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## Semi-medium-sized Towns of the North-West of Russia as Drivers of Regional Development

**Abstract.** Among the cities of Russia and Europe, including the Baltic Sea region, it is possible to single out the category of cities (towns) with a population of 20 to 50 thousand inhabitants, which is of particular interest for study, since it is the borderline category between small and medium-sized towns. Semi-medium-sized towns perform various functions in regional settlement systems, especially as centers for the formation of socio-economic regions. Another important factor in regional development is the active participation of semi-medium-sized towns in international cooperation with municipalities of the EU border states. The study deals with semi-medium-sized towns and their functions in five regions of Russia's Northwestern Federal District, and the socio-economic regions formed by semi-medium-sized towns are visually represented. As an example, five semi-medium-sized towns of the Kaliningrad region are considered, with emphasis on the role of each town in regional development. The author analyses the participation of semi-medium-sized towns of the Kaliningrad region in cross-border cooperation projects, identifying tendencies in territorial interactions of semi-medium-sized towns in the region with municipalities of the EU countries undertaken as part of trans-border and cross-border cooperation and benefits this cooperation has for the region.

**Keywords:** semi-medium-sized cities, settlement system, Baltic region, socio-economic region, Northwestern Federal District, Kaliningrad region, international cooperation

### 1. Introduction

Territorial development is impossible without a sustainable settlement system. Undoubtedly, a sustainable settlement system operates according to the concept

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of “Center-Periphery” with agglomerations acting as centres of development. However, practice shows that small and medium-sized cities can also become points of growth for territorial development and are important components of supporting frameworks of settlement. In our study, we identified a category of towns with a population of 20 to 50 thousand inhabitants. In one of the classifications [Davidovich 1962], these towns are referred to as semi-medium-sized. Such towns mainly functions as administrative centers of municipalities, but they can expand their influence over wider territories.

In the European part of Russia, the Northwestern Federal District, there are more than 30 such towns, but we focus our interest on 18 semi-medium-sized towns from five regions (Leningrad Region, St. Petersburg, Novgorod Region, Pskov Region and Kaliningrad Region). The choice of this district is motivated by the similarity of natural, historical and economic-geographical conditions that affect the development of settlement systems. Another important factor in regional development is the participation of semi-medium-sized towns of the Kaliningrad region and the entire Northwestern Federal District in international cooperation with municipalities of the EU border states, involving the creation of sustainable networks of cooperation between municipalities.

## 2. Theory

Russian socio-economic geographers and economists have devoted a lot of attention to theoretical and empirical studies on the subject of settlement, cities and regional development. However, there has been little research on semi-medium-sized towns in either Russian and foreign literature. The category of semi-medium-sized towns was introduced by L.L. Trube [1955], and V.G. Davidovich [1962] used this category in his classification of urban settlements. Later, the term “semi-medium-sized town” was used by economic geographers, such as O.A. Konstantinov [1963], D.G. Khodzhaev [1967], B.S. Khorev [1975]. Semi-medium-sized towns are of interest in the study of settlement systems, since they are a kind of a transition category combining the functions of small and medium-sized towns, and, depending on geographical location, they can replace mid-sized towns by performing a set of functions and providing adjacent territories with socio-economic services typical of mid-sized towns.

The group of foreign researchers investigating problems of semi-medium-sized towns includes mainly European researchers, such as A. McGregor, M. McConnahie [1995], N.B. Groth, Th. Lang et al. [2005]. They have considered both theoretical and practical aspects of urban development and regional (territorial) development in European countries. In addition, research organizations and in-

stitutions, departments of government ministries, for example, the Ministry of Transport, Building and Housing of Germany, the ESPON organization (Sweden), etc., are involved in the development of small, medium-sized and semi-medium-sized towns in the Baltic region. In the last 20 years small towns in the Baltic region (with 20 to 50 thousand inhabitants) have undergone dynamic development and at the moment play a very important role in settlement systems, acting as support centers for regional and socio-economic development of the surrounding territory [Anokhin & Zhitin 2014; Lang 2005]. The development of semi-mid-sized towns in the exclave region, including their international cooperation in the Baltic region, has been studied by such economists and geographers as G.M. Fedorov, V.S. Korneevets, Yu.M. Zverev, A.V. Levchenkov, N.A. Klimenko [2011], P.V. Pogrebnyakov [2009], including a number of works by the author.

