ukrainian border)⁴⁶.

⁴⁴ Source: <https://granica.gov.pl/przejsciad.php> (access Feb., 14 2020).

⁴⁵ Source: <https://granica.gov.pl/przejsciak.php> (access March, 3 2020).

⁴⁶ Report Ruch graniczny oraz wydatki cudzoziemców w Polsce i Polaków za granicą w 2018 r., GUS, Warszawa, Rzeszów, 2019, p. 23.

POLAND-BELARUS

The Polish-Belarusian border is 418 km long, running through the Podlaskie and Lubelskie Voivodeships on the Polish side, and bordering the Grodno and Brest Oblasts in the Belarusian part.

There are in total eight border checkpoints between Poland and Belarus, divided into road and rail crossing points.

The road border crossing points include:

- Kuźnica Białostock – Bruzgi checkpoint,
- Bobrownik – Byerastavitsa (*Bierestowica*) checkpoint,
- Połowce – Peschatka (*Pieszczatka*) checkpoint,
- Kukuryki – Kozlovichy (*Kozłowicze*) checkpoint,
- Terespol – Brest checkpoint,
- Sławatycze – Damachava (*Domaczewo*) checkpoint⁴⁷.

The railway border crossings points include:

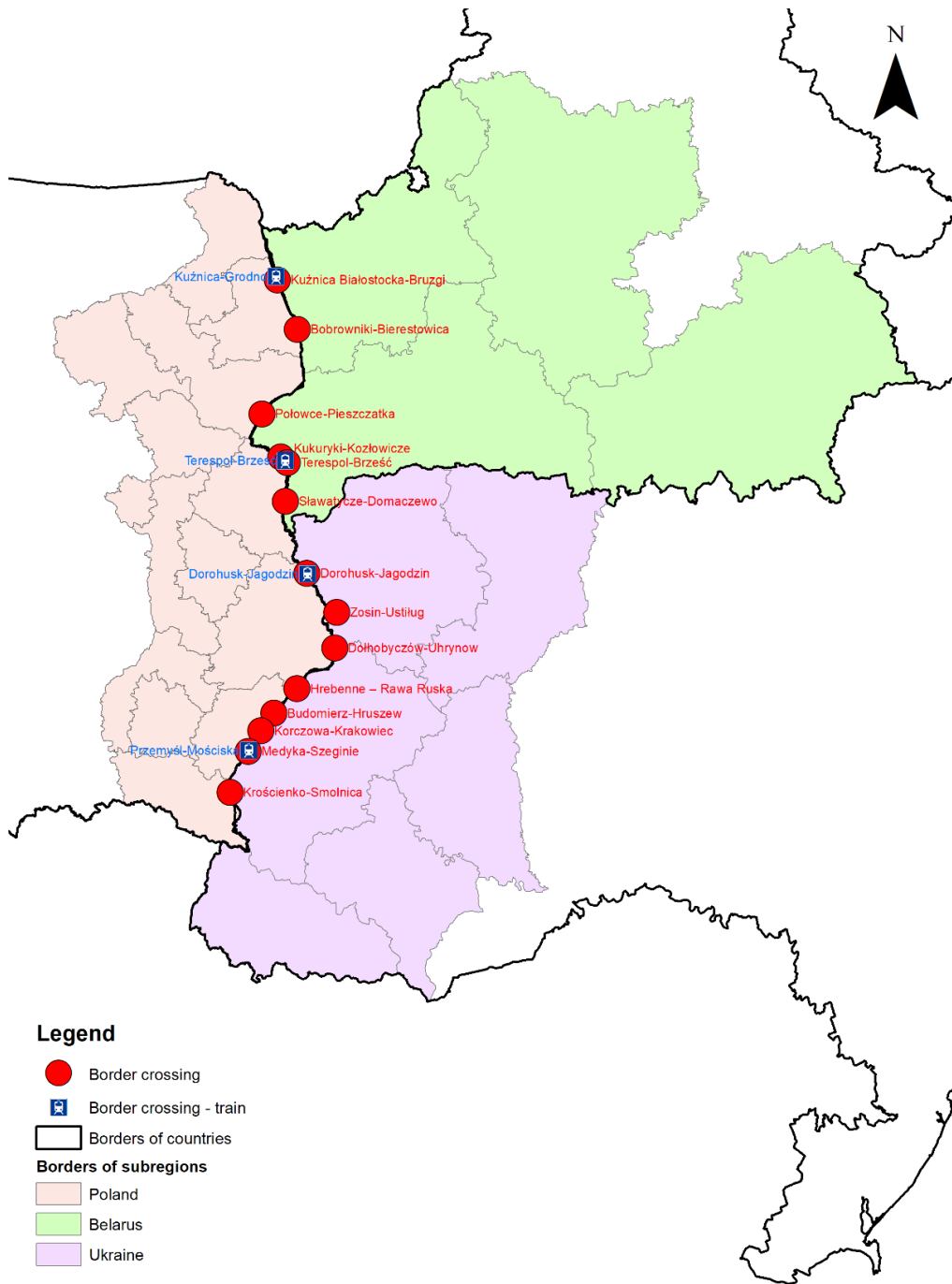
- Terespol-Brest checkpoint,
- Kuźnica-Grodno checkpoint⁴⁸.

In 2018, a total of 8.96 million crossings of the Polish-Belarusian border were recorded. The highest intensity of border traffic occurred at the crossing in Kuźnica Białostocka-Bruzgi (2.7 million checks, 30.13% crossing the Polish-Belarusian border) and at the Terespol-Brest crossing (2.6 million, 29.02% crossing the Polish-Belarusian border).⁴⁹ The location of border crossings is presented in the next map (Map 9).

⁴⁷ Source: <https://granica.gov.pl/przejsciad.php> (access Feb., 14 2020).

⁴⁸ Source: <https://granica.gov.pl/przejsciak.php> [access March, 3 2020].

⁴⁹ Report Ruch graniczny oraz wydatki cudzoziemców w Polsce i Polaków za granicą w 2018 r., GUS, Warszawa, Rzeszów, 2019, p. 24.



Map 9. Border checkpoints

Source: Own study

3.6.6 SUMMARY

The main conclusions in the field of transport infrastructure are the following:

- The length of roads in the Polish and Belarusian parts of the support area is gradually increasing.

- A low density of the support area road network is particularly noticeable in the Ukrainian and Belarusian parts.
- A low quality of road infrastructure in the Ukrainian and Belarusian parts of the support area.
- There is a decline in the number of passengers using public transport in Belarus and Ukraine as well as in the Podlaskie and Lubelskie Voivodeships.
- The number of used railway border crossing points is decreasing.
- The number of border checkpoints seems to be insufficient to ensure smooth traffic. Approx. 22 million people crossing the Polish-Ukrainian border use 10 border crossings.
- It is also necessary to improve the check efficiency at the border crossing points.
- It is suggested to add pedestrian crossing points to the existing road ones.

3.7 PUBLIC INSTITUTIONS, FUNCTIONAL AREAS AND CROSS-BORDER CONNECTIONS

3.7.1 ORGANISATION OF PUBLIC ADMINISTRATION

Public administration in Ukraine, Belarus and Poland is divided into governmental and local levels. Government administration is a set of administrative bodies managed by the Council of Ministers. Depending on a political system, the competences of the Cabinet of Ministers and the Council of Ministers in Poland, Ukraine and Belarus are different. The executive power in the semi-presidential system (i.e. in Ukraine and Belarus), characterised by the duality of executive power, belong both to the president and to the government. In Poland, the executive power (identified with the Council of Ministers) belongs to the Parliament, the government is also responsible in front of the Parliament for making decisions. The president has a "stronger" position in Ukraine and Belarus, while in Poland the role of the government and the prime minister prevails over the position of the president.

Local government administration includes administration at the local and regional levels. In the examined countries there is a three-stage territorial division. The first, under the state level, are the oblasts in Belarus and Ukraine and voivodeships in Poland. The intermediate level in Ukraine and Belarus are raions while in Poland – poviats. The lowest administrative and territorial units in Poland are municipalities (urban, rural and urban-rural), in Belarus – selsoviets and poselkovye soviets and in Ukraine the so-called associated territorial hromadas (OTH). It should be mentioned that OTHs were created

as the result of the local government reform consisting in the voluntary association of Ukrainian villages, towns and cities. The reform will be fully completed in the first quarter of 2020⁵⁰. Before the reform, in Ukraine, the lowest local government level were the councils (rural, district and city).

The area of Belarus is divided into six oblasts (with the Capital City of Minsk), 118 raions (and 10 cities with the oblast status, 102 cities of the raion status, 90 urban-type settlements), 1,295 selsoviet villages (and 24 districts in cities of with the oblast status and of capital of Minsk)⁵¹. In turn, in Ukraine there are 24 oblast, 490 raions, 460 cities (of which 187 have a special status), 111 raions in cities, 885 urban-type settlements and 28,385 rural-type settlements⁵². In Poland, there are 16 voivodeships, 314 poviats and 66 cities with the powiat status, which are municipalities, but also fulfil the tasks of poviats and 2,477 municipalities (of which 1,537 are rural municipalities, 638 are urban-rural municipalities, 302 are urban municipalities).

Local government bodies in Belarus belong to the state power system. At the same time, it should be pointed out that administrative and local government functions are performed by citizens through local deputy councils, executive and administrative bodies, local government bodies, referendums, assemblies and other forms of direct participation in social life. The system of local management bodies consists of the following territorial levels: oblast, base level, and includes oblast, urban, raion, urban-type settlement, rural executive committees, and local district administrations in cities.

The most important tasks of the Belarusian local council deputies include:

- approving local social and economic development plans,
- approving local budgets and reports on their implementation,
- approving the height of taxes and local fees,
- managing communal property,
- announcing local referendums.

It should be noted, however, that in Belarus there are no local government institutions fulfilling the standards of the European Charter of Local Self-Government.

⁵⁰ Reform was conducted under the so-called "Concept of local self-governance and territorial power reforming" adopted on April 1, 2014, which, together with implementing acts, became the base document for the ongoing reform.

⁵¹ R. Czachor, *Koncepcje reformy podziału administracyjno-terytorialnego i ustroju samorządu lokalnego na Białorusi (XX-XXI wiek)*, Polkowice: Krakowska Akademia im. A. Frycza.

⁵² It should also be mentioned that since March 2014 Ukraine has lost control of the Autonomous Republic of Crimea, and since May 12, 2014 also of the part of the Donetsk and Luhansk oblasts, as a result of the declaration of independence by the so-called Donetsk People's Republic and Lugansk People's Republic.

In Ukraine, councils at raion and oblast levels do not have executive bodies. This function is performed by local state administration bodies that operate at the level of oblasts, raions and cities with a special status. They are called “regional (district) state administration”. Their heads are appointed by the president and are subordinated to him, and at the same time controlled by self-government bodies (councils) in the scope of competence delegated to them by these councils. Currently, the scope of competence of the local government in Ukraine strongly depends on the existence of two power centres at the level of oblasts and raions: appointed state administration and elected local councils. One of the reports indicates that “this situation generates a virtually permanent conflict of competence between these bodies”⁵³.

The scope of tasks assigned to the councils is very wide, including the preparation of socio-economic and cultural development programmes, agreement and adoption of the local budget project, determining the height of local taxes (municipal, transport, etc.), managing the local community assets, renovation and construction of communal facilities, management of communal facilities, management of schools, hospitals, sports facilities, preparation and adoption of targeted programmes for improving and protection of work conditions, participation and organisational support in civil defence projects, among others⁵⁴. According to the local government reform, the competences of local representatives of central administration will be fully transferred to the local government bodies, i.e. associated territorial hromadas. The newly created executive bodies are to be responsible before the local deputies’ councils. As indicated in one of the reports, the existing state administration at the local level is to be included in the self-government, and the heads of these administrations will cease to be appointed by the President of Ukraine and will be elected directly by the local community⁵⁵. Until now, the representatives of the state administration were responsible for the preparation of socio-economic development programmes, support for investment activities, registers of local real estate resources, among others. Currently, they are to be replaced by the so-called prefects with control competences, and in municipalities with over 50 inhabitants there will also be auxiliary bodies – so-called starosts.

