

## Rural Development in the Context of Spatial Compression of a Northern Region\*



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**Abstract.** Ensuring balanced spatial development and reducing inter- and intra-regional imbalances are strategically important issues for Russia. However, finding a solution to these issues is complicated by the growing concentration of human, industrial, and scientific potential in large cities, major cities, and metropolises, depopulation and economic desertification of rural areas, that is, disintegration and compression of the country's economic space. This is especially acute in the northern regions of Russia. The aim of the article is to study the problems and determine the prospects for development of rural areas of the northern region in the context of spatial compression on the example of the European North of Russia. We point out that the social, economic, and infrastructural issues observed in rural areas have

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remained unresolved since the 1990s. Rural population decline caused by the destruction of the socio-economic potential of these territories is a key factor in the compression of the space of the northern region, degradation of the village and loss of its human capital. The reason lies not only in the shock transition to the market in the 1990s, but also in the ineffective state policy for rural development in the post-reform period, and in the absence of a strategic vision of the place of rural territories in the national space. Having analyzed the current state of the rural periphery and taking into account the need to shift to neo-endogenous rural development, we identify three priorities of state policy in the field of rural development in the North of Russia. They are as follows: development of the rural economy, modernization of rural infrastructure, and comprehensive development of human capital as the ultimate goal of all economic and social transformations. The findings of our work contribute to the formation of ideas about trends in spatial development of the northern regions of Russia and socio-economic issues of rural areas; they can be used by researchers in their studies on similar topics, and by public authorities when they need to work out strategic documents in the field of spatial development.

**Key words:** rural territories, northern region, economic space, disintegration, locational compression.

### Introduction

The Russian Federation is a northern country; more than 60% of its territory is located north of the 60th parallel [1]. Historically, the interest in the Russian North, on the part of foreign countries as well, was due to the huge reserves of natural resources of the territory and the water area, the transit potential of the Northern Sea Route. However, today the North not only serves as a resource depository of Russia, but also performs recreational, defense and other functions. These and many other factors determine the preservation of the “northern” vector in the policy of the Russian Federation, which is aimed at the new exploration and retention of the space of the northern region; the vector can be traced in official documents of the federal and regional levels<sup>1</sup>.

Despite the actively pursued state policy regarding the North and the Arctic, the development of these territories is going on unevenly: achievements of export-oriented industries, imbalances in living standards between village

and city, and the development of the economy, infrastructure, etc. are so prominent as they have never been before. In general, against the background of the overall development of the northern region achieved mainly due to the positive effects of urbanization, orientation of the economy toward exports and its dependence on natural resources, we can say that the northern village has practically become a “fabric”, a “neglected” area where social and economic activity is fading. Meanwhile, according to RAS Corresponding Member Doctor of Sciences (Economics) V.N. Lazhentsev and Doctor of Sciences (Economics) V.A. Ivanov, a crucial role in addressing the issues of sustainable functioning of the northern territories belongs to the improvement of the standard of living and quality of life of rural northerners and economic development of the northern village [2].

In this regard, the purpose of our work is to study the problems and determine the prospects for the development of rural areas in the conditions of spatial compression<sup>2</sup> of the northern region.

<sup>1</sup> Decree of the President of the Russian Federation “On the fundamentals of the state policy of the Russian Federation in the Arctic for the period up to 2035”, the Strategy for development of the Arctic zone of the Russian Federation and ensuring national security for the period up to 2035, etc.

<sup>2</sup> Here and further on, when speaking about spatial compression, we mean primarily locational shrinkage that is manifested in the loss of once inhabited and developed territories.

### Materials and methods

Methodological basis of the research includes works of Russian and foreign scientists in the field of spatial and regional economics, and works on strategic management of the development of regions and rural areas. We also drew information from sources such as official websites of Rosstat and its territorial offices, state and municipal authorities, a survey of heads of municipalities of the Vologda Oblast conducted by VolRC RAS in 2020.

Along with the method of content analysis of scientific literature, we used generalization, analysis, synthesis, qualitative and quantitative data processing.