### **3. Research methodology**

The author used materials from the Federal State Statistics Service for the period from 2005 to 2015; statistical compilations of the European Commission (Eurostat), reporting data of international projects of trans-border and cross-border cooperation programmes between Russia and the European Union (INTERREG, Tacis, etc.), implemented with the participation of the Kaliningrad region in the period from 2005 to 2017. These materials included results of international projects implemented by the author to study the potential of semi-medium-sized towns in the Kaliningrad region. For better clarity of the results, the cartographic method was applied, and the results are presented in tables and graphs.

### **4. Research results**

In the theory and practice of socio-economic micro zoning, intraregional socio-economic regions are the highest level of micro-regions allocated in meso-regions (in Russia, the level of meso-regions is made up of federal subjects of Russia). They play an important role in the cultural and everyday services of significant parts of meso-regions [Anokhin, Zhitin, Krasnov & Lachininsky 2014; Belova & Levchenkov 2012; Klimenko 2011]. Their centers are often not only large cities and mid-sized towns, but also semi-medium-sized towns. To give a typical example, Figure 1 shows intra-oblast socio-economic regions identified in the 5 regions of the Northwestern Federal District (St. Petersburg, Leningrad, Novgorod, Pskov and Kaliningrad regions). They were selected after analysing in-

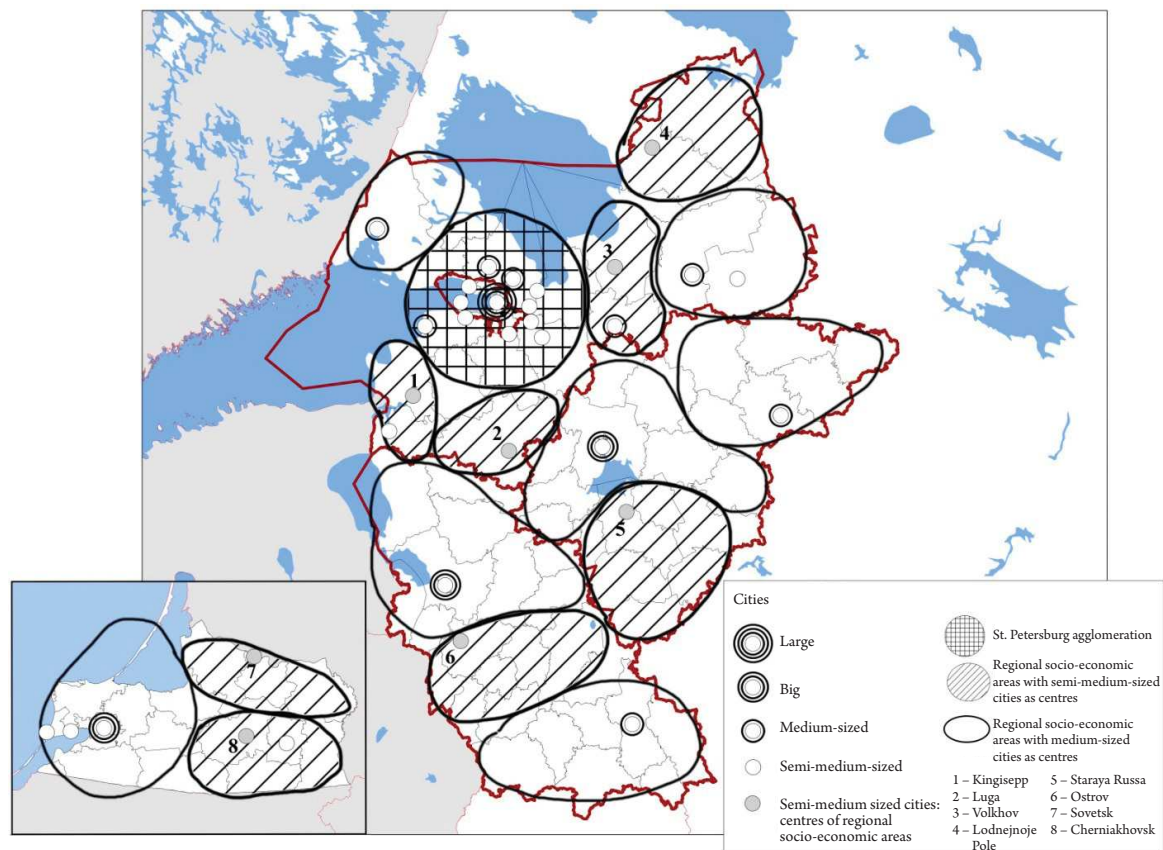


Figure 1. Intraregional socio-economic regions in the subjects of the Northwestern Federal District

Source: own elaboration.

tra-oblast transport routes and regional systems of territorial planning of the subjects of the federation. Only 8 of the 18 semi-medium-sized towns in the Northwestern Federal District are centers of intra-oblast socio-economic regions, of which 15 were considered.