In Poland, the inhabitants of a given territorial unit make decisions on matters that have been delegated to them in the decentralisation process in two ways: through elections and referendums, or through the bodies representing the given local government. Local government bodies exercising power and supervision over local policies are councils that operate at three levels: the municipal, powiat and voivodeship levels. They

⁵³ R. Kęsek (2010), *Ukraina, Annales Universitatis Paedagogicae Cracoviensis. Studia Politologica* 4, pp. 204-217.

⁵⁴ „Про місцеве самоврядування в Україні”, <http://www.zakon.rada.gov.ua> (access Jan., 30 2020).

⁵⁵ Pietnoczka (2017), *Proces konstytucyjny na Ukrainie w latach 2014–2016, Przegląd wschodnioeuropejski nr VIII/2 2017*, pp. 145-157.

establish local legislation, adopt the budget and control its implementation, and adopt regulations on property rights. Competences of the respective councils are assigned to them according to the local government level: municipal government carries out local tasks, poviats – supraregional tasks and voivodeships - regional tasks.

In Ukraine, Belarus and in Poland the deputy councils work during fixed sessions and perform activities within permanent and temporary committees and other council bodies.

The presented public institutional system as well as organisation of local and regional authorities in the examined countries were analysed in order to identify elements that may generate problems in future mutual cooperation. These include, among others, incomparable competences of local and regional authorities, different principles of the self-government authority functioning in Poland, Belarus and Ukraine. That applies, above all, to the independent, or not, disposal of own financial resources and municipal property, as well as financial planning activities from public funds and the lack of equivalent institutions. For example, in Belarus and Poland at the local level, municipal councils and city/village councils have their own executive bodies (such as executive committees or the president/mayor and head of the commune). In Ukraine there are no such bodies.

An additional aspect, which should also be mentioned, is the ongoing, although almost finalised, local government reform taking place in Ukraine. The process of systemic changes gives the undertaken activities a temporary or instable character and makes obtaining data diagnosing the local situation in this country difficult. The main idea behind the reform was the voluntary association in the OTHs, which, on one hand, led to the stimulation of local social capital, but, on the other, extended the process of change. Voluntary activity encouraged local activists and leaders to act for beneficial solutions for a given community. It also enabled local civic initiatives. Stimulated and growing social capital is an important issue in the view of possible cooperation with local governments in Poland and Belarus. Advanced social participation is a sign of an active society, and this is one of the key issues for a collaboration at the local and supra-local levels. Progressing changes in that field are confirmed, among others, by the fact that “in many places in Ukraine, as part of the association process, there were discussions and direct voting by residents wanting to decide on the future of their locality, e.g. on joining one of the two OTHs”⁵⁶.

⁵⁶ A. Haleniuk (2019), *Samorządowy renesans Ukrainy?*, Warszawa: Instytut Wolności. Bezpieczna przyszłość dla Polski.

The institutional reform is accompanied by a financial reform whose main goal is to decentralise local budgets. As a consequence of the changes a noticeable increase in local budgets: from UAH 68.6 billion in 2014 to UAH 192 billion in 2017 was observed. The share of local budgets in the consolidated budget of Ukraine also increased (51.2% in 2017)⁵⁷. These changes will make local budgets independent from central commitments, which will positively affect the quality and possibilities of cooperation with Polish and Belarusian partners (Table 34).

⁵⁷ Ibidem.



Table 34. Political system at the government and local levels in Belarus, Poland and Ukraine

		Belarus	Poland	Ukraine
Political system		Republic with a semi-presidential system	Democratic parliamentary republic	Democratic republic with a parliamentary and presidential system of government
Government administration		Council of Ministers of the Republic of Belarus – a collegiate central body of state power	Council of Ministers in charge of the central and regional (voivodeship) government administration	Cabinet of Ministers of Ukraine – the highest executive body
Local government	Representative body	Oblast council, raion council, city / village council	Voivodship council, poviats council, municipal council	Oblast council, raion council, city / village /district council
	Executive Body	Executive committees	Voivodship board, poviats board, head of the commune/mayor/ president	-
	Selection procedure and the term of office	General election for a four-year term	General election for a five-year term	General election for a five-year term

Source: Own study



3.7.2 CROSS-BORDER CONNECTIONS, COOPERATION OF LOCAL INSTITUTIONS AND LOCAL GOVERNMENTS

COOPERATION FINANCED FROM THE EU FUNDS

International cooperation between Poland, Ukraine and Belarus takes place mainly as part of the cooperation of the European Union with its eastern partners under the Eastern Partnership as well as under the “Poland-Belarus-Ukraine” Programme.

In the years 2014-2020, the Cross-Border Cooperation Programme Poland-Belarus-Ukraine is also implemented as part of the European Neighbourhood Instrument and the European Regional Development Fund. The Programme is targeted at the Polish, Ukrainian and Belarusian border regions. It is implemented in the area of NUTS 3 units on the Polish side and the corresponding territorial units, i.e. oblasts, in Ukraine and Belarus.

The amount of EUR 183 million was allocated to the implementation of tasks under the 2014-2020 programme (approximately EUR 171 million for the implementation of the projects themselves). By the end of March 2020, 135 projects were contracted under the programme, most of them are in the implementation phase. The most popular project topics in this edition of the programme are:

- preservation of historical and cultural heritage (53 projects, 9 regular and 44 micro-projects);
- improving safety including health security (23 projects, 19 regular and 4 LIP)
- preservation of existing natural heritage (23 projects, 7 regular and 16 micro-projects);
- improvement of transport connections (19 projects, 15 regular and 4 LIP).

Challenges related to these areas remain the most important from the point of view of Polish, Belarusian and Ukrainian beneficiaries. The vast majority of the current programme budget is dedicated to them (about 83% of funds allocated to project financing).

In order to implement the assumptions of the Programme, in the financing period 2014-2020 (until the end of November 2019), 214 partnerships were established between local government units and institutions operating in their area, including schools, hospitals, as well as non-governmental organisations. In the projects most of the partners were engaged on the Polish side (69), 44 on the Ukrainian side, and the least, 27, on the Belarusian side (Chart 10).

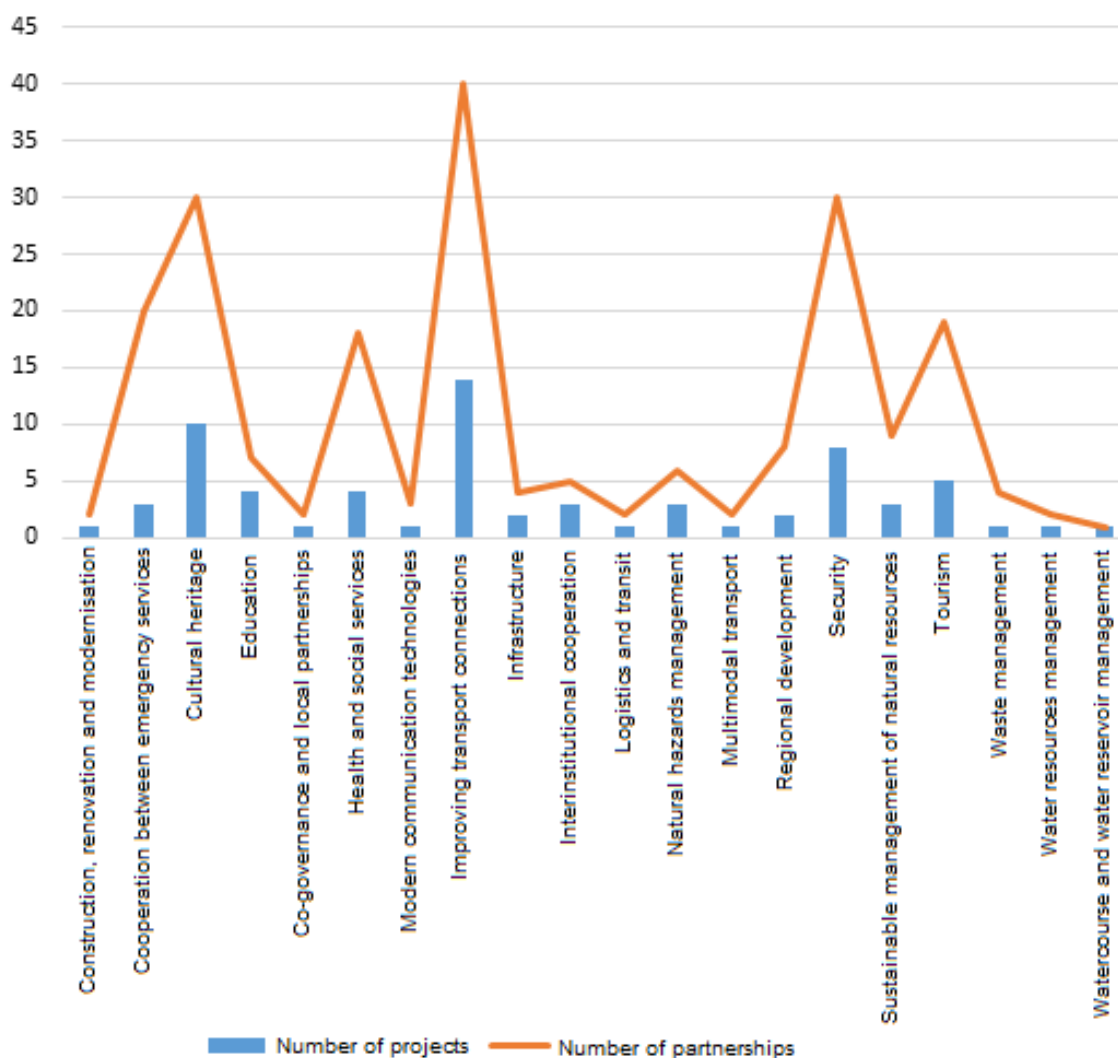


Chart 10. Number of projects and partnerships concluded under the Programme (by the thematic areas)

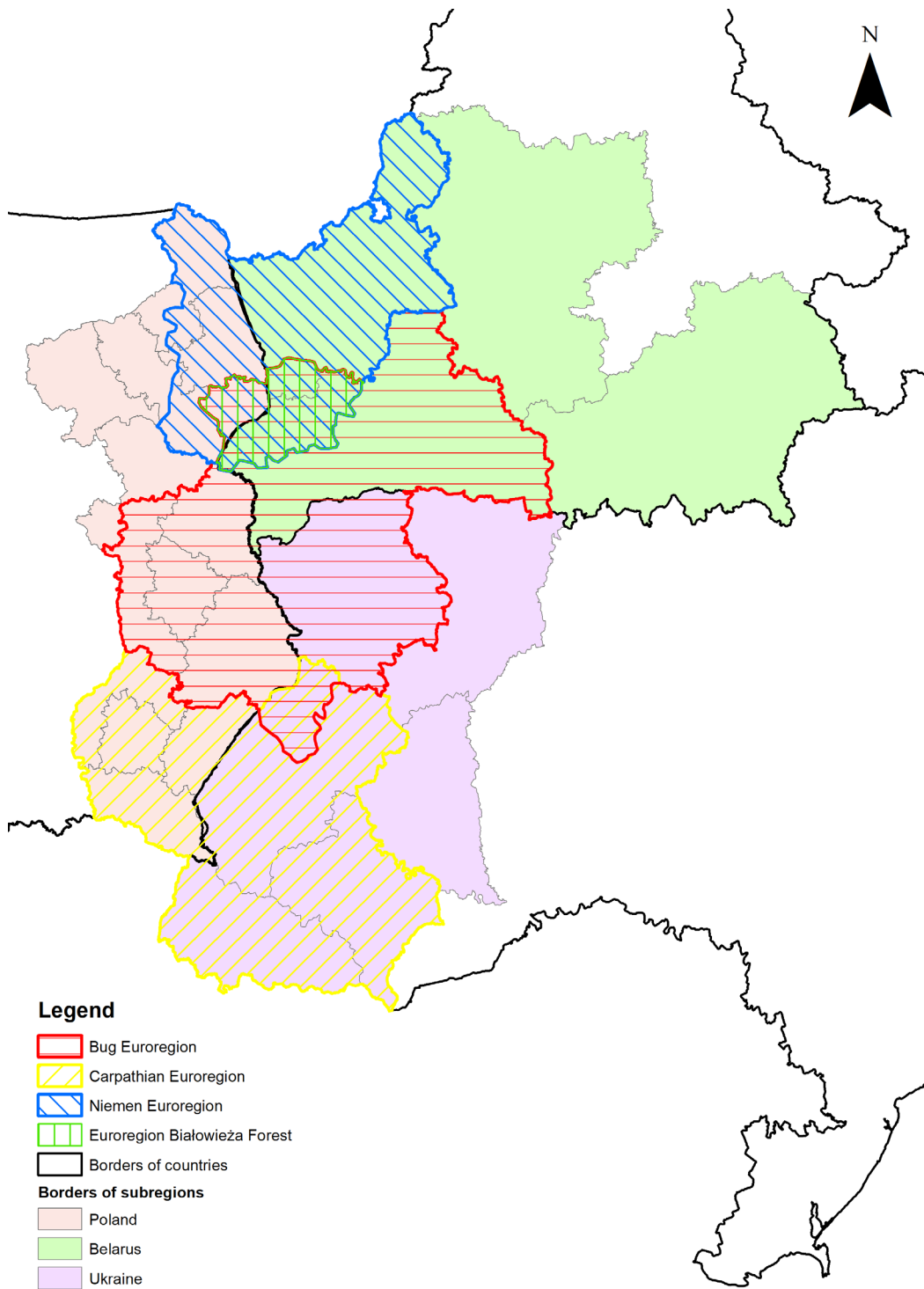
Source: Own study based on <https://www.keep.eu/statistics>