### Theoretical aspects of the study

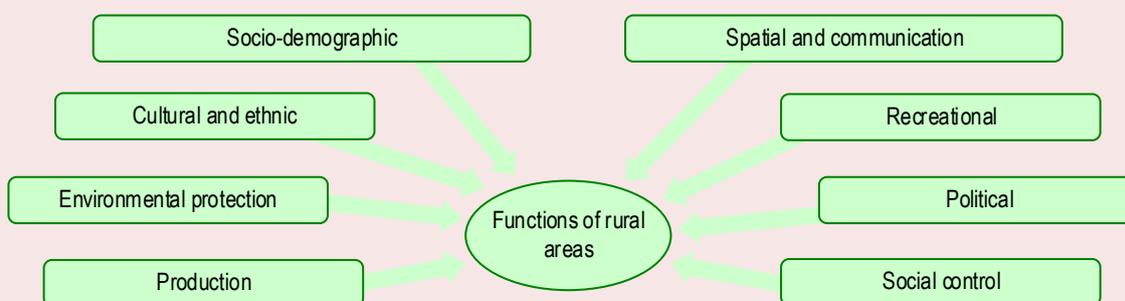
In the broadest sense, rural area (rural territories) is a “socio-economic, territorial, natural and historical-cultural complex that comprises rural population, a network of social and production relations connected with its functioning, and the territory and material objects located on it” [3]. The multifunctional role of rural territories lies in the fact that they are simultaneously a place of residence and recreation of their population, a site for production of food and agricultural products and implementation of other important economic functions (*Fig. 1*).

The extremely high contribution of the village to ensuring stable socio-economic and balanced spatial development makes it necessary to study rural areas comprehensively. In general, we can note that the issues concerning the role of rural territories, prospects and problems of their development are directly or indirectly considered in most major foreign and domestic theoretical developments on territorial and spatial development: standard theories, core-periphery models, growth poles theories, diffusion of innovations, zoning concepts, etc. [6–10].

Thus, according to the location theory developed by J.H. von Thünen, rural areas specialize in production of agricultural and forestry products and their sale to the city, this directly depends on the remoteness from the city, the amount of land rent and the prices for forest and agricultural products produced. At the same time, the development of rural areas is associated with the development of agriculture, forestry and other traditionally “rural” industries, that is, it has a clear sectoral orientation.

The ideas concerning the dependence of the role and specialization of rural territories on the location along the “core–periphery” line were further developed in the theories of cumulative

Figure 1. Functions of rural territories



Compiled with the use of [4; 5].

growth by W. Christaller, F. Perroux, T. Hägerstrand, etc. According to their basic provisions, as a result of the fact that growth centers are constantly being transformed under the influence of scientific and technological progress, obsolete industries are being displaced to the semi-periphery, and then, with a long time lag, to the distant rural periphery. Accordingly, specialization of the rural periphery is not limited only to the agricultural sector.

Meanwhile, it is possible to preserve and ensure the development of rural areas not only through the development of traditionally “rural” activities and the use of exogenous development factors. Based on the conceptual provisions of the new economic geography and the new growth theory, we can point out that a huge potential for the development of rural areas lies in the application of internal factors, including second-tier non-agglomerative factors.

In general, the views presented in different theories on the role of rural territories are reflected in practice in the models of rural development (*Tab. 1*). Undoubtedly, each of the models – exogenous, endogenous, and neo-endogenous – has its advantages and disadvantages. However, in modern conditions, when competition gives way to cooperation, and the economy of all levels – micro-, macro-, meso-, megaeconomics – is based on networks (cooperative, production, etc.), it is advisable to ensure integrated and stable rural development within the framework of a neo-endogenous development model.

At the same time, special attention in research on rural development is given to the northern village, which has a number of unique distinctive features. For example, in Russia it is “the location of settlements surrounded by forests, along rivers and lakes; small settlements, poor development

Table 1. Rural development models

Feature	Exogenous development	Endogenous development	Neo-endogenous development
Development principle	Using exogenous external development resources	Using endogenous local development resources	Reliance on local resources, but with an orientation toward the outside world and dynamic interaction between rural areas and between rural areas and their surrounding environment
The driving force of development	The driving force outside rural areas. Cities as growth poles, providing an impetus to the development of rural areas	The driving force within rural areas. Local initiative and entrepreneurship	The driving force consists in cultural, economic, institutional and other types of integration between urban and rural areas, and in strengthening their relations
Key functions	Production of agricultural, forestry and other products for the urban economy	Provision of various services	Preserving natural and human capital of rural areas
Development directions	Industrialization and specialization of agriculture; promotion of labor mobility and capital mobility	Development of internal potential (institutions, infrastructure, etc.); overcoming social isolation of rural areas	Decentralization of rural development management; building the capacity of local actors to manage larger processes and actions; positioning rural areas as places of production and catalysts for economic growth
Main problems	Dependence on external investments and subsidies; stimulation of certain sectors, settlements and certain types of businesses; neglect of non-economic aspects of rural life; development dictated by external experts	Limited opportunities for districts and social groups to participate in economic and development activities; this is usually due to the fact that preference is given to certain more influential social groups	Risk of formation of exclusive (privileged) rural areas; risk of inequality and asymmetry within the network; risk of imbalance of local and extra-local control; weakness of rural networks in the context of existing knowledge and capital
Compiled with the use of [11–15].			

of the network of road transportation links between cities and rural settlements; a low level of social cultural and consumer services; high unemployment and seasonality of agricultural and logging production” [16].