It can be noted that in the Leningrad Region, the four semi-mid-sized towns (Kingisepp, Luga, Volkhov and Lodeynoye Pole) are the centers of intra-oblast socio-economic regions. In the Kaliningrad region – two (Chernyakhovsk and Sovetsk). In the Novgorod region – one (Staraya Russa), in the Pskov region – also one (Ostrov).

In four intraregional districts, the centers are large cities and in three – mid-sized towns. In addition, the surrounding area of St. Petersburg, which includes 4 mid-sized and 5 semi-medium-sized towns, as well as a number of small towns, belonging to the St. Petersburg urban agglomeration, which, to a certain extent, can also be considered as a region in its own right.

In regional settlement systems, many semi-medium-sized towns are multi-functional and can perform several functions associated with socio-economic

support and maintenance of the territory that is part of their zone of influence (Table 1). At the same time, the most pronounced functions of these towns determine the trends in their own development and that of the adjacent territories.

Table 1. Functions of semi-medium-sized towns in settlement systems of the Northwestern Federal District

Subject of Russian Federation	Semi-medium-sized town	Functions of semi-medium-sized towns*								
		1	2	3	4	5	6	7	8	9
Leningrad region	Kingisep	+		+			+		+	
	Volkhov	+		+	+			+	+	
	Tosno		+	+	+				+	
	Luga	+		+					+	
	Slantsy			+	+					
	Kirovsk		+	+						
	Otradnoje		+							
	Kommunar				+					
	Nikolskoje		+		+					
	Lodejnoje Pole	+		+						
Pikalevo				+						
Kaliningrad region	Sovetsk	+		+			+		+	
	Cherniakhovsk	+		+	+				+	
	Gusev			+	+	+			+	
	Svetly		+		+					
	Baltijsk								+	+
Novgorod region	Staraya Russa	+		+				+	+	
Pskov region	Ostrov	+		+			+	+	+	

\* 1 – centers of intra-oblast socio-economic regions; 2 – satellite towns of large and extra-large cities; 3 – centers of municipalities of the second level; 4 – industrial towns; 5 – centers of innovation development; 6 – towns performing trans-border and cross-border interaction functions; 7 – centers of tourist and recreational zones; 8 – transport hubs; 9 – centers with a defence function; +! – the most pronounced function of the town in the settlement system.