EUROREGION COOPERATION

International cooperation at the Euroregion level of the examined countries has been taking place under 4 Euroregions (Map 10).

In addition, another Euroregion is being created⁵⁸ in the program area - Euroregion Roztocze. It currently associates local governments located within the 'Roztocze' Biosphere Reserve established on June 19, 2019. The priority in the euroregion's activity is to further create conditions for the development of friendly and mutually beneficial cross-border cooperation, between the directly neighbouring areas of Ukraine and Poland.

⁵⁸ As of 27.03.2020



Map 10. Euroregions

Source: Own study

- Euroregion Bug

Euroregion Bug, covering the area of 80,900 sq. km, is one of the largest Euroregions in terms of area. The Polish part is 31.1%, the Ukrainian 28.4% and the Belarusian 40.5%. The Euroregion consists of the following poviats: Chełmski, Lublelski, Zamojski, Tarnobrzesci and Bielski in Poland, the Brest Oblast in Belarus and Volynska Oblast, Sokal and Zhovkva raions in Ukraine. The Euroregion implements activities in the field of neighbourly cooperation regarding: regional development, transport and communication, supply of energy and water carriers, nature and environmental protection, industry, trade exchange, agriculture and food processing, education and scientific research, health protection, culture, art, tourism and recreation, and mutual assistance in the fight against crime as well as disasters, including natural ones.

In 2019 and 2020, cooperation within the Euroregion was based primarily on the expansion of the technical and medical rescue equipment base at the disposal of volunteer fire brigades. These activities are expected to contribute to improving safety in the Euroregion⁵⁹. Activities have been also carried out for the development of the geoportal of the Association of Local Governments of the Bug Euroregion.

- Białowieża Forest Euroregion

The Białowieża Forest Euroregion is based on a cross border natural complex of the primeval Białowieża Forest. Its main goal is to support economic, social and cultural development, initiating contacts of various types of institutions and local governments, such as educational, sporting, cultural and others. Due to the location of the resource that is valuable in terms of nature and the environment, an important goal is also the protection and measures taken to prevent natural disasters and threats. The Euroregion consists of the Hajnowski powiat in Poland and the Pruzhany (*Prużański*), Kamenets (*Kamieniecki*) and Svislach (*Świsłocki*) raions in Belarus.

Currently, the following projects are being implemented by the Association of Self-Governments of the Białowieża Forest Euroregion:

- a) "Live more efficiently" (*Życ sprawniej*), whose aim is to help people at risk of social exclusion and poverty by raising their professional and life activity;
- b) "Active on the labour market in the area of the local action group Puszcza Białowieska" (*Aktywni na rynku pracy na obszarze LGD Puszcza Białowieska*),

⁵⁹ Biuletyn Informacji Publicznej Stowarzyszenia Samorządów Euroregionu Bug.

whose main idea is to activate inactive people, especially young adults above 25 years old;

- c) "Implementation of the programme of the social and professional activation of people of 25+ in the area of the local action group Puszcza Białowieska" (*Realizacja programu aktywacji społeczno-zatrudnieniowej osób 25+ na obszarze LGD Puszcza Białowieska*), whose aim is to improve the situation of unemployed people above 25 years old, inactive, at risk of poverty or social exclusion, living in rural areas;
- d) Grant under the "Act Locally" (*Działaj lokalnie*) Programme, which aims to activate the local community. This program is addressed to non-governmental organisations, informal groups, local action groups, and is financed by the Polish-American Freedom Foundation in cooperation with the Academy for the Development of Philanthropy in Poland.

All projects are financed from the Regional Operational Programme of the Podlaskie Voivodeship for the years 2014–2020.

- Euroregion Niemen

The Association Euroregion Niemen includes four countries: Poland (Białostocki, Etci, Olecki, Sejnejski and Suwałski poviats), Lithuania (Alytus, Marijampol and Vilnius regions), Belarus (Grodno Oblast) and Russia (Chernyakhovsk, Gusev, Ozyorsk, Krasnoznamensk and Nessersk raions). The priority areas of the Euroregion activities include economic development, tourism the labour market and educational institutions development, as well as the development of culture, environmental protection and transport. i.e. all the spheres important for the border areas. Like the Euroregion Bug, the Euroregion Niemen also covers the areas with unique natural values, forming the functional area of "Green Lungs of Poland" and, at the same time, "Green Lungs of Eastern Europe".

In the current programming period, the Association Euroregion Niemen has been implementing activities, first and foremost, to develop competences and skills (especially in the field of information and communication technologies, and foreign languages) of adults. To this end, in the years 2017–2020, the project "Development of personnel competences subregion Suwałki" has been implemented. Secondly, social economy activities have been carried out under the Regional Operational Programme of the Podlaskie Voivodeship for the years 2014–2020. The project "Podlasie Centre for the Support of Social Economy" aims to strengthen the role of social economy in the socio-economic development of the Podlaskie Voivodeship by supporting social economy entities and creating 108 jobs in social enterprises in the Suwałski subregion.

- Carpathian Euroregion

The Association of Carpathian Euroregion covers Poland (Podkarpackie Voivodeship), Slovakia (Prešov and Košice regions), Hungary (Borsod-Abaúj-Zemplén, Hajdu-Bihar, Heves, Jász-Nagykun-Szolnok, Szabolcs-Szatmar-Bereg counties, and Nyiregyhaza, Miskolc, Debrecen, Ether cities), Romania (Bihor, Botoșani, Maramureș, Suceava, Harghita, Satu Mare and Sălaj counties) and Ukraine (Lvivska, Zakarpatska, Ivano-Frankivska and Chernivetska Oblasts). Currently, the Euroregion area covers approximately 154,000 sq. km, and is inhabited by over 15 million people. Part of the Carpathian Euroregion is located on the eastern border of Poland, which is the external border of the European Union.

The main tasks undertaken within the Euroregion include organising and coordinating activities for the development of cooperation between the members in the fields of economy, ecology, culture, science and education, as well as developing good mutual relations. This is to be achieved by supporting specific projects and plans of common interest as well as developing and facilitating contacts between the residents of the association area, including contacts between experts in various fields.

Currently, 21 projects have been carried out so far regarding:

- tourism - "Tourism without borders" (*Turystyka bez granic*), "Wandering without a backpack" (*Wędrowanie bez plecaka*) projects, among others,
- innovation and strengthening of the substantive base of the regional and international cooperation – "Professional Member of Local Government" (*Samorządowiec Profesjonalista*), "Innovative cooperation platform of the City Network of the Carpathian Euroregion" (*Innowacyjna platforma współpracy Sieci Miast Euroregionu Karpackiego*), among others.

As for the Polish-Ukrainian cooperation, the following noteworthy projects focusing on cooperation within these two countries were implemented:

- "ABC study and work in Poland" (*ABC studiowania i pracy w Polsce*) micro-project addressed at young people from Belarusian and Ukrainian border regions and young people planning to study or work in Poland. Its goal was to support the cross-border cooperation in researching needs and increasing educational opportunities and in the labour market for young people.
- "Conscious students on the labour market" (*Świadomi studenci na rynku pracy*) micro-project. Its main goal was to increase the chances of finding work by Polish and Ukrainian students preparing to enter the labour market.

- “Development and promotion of spa treatment in the Polish-Ukrainian part of the Carpathian Euroregion, namely in the Lvivska oblast and the Podkarpackie Voivodeship” (*Rozwój i promocja lecznictwa uzdrowiskowego w polsko-ukraińskiej części Euroregionu Karpackiego, mianowicie w obwodzie lwowskim i województwie podkarpackim*) micro-project, which aimed to enable the exchange of experience between medical personnel of health resorts in the Lvivska Oblast and the Podkarpackie Voivodeship as well as to support and promote spa treatments in the spas located in the Polish and Ukrainian parts of the Euroregion.

Currently, two projects are being implemented in the Carpathian Euroregion. The first, EtnoCarpathia, aims to promote the cultural heritage of the Polish-Slovak border area by developing a EtnoCarpathia tourist product based on the resources of Carpathian culture. The second project, Inter Ventures, serves the development of small and medium-sized enterprises so that they can contribute to the increase of the EU border region competitiveness. The projects will be implemented until the end of October 2021 and mid-2023, respectively.

To sum up, the factors favouring the development of the cross-border cooperation in the discussed area include, first of all, geographical proximity as well as economic and social connections. The nature of the projects implemented in the Euroregions indicates that the border area gives priority to the labour market improvement. Their aim is especially to improve skills and competences of the unemployed and inactive inhabitants, as well as to support young people entering the labour market, and to improve security and strengthen the local community. Statutory documents and promotional materials emphasise that all Euroregions are located in the valuable natural areas, but in recent years (in the 2014–2020 and 2007–2013 financial perspectives) the share of the environmental projects was marginal.

COOPERATION OF THE LOCAL GOVERNMENT UNITS

One of the studies indicates that the primary partners of the Polish local governments are the Member States of the European Union, in particular the federal states of Germany, regions of France and Italy⁶⁰. It is also important to emphasise the growing cooperation between Eastern European countries, especially between Poland, Ukraine and Russia. Non-European cooperation is marginal for the countries belonging to the European Union. Based on surveys carried out in 2012⁶¹, it was found that 41% of the examined Polish local governments declare active cooperation with Ukraine, especially regarding EU projects and gaining local government experience. Cooperation with the Belarusian local governments is of a smaller scale. "It concerns economic contacts, cultural and tourist events as well as school youth exchanges"⁶², however, the visa requirement remains a problem in this respect.

The use of the potentials of local government units for cooperation may be restricted by the existing development asymmetries between Ukraine, Poland and Belarus. This may concern the level of socio-economic development, prevailing management standards or level of state economy commercialisation. Actions aimed at structuring its principles and increasing the competence of the local government units to cooperate with international partners seem to be necessary for effective cooperation. In this respect, experience from implementing the past EU cross-border programmes plays a significant role. Cross-border projects serving as catalysts for building good relations can effectively contribute to establishing the cooperation between local government units.

COOPERATION OF OTHER ENTITIES

The cooperation between Poland, Ukraine and Belarus also includes the cooperation of other entities, especially non-governmental organisations. In this regard, the studies indicate the cooperation of civil society institutions as a development opportunity for all three partners.

Projects co-implemented by the Foundation in Support of Local Democracy with partners from Ukraine and Belarus may be a good example. The foundation principle

⁶⁰ A. Skorupska (2015), *Dyplomacja samorządowa. Efektywność i perspektywy rozwoju*, Warszawa: Polski Instytut Spraw Międzynarodowych.

⁶¹ Ibidem.

⁶² Biuro Analiz, Dokumentacji i Korespondencji (2017), *Międzynarodowa współpraca samorządów*, Warszawa: Kancelaria Senatu.

is to act in partnership and maintain lasting ties with persons, organisations and institutions. The main beneficiaries of the foundation activities are local governments, non-governmental organisations and local leaders, while the stakeholders are local communities, entrepreneurs, young people and representatives of education.

The following projects were implemented in the last years:

- “Belarusian-Polish Academy of Rural Leaders” implemented in 2009. Its goal was to support rural leaders from Belarus in grassroots activation of rural communities. The essential part of the project was a study visit to Szczecin and the Zachodniopomorskie Voivodeship. Educational and integration events were also carried out in five Belarusian villages.
- “Young Belarusians, Democracy and the Eastern Partnership” implemented in 2009. It consisted of workshops devoted to democratic changes in Poland. Workshops and meetings with Polish local charity activists and local culture leaders were also organised. The goal was to share the experiences of Polish activists in acting for the benefit of local communities, to point out the biggest problems and show the mechanisms for overcoming them.
- “Responsible investment – investment in personnel. Enhancing management competences of Ukrainian local authorities in the sphere of municipal engineering”. The project aimed at building the potential of the local government by increasing the management competences in the field of municipal economy of the Ukrainian territorial self-government units, which was part of the preparations for the (repeatedly mentioned) local government reform. The project was implemented in 2012.
- “Transparent Ukraine through social dialogue – building social approval for struggle against corruption” and “Transparent Ukraine for the Eastern Partnership. Sical and Media Support”. These projects were complementary and aimed at carrying out activities for deliberative democracy. To achieve this, teams were created to monitor the degree of transparency of the authorities’ activities and to implement the principles of the “Transparent Ukraine” programme. NGOs and local journalists were also involved, being responsible for media and social communication of activities. The projects were carried out in the years 2011–2012.

Another example of cooperation are activities undertaken as part of the activities of the chambers of commerce: the Polish-Ukrainian Chamber of Commerce and the Polish-Belarusian Chamber of Commerce and Industry.

The Polish-Ukrainian Chamber of Commerce has been active since 1992 in the developing of Polish-Ukrainian economic and cultural relations. Its main goal is to support Ukrainian and Polish enterprises. To this end, the chamber supports the representation of Ukrainian investors in Poland and Polish investors in Ukraine. It also provides substantive and organisational support to contacts with business organisations as well as Ukrainian and Polish authorities. Indirectly, its activities contribute to the positive image of Poland in Ukraine and Ukraine in Poland. According to data, by the end of 2018, in the chamber there were 231 economic entities, which jointly implemented 642 projects.

The Polish-Belarusian Chamber of Commerce and Industry has been operating since 1993. Currently, by the end of 2018, it associated 80 entrepreneurs. The main sectors represented by members are banks and insurance, economic self-government, transport and logistics, legal advice, real estate, agriculture and food processing, construction and building, energy and chemistry. Every year, the chamber organises the Polish-Belarusian Economic Forum "Good Neighbourhood". The main goal of the chamber is to support Polish and Belarusian enterprises operating in the neighbouring country (Belarus or Poland, respectively). To this end, the chamber supports business entities in establishing business contacts, approves export price calculations and provides expert and advisory services.

However, despite the above-mentioned examples in the existing scientific and popular science studies, it is emphasised that cross-border cooperation is based primarily on already discussed formal activities such as the Euroregions or cooperation under the EU financed projects. Data allowing to determine the scale and nature of contacts established by non-governmental organisations, entrepreneurs or other entities are limited. Cooperation stimulated by non-governmental organisations or organisations for the economic development is relatively smaller and is based mainly on bilateral partnerships.

3.7.3 POTENTIAL FUNCTIONAL AREAS

The Act of 27 March 2003 on spatial planning and development (Journal of Laws 2003, No. 80, item 717) defines a functional area as "an area of special phenomenon in the field of spatial management or of the occurrence of spatial conflicts, constituting a compact spatial arrangement consisting of functionally related areas characterized by common conditions and predicted uniform development goals. " Whereas, according to the document "Functional areas in member states of the council of

Europe" developed as part of the Preparatory Study for the 17th session of the Council of Europe Conference of Ministers responsible for spatial planning (CEMAT) a functional area is an area or region that functions as a unified political system from the social or economic point of view. In other words, the functional area is defined by the internal system of interaction and relations, and includes, in whole or in part, the territory of several administrative-territorial units which cooperate and are connected in economic, communal and transport terms etc.⁶³ Functional areas, apart from having specific boundaries in space, function in designated socio-economic framework as well as administrative and institutional framework.

The idea of functional areas arose due to the need for system instruments enabling effective management and use of the potential, but also to solve problems occurring in a given area, regardless of the restrictions resulting from the administrative division. In the National Concept of National Development 2030, the principles of spatial development policy of the country include, among others the principle of dynamic zoning and designation of planning areas, referring to functional areas. This approach is to ensure the functioning of the integrated development system.

The designation of functional areas for the needs of the cross-border cooperation program is of particular importance given that in so-called NSDC (National Spatial Development Concept) expert project Piotr Korcelli et al. (2010), all of Eastern Poland was designated as a problem area of national importance (also one demanding specific spatial policy)⁶⁴.

The adopted methodology for the delimitation of functional areas takes into account the recommendations formulated in national documents. In accordance with NSDC 2030, functional areas are designated with ensuring:

1. continuity and compactness of the designated area – consisting in the designation of an area closed by a common border;
2. availability of indicator data, enabling the determination of the total area, the spatial extent of which allows to solve existing or anticipated problems and to develop new functions of these areas.

Cross-border functional areas (CBFA) for the needs of the study were defined as a spatially specific territorial complex (arrangement of adjacent areas) located on both sides of the Polish-Belarusian-Ukrainian border and characterized by common socio-economic and spatial features which can be treated as a problem or developmental

⁶³ „Functional areas in member states of the council of Europe“.

⁶⁴ NSDC Expert Project.

opportunity that connects them. The main function of this area is to bring together and cooperate with local communities on both sides of the border.

Identification of cross-border functional areas (CBFA) was carried out based on expert knowledge. As a result of a comprehensive diagnosis of the socio-economic situation, the state of the natural environment, analysis of current development policy directions in Poland, Belarus and Ukraine and in the EU, information has been gathered to characterize potentially designated areas.

Five thematic axes have been identified around which CBFA can focus and which were focused around the developmental potential of the borderland:

A – natural heritage

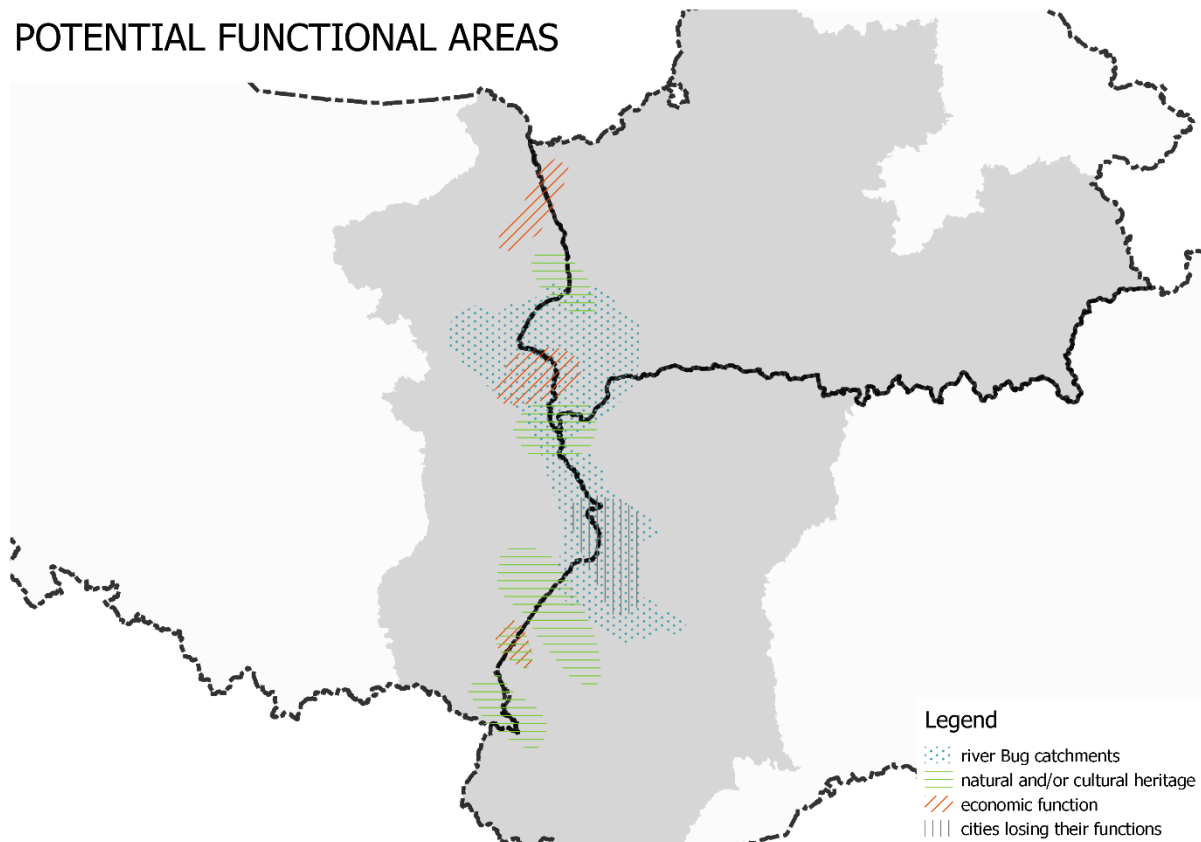
B – natural and cultural heritage

C – river catchments

D – economic function

E – cities losing their functions

POTENTIAL FUNCTIONAL AREAS



Map 11. Functional areas of cross-border cooperation



PL-BY-UA
2014-2020

Source: Own study

CHARACTERISTICS OF PROPOSAL CROSS BORDER FUNCTIONAL AREAS IN THE PL-BY-UA PROGRAM SUPPORT AREA

THE BIAŁOWIESKA FOREST

The functional area has been designated in the existing cross-border area which is the Białowieża Forest. The forest complex covers about 1500 m² on the Polish-Belarusian border and 42% of its area it is on the Polish side. It protects the unique temperate deciduous forest of primary nature with fragments of mixed forests and coniferous stands, growing on the old glacial moraine plateaus. It is a refuge of rare species – the most recognizable as the place of occurrence of the bison - the largest land mammal of the European continent. Its exceptional value is recognized internationally, which is reflected in the 1978 entry on the UNESCO World Heritage List. The strategic problems of the area include joint coordination of activities in the field of managing national parks on both sides of borders, monitoring of biodiversity, species protection and creation of a joint tourist offers. The development vision for the Białowieża Forest provides for preserving natural values, establishing cooperation between entities related to the forest, and better management of the cross-border area.

KREMENAROS AND BRAMA PRZEMYSKA

The Carpathian Euroregion Poland association together with partners proposed to create two cross-border functional areas with the participation of Poland and Ukraine. These are CBFA "Kremenaros" (on the Polish-Slovak-Ukrainian border) and CBFA "Brama Przemyska" (on the Polish-Ukrainian border).

The proposed functional area is located on the Polish-Ukrainian-Slovak border. It covers the area of the eastern Carpathians with the Bieszczady peak – Krzemieniec – which is a state border of three countries. These are areas of particular natural and cultural value, also important due to the water resources of the Carpathians, which require development support from countries and the European Union. Despite the attractiveness of this area, living conditions are difficult here, which means that there is increased emigration of people to larger urban centres.