Source: compiled by the author on the basis of existing industries and prevailing economic activity.

All the semi-medium-sized towns of the Northwestern Federal District can be divided into the following functional types:

1. Centers of intraregional socio-economic regions (Kingisepp, Luga, Volkhov, Lodeinoe Pole, Staraya Russa, Ostrov, Sovetsk, Chernyakhovsk). All these towns are centers of municipalities of the second level and have the corresponding social infrastructure (educational, health, culture, etc.). Some of them also perform an industrial function (Sovetsk, Chernyakhovsk), and almost all – an important transport function, because they have a favorable economic and geographical location. Kingisepp, Sovetsk, and Ostrov perform cross-border functions, Staraya Russa – resort and recreational functions.

2. Towns which are satellites of the large city of St. Petersburg and other large ones with industrial, transport and administrative functions (Volkhov, Tosno), with industrial functions – Kirovsk, Nikolskoe, Otradnoe, and also Svetly with industrial and transport functions, the satellite town of a large city – the regional center of Kaliningrad.

3. Industrial points and centers (Pikalevo, Kommunar), the same with administrative functions (Slantsy).

4. Centers of innovative development (Gusev).

5. The center with a defence function – the naval base of Baltiysk.

Population dynamics of semi-medium-sized towns depends on their functional type (for example, the number of residents in the industrial satellite towns of St. Petersburg is growing most rapidly: Kirovsk, Nikolskoe, Otradnoe). But the main factors in this case are the size and geographical location. Towns situated on the periphery of the regions usually lose their populations the fastest. In general, in all the semi-medium-sized towns of the North-West in the decade (2006-2016), the population decreased by 2.3%. At the same time, the population of St. Petersburg increased by 14%, in large cities regional centers – by 6%, in medium-sized towns – by 4%, in small towns – it decreased by 6%.

In the semi-medium-sized towns which are centers of intra-oblast socio-economic regions, the population decreased by 8%. This is due to their predominantly peripheral location (cf. Fig. 1). In connection with the important role of such centers in the socio-cultural development of the territory, priority measures on the part of both the region and the Federal Center are required to support their development.

In the Kaliningrad region, given its geographical size and its population, the semi-medium-sized towns have a set of specific functions and perform the role of mid-sized towns, with some of them forming socio-economic regions of a new level in terms of territorial and functional characteristics. Based on territorial and administrative data, the semi-medium-sized towns and regions gravitating towards them can develop in certain directions [Belova 2008].

Based on the prevailing conditions, in addition to administrative functions, three main areas of development of the semi-medium-sized towns of the Kaliningrad region can be distinguished: tourism (resort and tourism in the case of Baltiysk and education and tourism in the case of Gusev), transport (this configuration is being implemented in Chernyakhovsk and Sovetsk, with the additional advantage of the latter resulting from the presence of a border crossing) and industry (this orientation is implemented by Svetliy, which is part of the transport network for the disposal of sewage sludge from the Kaliningrad agglomeration). It is also necessary to take into account the increased defence function of the region (Baltiysk) (Fig. 2).