Due to the attractive location in the area, the tourist function could develop – perhaps in the form of a cross-border tourist area.

The proposed CBFA area "Kremenaros" covers the border of Poland, Slovakia and Ukraine:

- Polish side: Bieszczadzki, Leski and Sanocki poviats;
- Slovak side: Snina period, Humenne, Medzilaborce;
- Ukrainian side: Uzhgorod, Perechyn, and Great Berezhnyn regions.

Whereas, the CBFA "Brama Przemyska" will cover the border between Poland and Ukraine:

- Polish side: Przemyski, Jarosławski, Lubaczowski, Przeworski poviats, Przemyśl – city with powiat status;
- Ukrainian side: regions: Mościcki, Jaworowski, Drohobycki, Samborski.

The main potential of both CBFAs was defined as natural and cultural resources that are the basis for creating products in the tourism-based economy. Tourism will therefore be the main factor joining areas.

The main direction of development of both CBFAs is going to be tourism economy with related segments. The development of the area will be supported by implementing the carpathian brand carpathia organizing the environment of tourist products and adapting their level to market needs. In order to achieve the main objective efficiently, as a result of meetings and consultations with representatives of CBFA communities, related topics of cooperation were defined:

- education for the labor market
- transport accessibility
- tourist infrastructure
- Marketing/branding,
- environmental protection / ecology
- innovation
- local, regional, traditional product
- bilingualism
- cross-border management – identification of cross-border obstacles/allocation of services and resources
- strengthening cooperation between citizens and institutions.

The Carpathian Euroregion Poland association is an institution coordinating activities related to the abovementioned initiatives.



BUG CATCHMENT

The Bug is a border river which catchment is located on the territory of all three countries of the support area – the Republic of Poland – 49.2%, Ukraine – 27.4%, the Republic of Belarus – 23.4%. The pool area is 73 470 km². Due to the valuable natural and ecological values of the discussed area, especially from the ecological point of view, the Bug River valley, its ecosystem and catchment system should be very important elements of cross-border cooperation. The potential of the resource located at the border of Poland, Ukraine and Belarus is evidenced by the fact that, due to its unique values, the Bug Valley has obtained the status of a European ecological corridor – care should be taken to maintain this status. Therefore, the status of the Bug River requires the development of a special program of use and cross-border cooperation towards joint actions to ensure the purity of the Bug River and restore its full navigational and tourist functions.

BIAŁYSTOK–GRODNO

These are large urban centres that are available to facilitate and stimulate cross-border cooperation, thus indirectly supporting the development of municipalities and villages. Białystok and Grodno are approx. 85 km apart, which seems to be non-binding with connected transport connections (DK No. 19). Taken into account should be the already existing lack of visa requirement in the Grodno area, which allows for establishing contacts with partners in the field of economic, cultural and service development. An important potential of the area that cannot be overlooked is the shared historical and cultural heritage reinforced by existing projects. The proposed range also includes the Kuźnica Białostocka border crossing, which is the most often crossed border on the Polish-Belarusian border. Presence can affect the development of the entire CBFA

BREST–BIAŁA PODLASKA

Maintaining relations between the city of Brest and Biała Podlaska is favoured by the geographical proximity of these cities and an important transport corridor connecting them through the crossing in Terespol. These cities and the areas surrounding them are on the path of international communication routes leading through central Poland from west to east Europe. These are relatively large urban centres, whose presence definitely facilitates and stimulates cross-border cooperation, which indirectly promotes the development of communes and villages. Their location in the border area also allows for establishing economic partnerships, which is a very important element from the point of view of socio-economic development. For further development, it is



important to increase the permeability of the border, which will have a positive influence on Brest's impact on border areas and may enable the development of entrepreneurship, especially in the field of transport, logistics and warehouse activities on both sides of the border. The existing internal potential of the area limited by Brest and Biała Podlaska consists primarily of communication conditions, the quality of which will be gradually increased (due to the planned construction and modernization of road (highway) and railway infrastructure (modernized line)) and location in the vicinity of large urban centres. It also fits into the strategic vision of the development of the so-called Northern lane of economic activity, which is indicated, among others in the Lublin Voivodeship Development Strategy.

It should also be emphasized that from the point of view of the intersection of two political and economic groups – the European Union and the Eurasian Union, and the growing volume of transport between China and the European Union, the importance of these areas is considerable for both Poland, Belarus and the European Union.

CBFA ROZTOCZE

The area covers the range of hills of Roztocze, so it falls under the Cross-Border Protected Area of Roztocze, which covers a land of approximately 200,000 hectares. It stretches from Zamość to Lviv. Numerous rivers start here: Wieprz, Tanew and their tributaries, as well as the tributaries of the San, Bug and the Dniester. A characteristic feature of Roztocze are loess hills and distinctive ravines, forest complexes with unique vegetation and animals, especially steppe nature. The area can successfully perform – to a greater extent than before – tourist functions in the form of a cross-border tourist functional area. It would be created based on the natural values of Roztocze and the UNESCO Cross-Border Biosphere Reserve.

CBFA WESTERN POLESIE

The functional area covers the most valuable natural areas of the Polish-Belarusian-Ukrainian borderland, where local and regional public administration together with environmental protection services from the countries of the support area cooperate closely. West Polesie falls within the boundaries of the UNESCO Cross-Border Biosphere Reserve. Therefore, in this district the development of the tourist and recreational function is preferred, which results from the existing natural and landscape resources - the region is distinguished, among others, by the lake landscape.

HRUBIESZÓW, VOLODYMYR-VOLYNSKYI, NOVOVOLYNSK

These three urban centres of border areas form a problem area of cities which are losing their functions. The main problems of cities are those related to the maintenance of the economic base. The economic changes taking place in the last thirty years have led to negative socio-economic changes - in the cities indicated, this negatively affected the condition of the workplaces operating there. Collapsing enterprises have created an economic gap, which results in a high level of unemployment and relatively low economic activity of the population. "Flushing out" the economic functions of Hrubieszów, Volodymyr-Volynskyi and Novovolynsk results and will result in a growing problem of depopulation. It should also be emphasized that these cities are characterized by poor transport accessibility - they are located away from the international roads E372 and E373. However, they are also centres around which agricultural production can be developed based on excellent soil conditions, which is why their high development potential may be high-quality, highly professionalized agricultural activity.

Conclusions:

- CBFA in the Program Poland-Belarus-Ukraine 2021-2027 should focus around areas with great natural and cultural potential.
- CBFAs should contribute to the development of the region based on tourism initiatives.
- As part of CBFA, cooperation at border crossing points of the countries participating in the program is recommended in terms of creating better border crossing procedures, joint training of border services, purchase of equipment.
- There is a potential for cooperation between cities that face similar development problems on the border between Poland and Ukraine, as well as Poland and Belarus – in-depth cooperation under CBFA can bring measurable benefits to partner cities on both sides of the border.

4. MAIN OBSTACLES TO CROSS-BORDER COOPERATION

The development of cross-border cooperation may be hampered by numerous obstacles. Identifying them, can allow for the establishment of effective tools enabling the development of a region. Minimizing the negative influence of barriers and problems can contribute to the improvement of the effectiveness of cooperation, improvement of the cross-border impact of the projects and improvement of the integration of common border areas.

In the case of the Polish-Belarusian-Ukrainian support area one of the basic obstacles hindering cooperation are formal and legal restrictions⁶⁵. The lack of cohesion of regulations and their instability makes it difficult for local government units as well as entrepreneurs, NGOs and cultural institutions to cooperate. Institutional constraints related to frequent changes or reorganization of institutions and authorities are also clearly visible. Difficulties in coordinating joint actions between institutions in individual countries affect the extended time of procedural preparations for the implementation of joint cross-border projects. Clearly existing differences and competency restrictions at the institutional level hamper development programming and require better coordination of cooperation in the cross-border area⁶⁶.

Despite the activities carried out so far, the peripherality of the sub-areas and circuits forming the support area is maintained. It is characterized by a lower level of economic development compared to other regions of its countries, which has a significant impact on social processes – primarily on the outflow of residents from the support area. In addition, the different economic systems between Poland, Ukraine and Belarus negatively affect the partnerships established in the field of economic activities, as evidenced by their small number. Perhaps this is due to the lack of a common, definite vision of the development of cross-border cooperation, and certainly from the limited financial possibilities, especially the budgets of local authorities, which hinders the implementation of larger investment projects. The indicated factors significantly limit cross-border cooperation in the grouping area, to a certain extent functionally connected, territorial units characterized by a low level of socio-economic development.

An obvious obstacle in establishing economic cooperation are mental barriers, the Polish side's perception of potential partners from Ukraine or Belarus as unstable and uncertain. Among the most frequently indicated barriers in Polish-Ukrainian cooperation in this area, attention is paid to the phenomenon of corruption and insufficient credibility of the political system.

It should be noted that the barriers indicated are interrelated, which may hinder their overcoming. There is a kind of feedback loop between social and economic barriers –

⁶⁵ J.P.Gwizdała, *Prospects for development and euroregional cooperation on the eastern border of Poland* no. 1/2016 (79), s. 655–664.

⁶⁶ B.Kawałko, *Development challenges of the Polish-Ukrainian borderland*, edited by Andrzej Miszczuk, dedicated to prof. dr. Semen Matkowskyi, s 257-281.



some result from the other and vice versa. The existence of institutional, formal-legal and mental (psychological) barriers is not favourable to the situation⁶⁷.

⁶⁷ E. Mikuła-Bączek (2008), *Barriers and factors of activating of Polish-Ukrainian transborder cooperation* [in:] *Socio-economic cohesion and the modernization of cross-border regions*, Rzeszów: University of Rzeszów.



5. SWOT ANALYSIS OF THE SUPPORT AREA

Based on desk research and diagnostic workshops led in each voivodeship and each oblast an analysis of factors of socio-economic development in support area has been prepared. SWOT analysis was used for this purpose. The SWOT analysis consists of four components: strengths and weaknesses as well as opportunities and threats. It should be noted that strengths and weaknesses relate to the support area itself, while opportunities and threats relate to its environment. Therefore, in this approach, SWOT analysis is used as a diagnostic and prognostic tool.

The SWOT analysis was carried out divided into five thematic blocks specified at the analytical and diagnostic stage.



5.1 ECONOMY AND INNOVATION

Strengths	Weaknesses
<ul style="list-style-type: none">• Favourable geographical location of the support area;• The attractiveness conditioned by the proximity to EU communication corridors;• Relatively high level of innovation in some regions in the Polish and Belarusian part of the support area;• Strong economic connections developed in the area of support;• A wealth of natural and recreational resources;• The existing research and development centres on the Polish side;• Access to well-qualified employees.	<ul style="list-style-type: none">• Different legal systems in countries of the support area;• Large disproportions between the level of economic development in each country;• Poor research facilities on the Belarusian and Ukrainian side;• Excessive bureaucracy hindering running business activity;• Outflow of staff from the support area;• Illegal import of goods from abroad.
Opportunities	Threats
<ul style="list-style-type: none">• International cooperation programs, including cross-border ones;• A large market, which may be absorbent for services, products created by local entities;• The possibility of using the existing tourist potential for economic development;• Openness to intercultural exchange and development of entrepreneurship among residents;• Investment areas.	<ul style="list-style-type: none">• Political instability of Ukraine• Instability of Ukrainian law in the field of economy;• Insufficient trust of potential business partners in various countries;• Possible further drainage of research and development staff and the most professionally active people to areas with higher development potential.



5.2 ENVIRONMENT AND ITS PROTECTION

Strengths	Weaknesses
<ul style="list-style-type: none">• A high percentage of protected areas and intact ecosystems;• Unique natural heritage resources inscribed on the UNESCO World Heritage List;• Favourable climatic conditions for life and tourism;• High qualifications of nature protection and forestry services.	<ul style="list-style-type: none">• Lack of diversification of energy sources (especially in terms of renewable energy use);• Lowering the water level in natural water reservoirs;• Excessive waste production and low levels of reuse;• Insufficient level of ecological education of the inhabitants of the area;• Bad air quality;• Insufficiently developed sewage and water supply system;• A large percentage of untreated wastewater, especially industrial.
Opportunities	Threats
<ul style="list-style-type: none">• Ratification of the Carpathian Convention by Ukraine;• Existence of international cooperation programs, including cross-border ones;• Increase in popularity of renewable energy use and access to ecological energy-efficient technologies;• Increasing demand for leisure in a clean environment.	<ul style="list-style-type: none">• Threats from invasive plant and animal species;• High demand for wood from neighbouring countries and other EU countries threatening excessive deforestation of the Carpathian forests;• High pressure induced by humans and technology on the environment;• Lack or insufficient enforcement of sanctions when undertaking activities that cause damage to the environment.



5.3 SOCIETY AND CULTURE

Strengths	Weaknesses
<ul style="list-style-type: none">• Increase in professional activity rate;• Multinationality and multiculturalism of the support area;• Existence of folk traditions and folk crafts;• Existing material resources of historical and cultural heritage;• Experience and knowledge of institutions / entities resulting from projects implemented so far;• Numerous partnerships in history and culture;• Increase in number of tourists.	<ul style="list-style-type: none">• Unfavourable demographic structure;• Decreasing population (negative birth rate, negative migration balance);• Distinct economic stratification of the population;• Lack of joint management of historical and cultural heritage areas;• Lack of cross-border tourist products;• Revival of historical conflicts;• Poor technical condition of material resources of historical and cultural heritage.
Opportunities	Threats
<ul style="list-style-type: none">• International cooperation programs, including cross-border ones;• Thriving activity of various cultural and social institutions;• Use of existing and cultural facilities, historical and cultural heritage, sports infrastructure.	<ul style="list-style-type: none">• Lack of investment in monuments - destruction of facilities;• Unfavourable demographic changes with disadvantageous prospects for the future;• Nationalist movements that are gaining strength.



5.4 SAFETY AND COOPERATION

Strengths	Weaknesses
<ul style="list-style-type: none"> • Qualified staff; • Developed solutions, systems and procedures (eg EWRS system, Government Security Centre (RCB) alert) - especially in Poland, which can be shared; • Current cooperation of services in the field of border protection; • Current cooperation of emergency and medical services; • Access of uniformed services to human resources - great interest in working in such structures; • Existing medical educational facilities. 	<ul style="list-style-type: none"> • Underinvestment in fire and health care units - outdated equipment and worn out cars; • Differences in procedures between countries; • Large dispersion of patients in need of help; • Staff shortages, shortages of qualified personnel (doctors, nurses); • Difficult procedures in recruiting doctors from Belarus and Ukraine; • Lack of cross-border rescue procedures; • Existence of areas with increased crime rate; • Lack of synchronization in the work of customs and border services; • Low awareness of residents (from different age groups) in the field of preventive healthcare and safety; • Insufficient public information about various types of danger (infectious diseases, fire safety, etc.); • Low driving culture on the road.
Opportunities	Threats
<ul style="list-style-type: none"> • Technology availability; • Promotion of good practices in the field of raising the level of public safety; • Compliance of public administration entities and the society regarding the need to create a sense of security; • Existence of international cooperation programs, including cross-border ones. 	<ul style="list-style-type: none"> • Intensification of negative weather phenomena associated with climate change (floods, droughts, hurricanes); • Migration movements of the population, especially the ones in high intensity; • Limited competencies / experience of some people who are responsible for the operation of the rescue system; • Vagueness of future state and local administration (in Ukraine). • Unpredictable epidemic threats



5.5 MOBILITY (DIGITALIZATION AND BORDER INFRASTRUCTURE)

Strengths	Weaknesses
<ul style="list-style-type: none">• Wide access to the internet;• Transnational road communication channels;• Equipment at border crossings;• Existing railway infrastructure allowing for intermodal transport;• Commercial tourism as a form of local, cross-border economic connection.	<ul style="list-style-type: none">• Poor public communication in the support area;• Informational fragmentation of the oblasts;• Insufficient number of border crossings at the borders;• Low capacity of border crossings and in consequence long waiting time at border crossings.
Opportunities	Threats
<ul style="list-style-type: none">• International cooperation programs, including cross-border ones;• Increase in investment and tourist attractiveness by breaking the peripherality;• State investments in road infrastructure of national importance.	<ul style="list-style-type: none">• Closure of cross-border traffic;• Aging infrastructure;• Smuggling.

6. PROBLEM TREES AND SOLUTION TREES ANALYSIS

As a result of work on the diagnostic part of the document (based on desk research and workshops) problem trees and purpose trees were created and broken down into thematic areas.