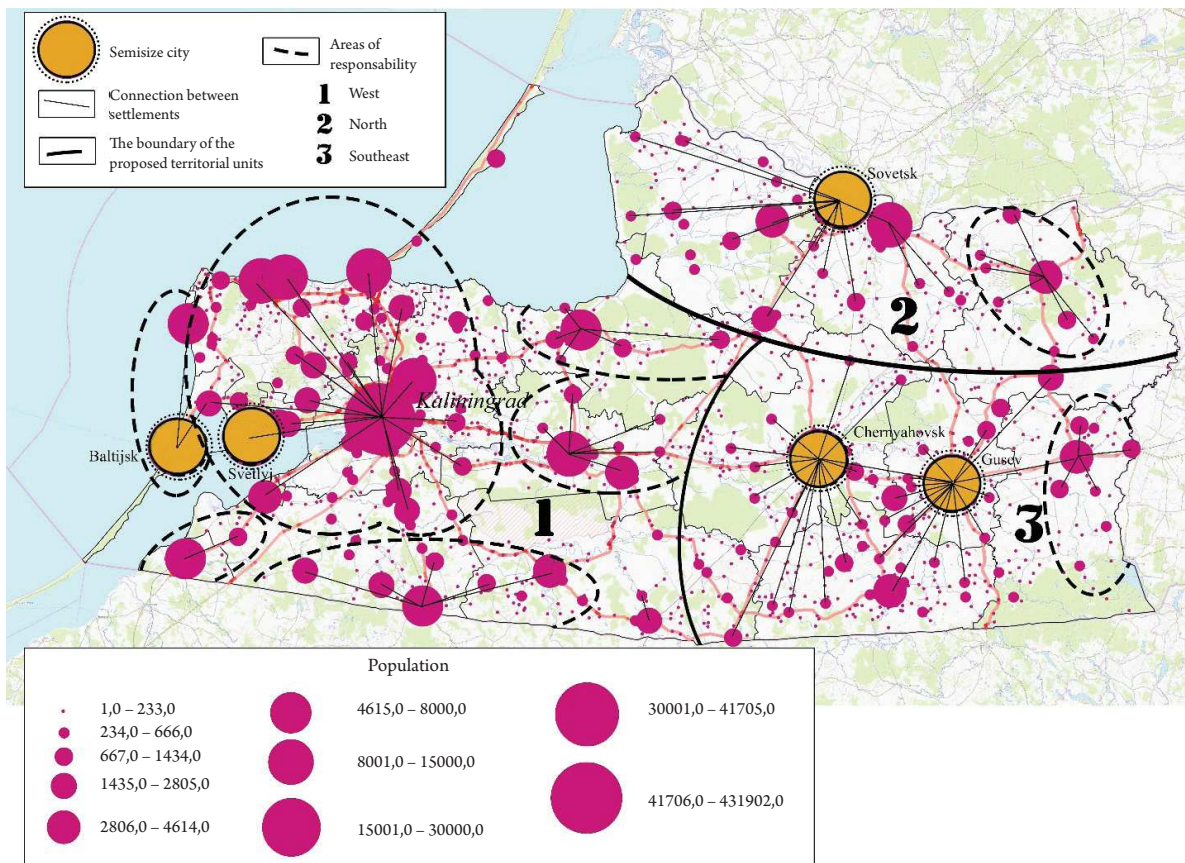


Figure 2. Semi-medium-sized towns in the settlement system of Kaliningrad region

Source: own elaboration.

One of the drivers of regional development in semi-medium-sized towns of the exclave region is their active involvement in international cooperation. Cross-border and trans-border cooperation of the Kaliningrad Region was included in the Strategy of Social and Economic Development of the Kaliningrad Region until 2020 as one of the priorities for ensuring the vital activity of the region, which enables effective and comprehensive solutions to environmental, cultural and social problems in the development of the region's border areas. In addition to its important role in the social and economic development of the region, and in resettlement, such activities are crucial in the international (cross-border and cross-border) cooperation of the Kaliningrad region in the Baltic region.

By participating in projects of border and trans-border cooperation programs from 2005 to 2015 semi-mid-sized-sized towns were able to establish contacts and partnership relations with 27 cities from six Baltic region countries. Over the past 10 years semi-mid-sized towns have implemented 43 projects for a total of 8,557,000.00 euros. A number of projects included an infrastructural compo-

ment, that is, the construction of new or reconstruction of existing infrastructure. For example, in Sovetsk a new bridge was built across the Niemen river, which connects Lithuania and Russia. The bridge will relieve the burden of traffic on the Queen Louise Bridge, which is now the only crossing on the Russian-Lithuanian border in Sovetsk for road transport, including freight [Belova 2018].