ECONOMY AND INNOVATION

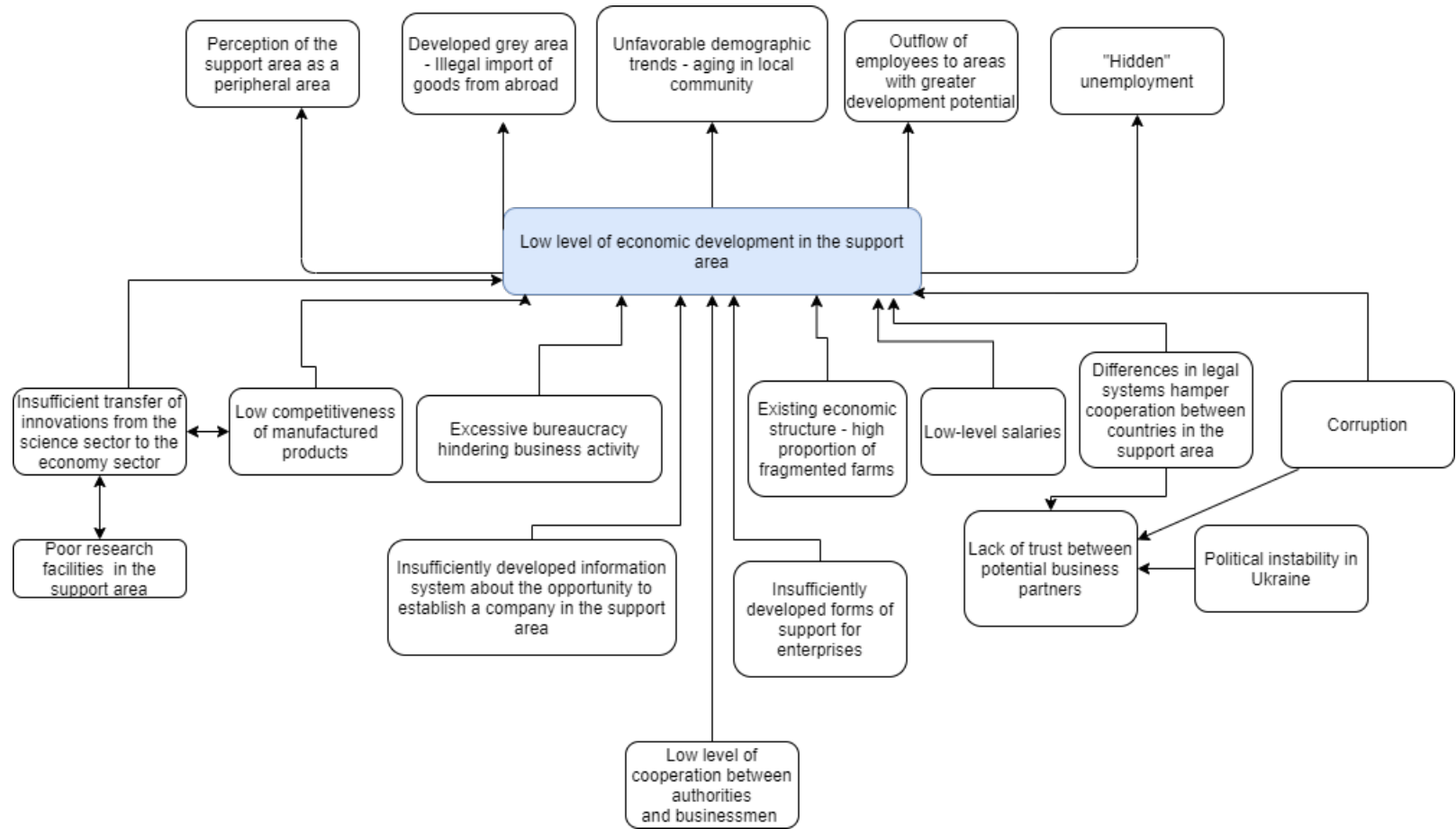


Figure 4. Problem tree in economy and innovation

Source: Own study

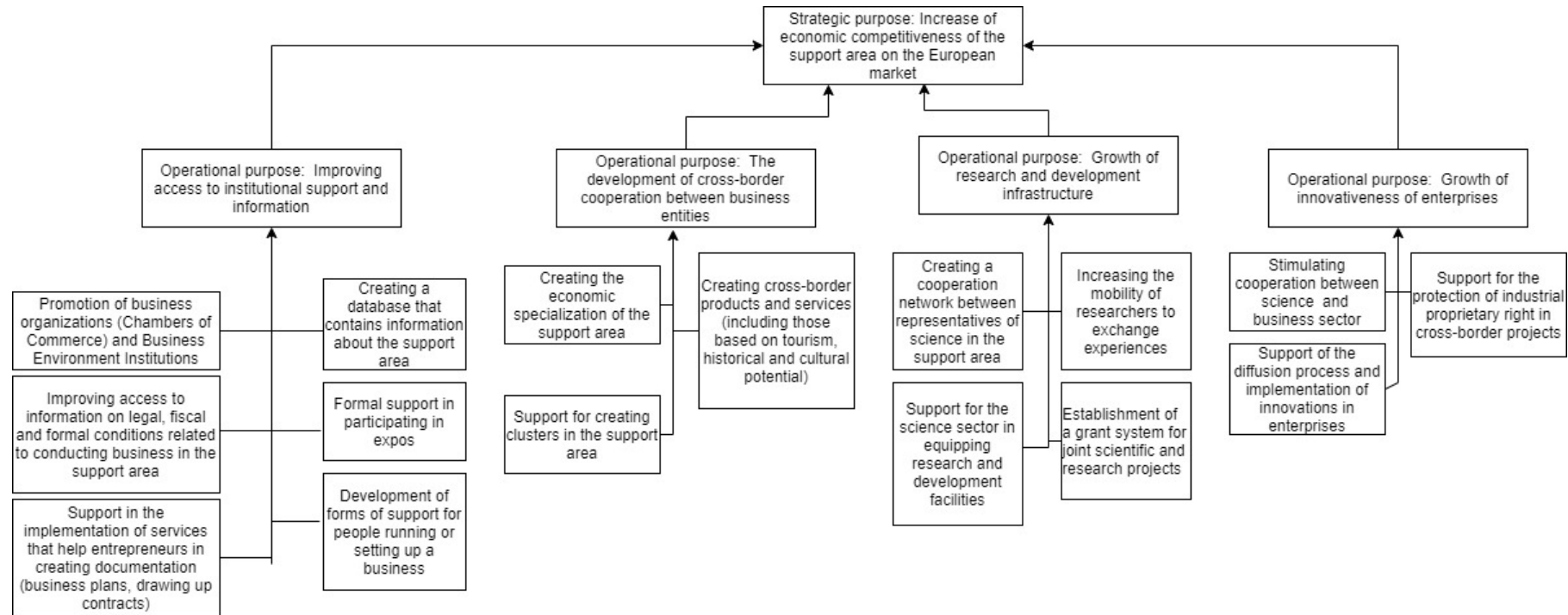


Figure 5. Solution tree in economy and innovation

Source: Own study

ENVIRONMENT AND ITS PROTECTION

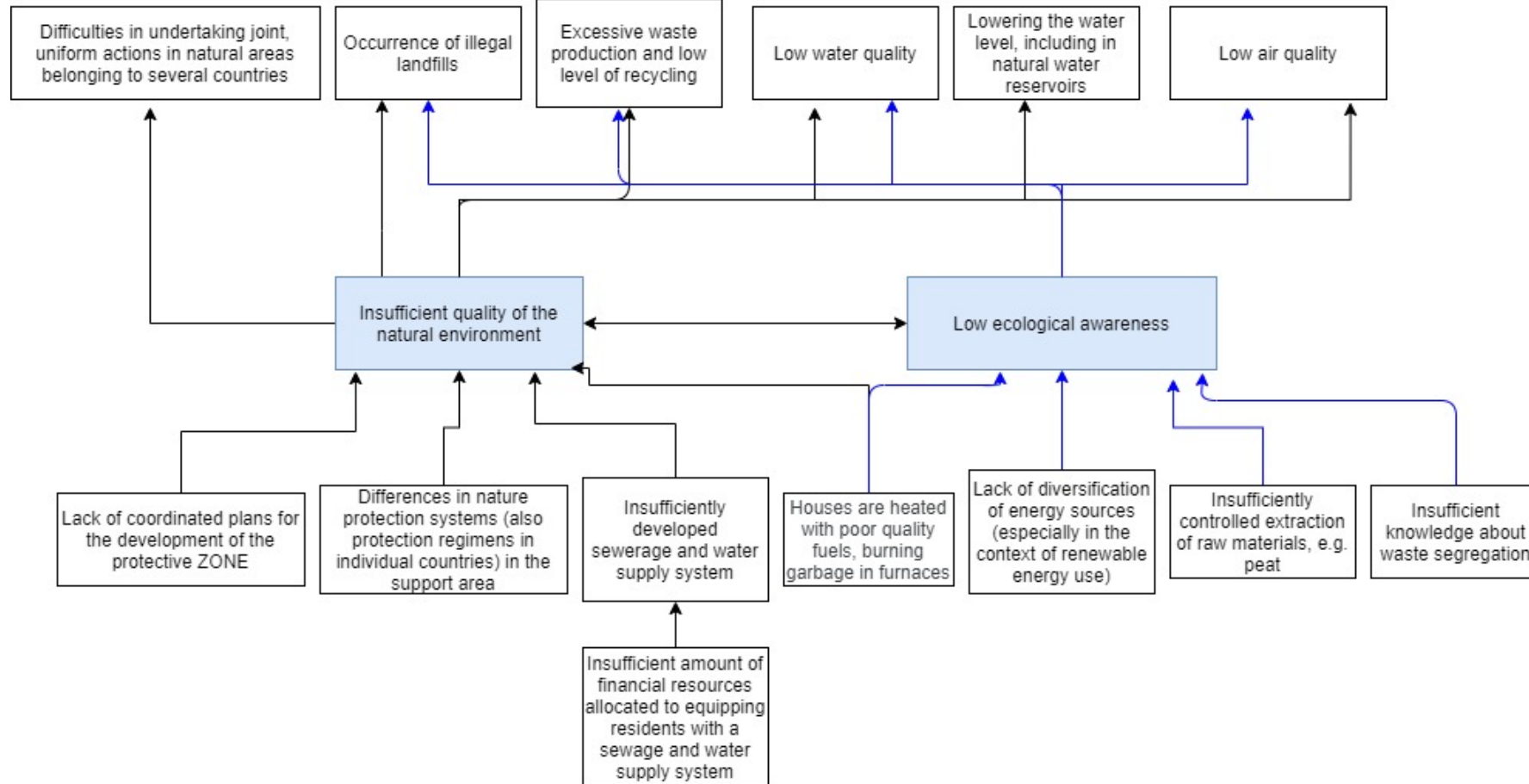


Figure 6. Problem tree in environment and its protection

Source: Own study

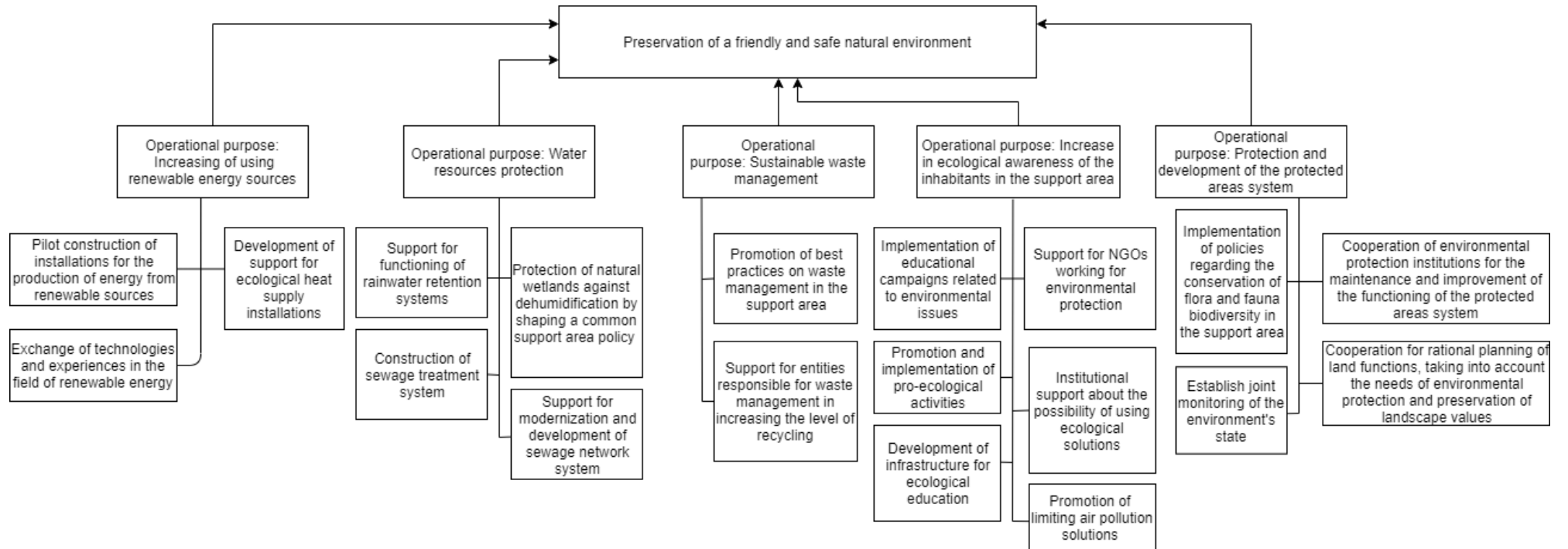


Figure 7. Solution tree in environment and its protection

Source: Own study

SOCIETY AND CULTURE

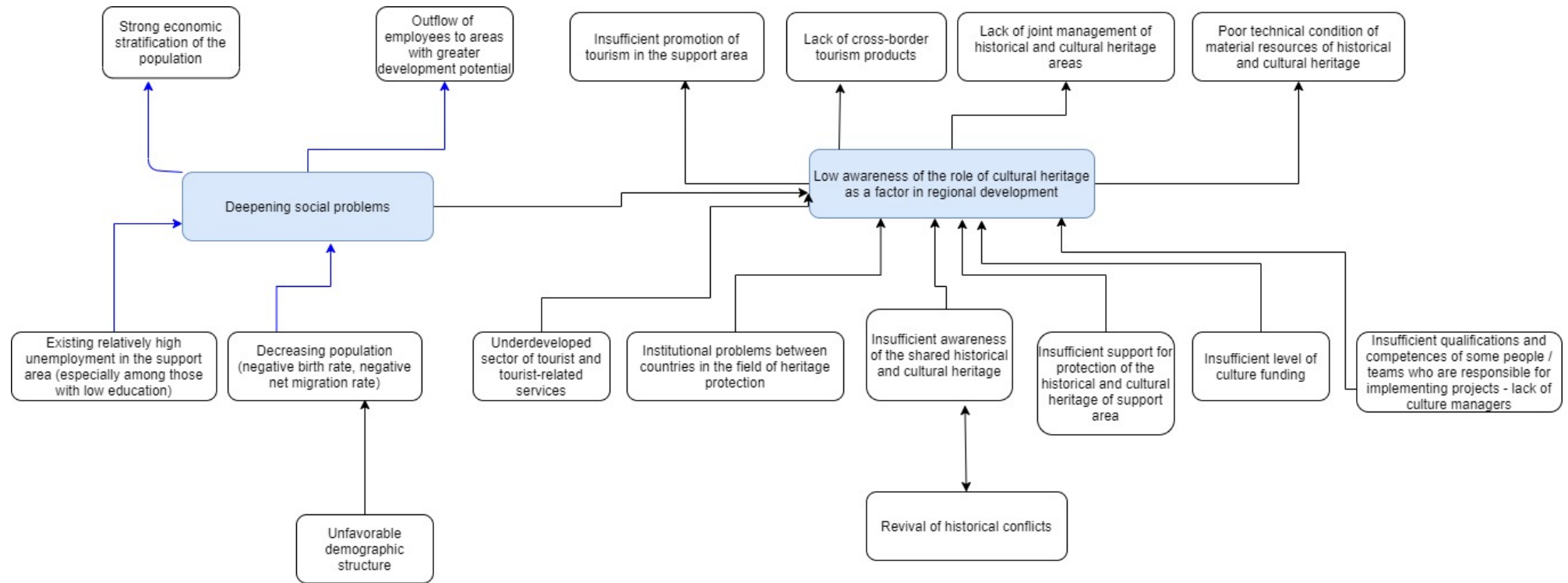


Figure 8. Problem tree in society and culture

Source: Own study