Analyzing the relations of the semi-mid-sized towns with their partner cities, we can talk about the formation of three clusters of cooperation: Scandinavian and Western trans-border clusters and one cross-border cluster, the most active and strategically important for the modern development of the region and the formation of sustainable integrated links between semi-medium-sized towns of the Kaliningrad region and neighboring regions of Poland and Lithuania (Fig. 3).

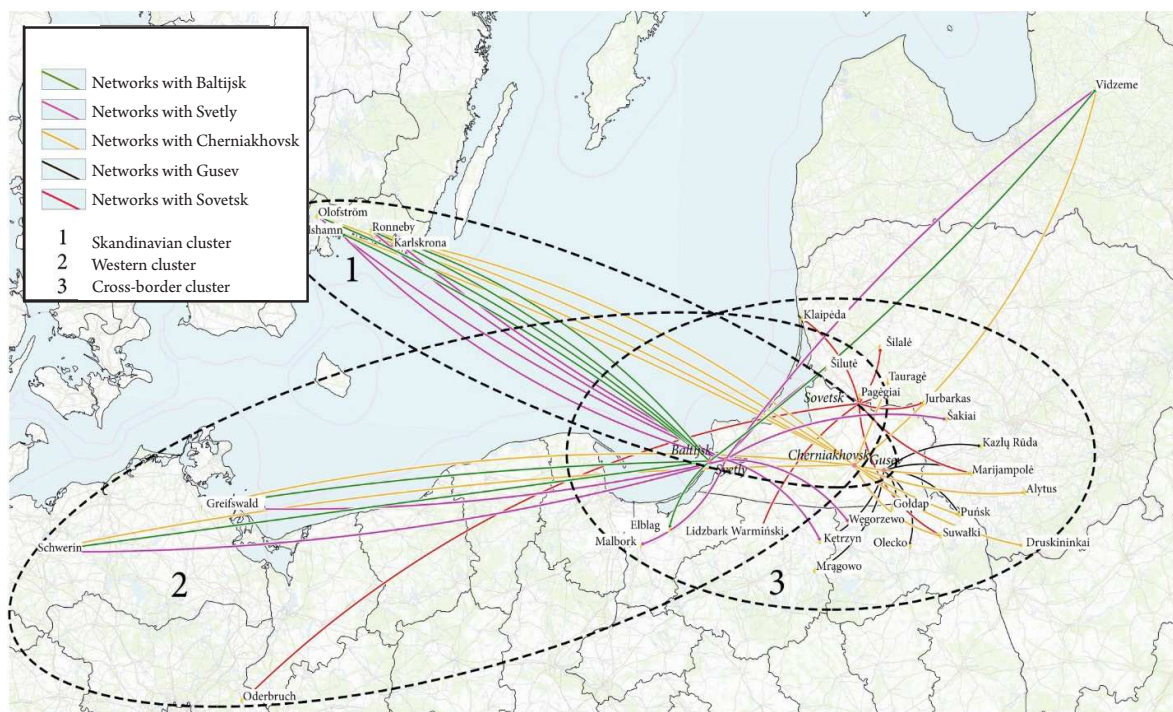


Figure 3. Links established by the semi-medium-sized towns in the Kaliningrad region as a result of the implementation of international projects in 2005-2015

Source: own elaboration.

International cooperation is one of the most important tools for enhancing the development potential of the semi-medium-sized towns in the Kaliningrad region; the semi-medium-sized towns of the Kaliningrad region have accumulated considerable experience in this area. As a result of various cooperation projects, those semi-medium-sized towns could benefit from the creation of industrial facilities, agricultural enterprises, the establishment of educational and cultural networks and the introduction of new management technologies and



organization of the economy. To develop this potential, it is necessary to implement a set of measures, including the development of spatial models and the implementation of pilot projects for cooperation between the semi-medium-sized towns of the Kaliningrad region and the Baltic region, the development of industrial zones and the modernization of transport networks, the creation of an international support network for small and medium-sized enterprises interested in entering the foreign markets.

## 5. Conclusion

As a result of the study, a number of main conclusions can be drawn. In the North-western Federal District, semi-medium-sized towns have a similar functional purpose and can be classified into functional types. It is possible to distinguish nine functional types of semi-medium-sized towns.

In terms of their functional purpose, semi-medium-sized towns are similar to towns of Western Europe with similar populations, although they are usually classified as „medium-sized.”

The role of semi-mid-sized towns as engines of regional development in the Kaliningrad exclave is most pronounced. Here, owing to the legacy of the settlement system adopted after 1945, in addition to the existence of a large regional capital, Kaliningrad, there are five towns with a population of 20 to 50 thousand inhabitants – Gusev, Chernyakhovsk, Sovetsk, Svetly and Baltiysk. These semi-mid-sized towns perform the same function in the region as mid-sized towns elsewhere. Three of them are centres of socio-economic areas, the other two are play the role of companions to the regional center – Kaliningrad.

In recent years the semi-medium-sized towns of the Kaliningrad region have been involved in various forms of international cooperation:

- cross-border cooperation as part of 5 Euroregions: Baltika, Neman, Lyna-Lava, Sheshupe and Saule. The Kaliningrad region, with the support of the Euroregions, 23 projects focusing on various areas from 2005 to 2016;

- implementation of projects as part of cross-border and cross-border cooperation programs. Participation in the projects from 2005 to 2015 allowed semi-mid-sized towns to establish contacts, partnership relations with 27 cities from 6 countries of the Baltic region. A total of 43 projects amounting to 8.5 million euros have been implemented over 10 years. The largest number of projects took place in Chernyakhovsk, while Sovetsk received the largest amount of grant funds (to implement a smaller number of large infrastructural projects). In other cities, project participation was less active owing to weaker involvement of potential actors of cross-border cooperation.

In view of the above, it is essential, in the opinion of the author, to actively develop new functions in semi-medium-sized cities to foster their effective socio-economic development as regional development engines. Priority functions for the ex-Russian region are as follows: the functions of innovation centers and centers of international (trans-border and cross-border) cooperation.

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## Miasta średniej wielkości północno-zachodniej Rosji jako czynnik rozwoju regionalnego

**Streszczenie.** Wśród miast Rosji i Europy, w tym należących do regionu Morza Bałtyckiego, można wyróżnić kategorię miast o populacji 20-50 tys. mieszkańców, co ma szczególne znaczenie dla badań, gdyż jest to granica oddzielająca małe i średnie miasta. Miasta średniej wielkości pełnią różne funkcje w lokalnych systemach osadniczych, zwłaszcza stanowią ośrodki tworzenia regionów społeczno-gospodarczych. Ważnym czynnikiem rozwoju regionalnego jest też aktywny udział miast średniej wielkości we współpracy międzynarodowej z gminami państw granicznych UE. Badanie dotyczy miast średniej wielkości i ich funkcji w pięciu regionach północno-zachodniego okręgu Federacji Rosyjskiej, a regiony społeczno-gospodarcze utworzone przez miasta średniej wielkości są zaprezentowane w formie wizualnej. Analizie poddano pięć miast średniej wielkości w Obwodzie Kaliningradzkim i ich rolę w rozwoju regionu. Zbadano też udział tych miast w projektach współpracy transgranicznej, określając tendencje w stosunkach terytorialnych miast średniej wielkości w regionie z gminami krajów UE w ramach współpracy przygranicznej i transgranicznej oraz korzyści, jakie ta współpraca ma dla regionu.

**Słowa kluczowe:** miasta średniej wielkości, system osadniczy, region bałtycki, region społeczno-gospodarczy, Północno-Zachodni Okręg Federalny, Obwód Kaliningradzki, współpraca międzynarodowa