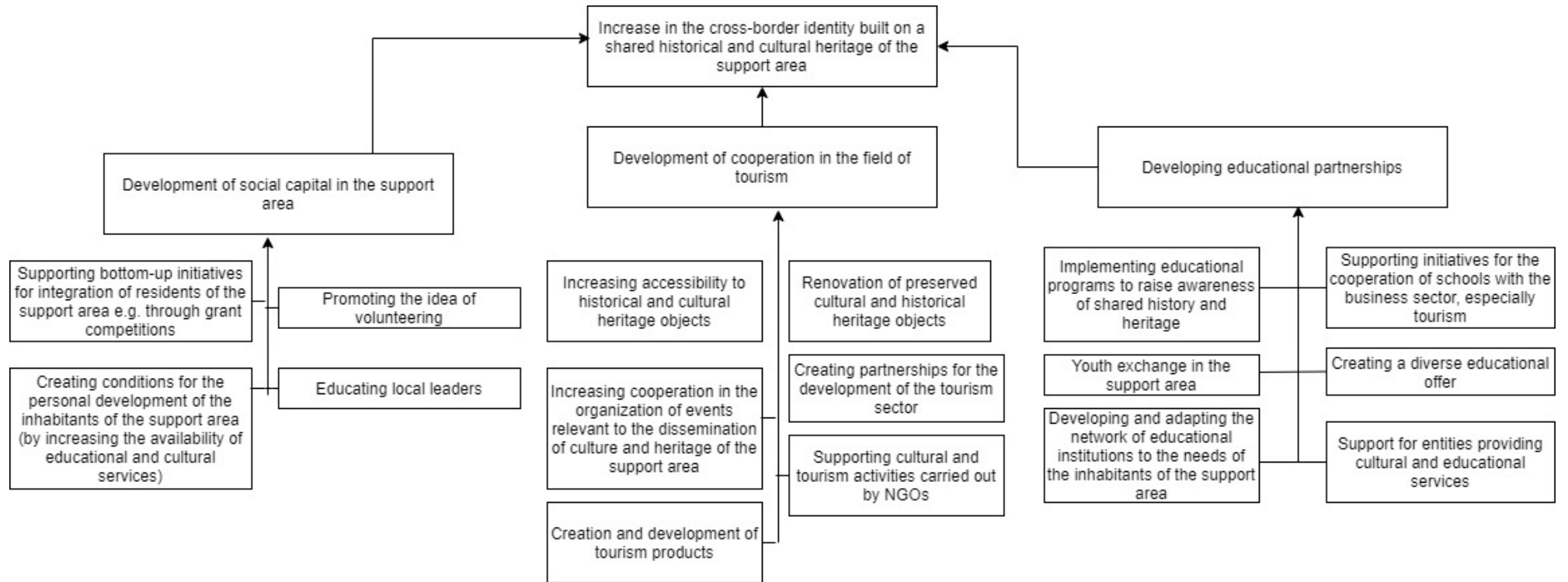


Figure 9. Solution tree in society and culture

Source: Own study

SAFETY AND COOPERATION

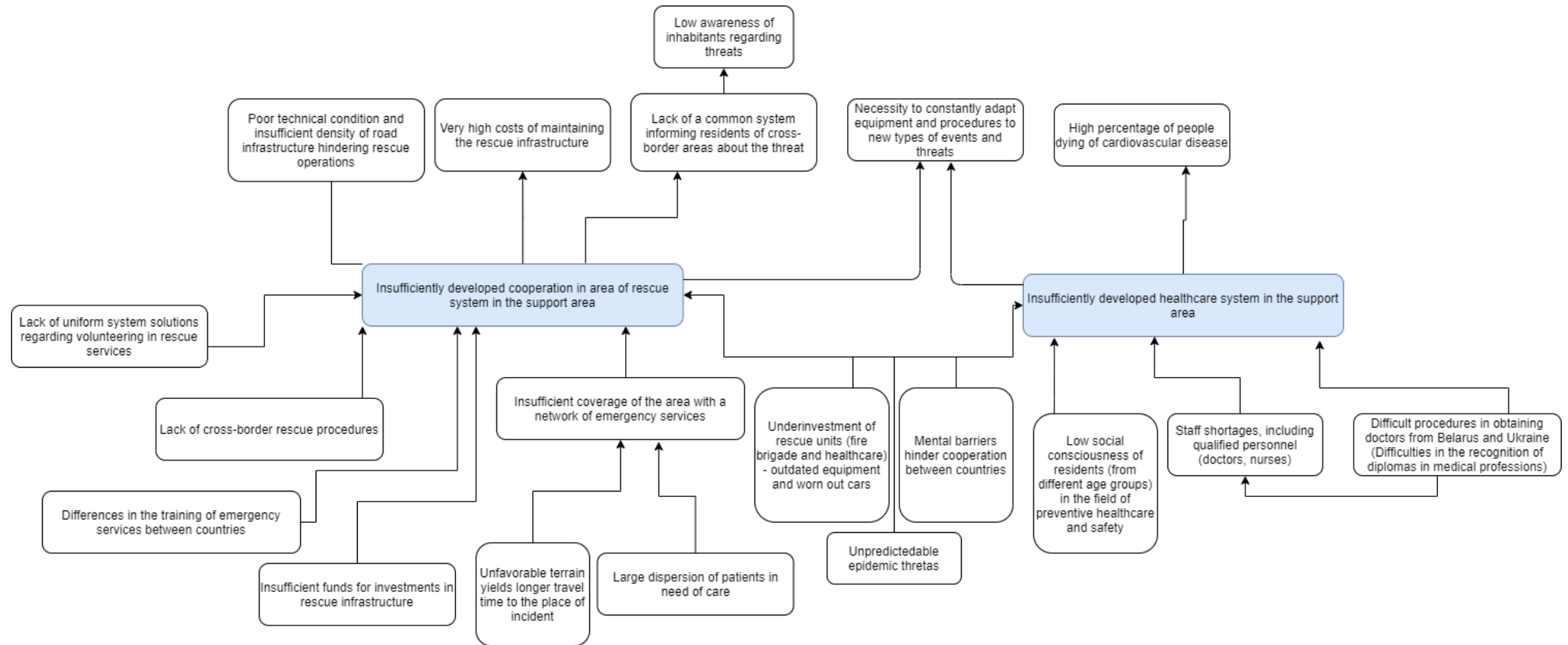


Figure 10. Problem tree in safety and cooperation

Source: Own study

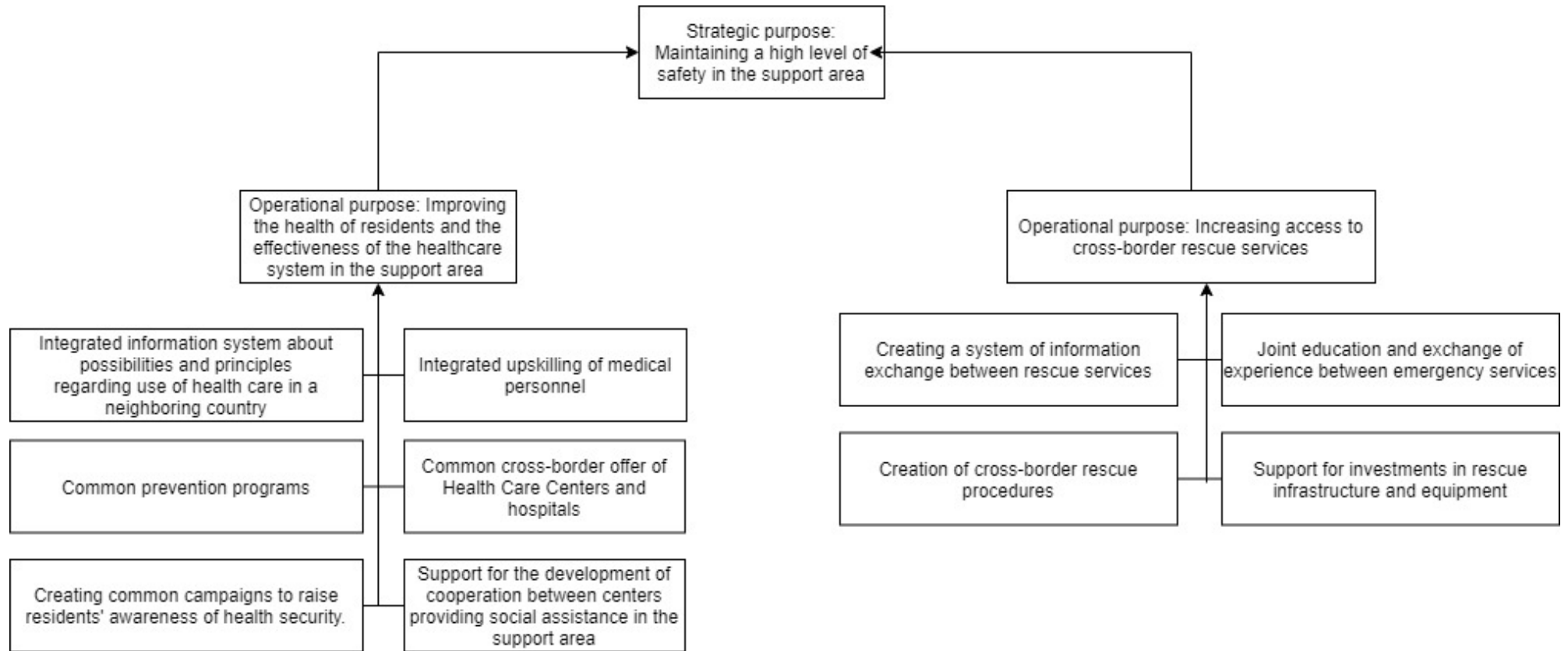


Figure 11. Solution tree in safety and cooperation

Source: Own study

MOBILITY (DIGITALIZATION AND BORDER INFRASTRUCTURE)

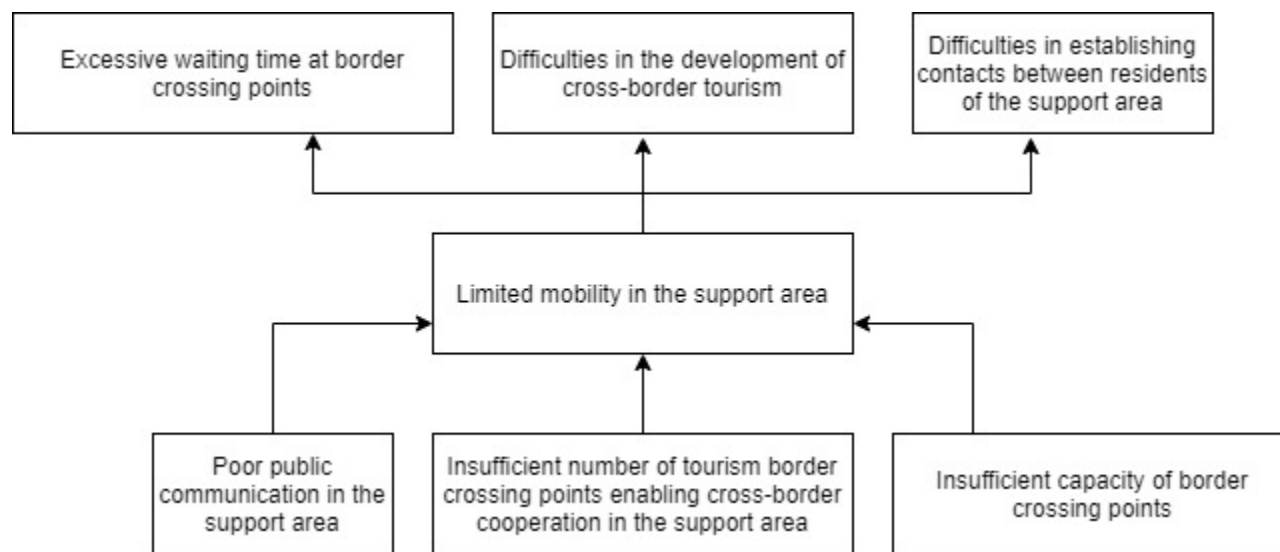


Figure 12. Problem tree in mobility

Source: Own study

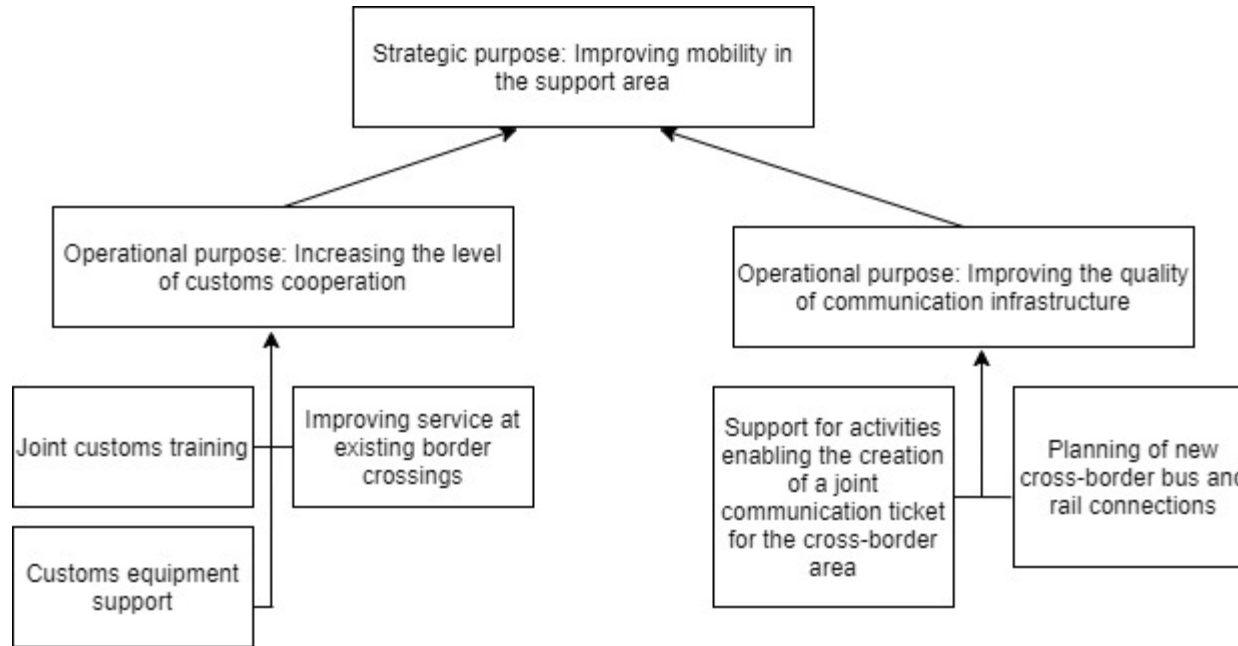


Figure 13. Solution tree in mobility

Source: Own study

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