Thus, one of the major research areas for Russian and foreign scientists is the study of demographic, economic and infrastructural issues of northern rural territories in the context of achieving their sustainable development [17; 18]. A large number of scientific papers are devoted to the polarization of rural space, the interaction between rural and urbanized territories of the North, the search for some balance in the distribution of economic resources between them [19–22]. Scientists pay special attention to the issues of state regulation of development of the northern village and its economy, improvement of methodological approaches and mechanisms of their development taking into account northern climatic conditions [2; 23].

At the same time, the ongoing compression and polarization of the explored space<sup>3</sup> against the background of a gradual transition to a neo-endogenous model have altered modern research discourse on rural development in the northern regions. Now the discussions on the subject proceed from the need to raise living standards, improve the quality of life and develop human capital in peripheral communities, rather than preserve rural settlements of the North as such or support

<sup>3</sup> As noted in [24], when space is polarized, then “somewhere there is growth, and somewhere there is a decrease”, i.e. two poles are formed that are different in some way; in turn, when space is compressed, “the loser pole melts, because everything is gravitating somewhere toward the center”. That is, in general, compression and polarization are two different phenomena. At the same time, the works [24–26 et al.] present the facts that spatial compression and polarization have been among major trends in the development of Russia and its regions for 30 years. Despite the fact that the attitude toward these processes among the population, experts, and authorities is different, they are a reality that must be taken into account when developing and implementing the policy of socio-economic and spatial development of Russia.

northern fisheries and other economic activities<sup>4</sup>. Despite the fact that the scientific problem itself has not changed in its essence (the question of how to develop northern rural territories remains relevant), the conditions in which it is addressed have undergone radical transformations.

#### Major research findings

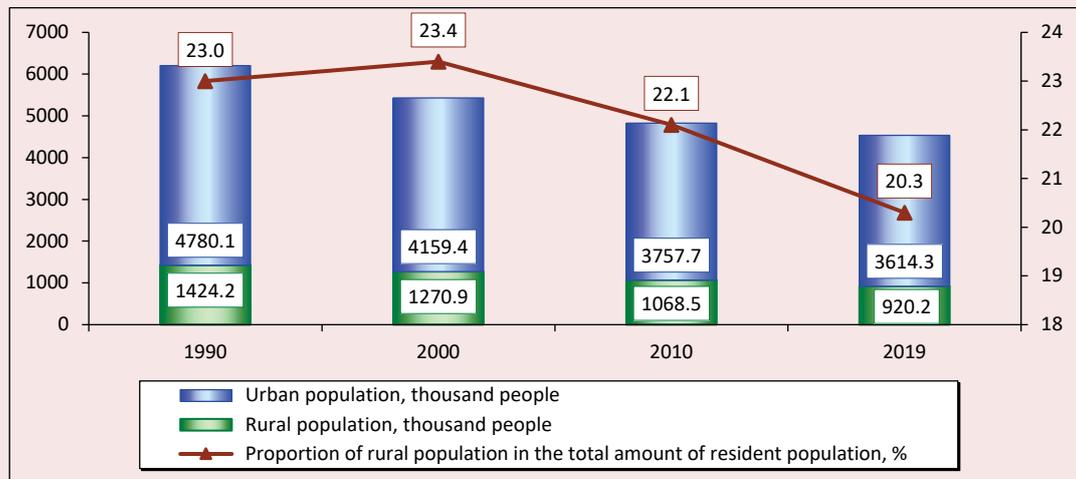
The market reforms of the 1990s had a significant impact on the transformation of the production and settlement frameworks of Russia and on the distribution of economic activity between territories. While large cities and agglomerations have strengthened their positions as centers of production, knowledge, and transport hubs, destructive processes and problems have intensified in the development of the rest of the territory; the problems include population decline, technological backwardness of industrial enterprises and a high level of depreciation of their fixed assets, destruction of social, transport infrastructure, etc. In the absence of any counterweights, such polarization of space entailed its locational compression and fragmentation. This is extremely acute today in the northern territories of Russia, where the pace of depopulation and economic desertification of rural periphery has acquired an unprecedented scale.

Using the example of the European North of Russia (ENR)<sup>5</sup>, a geostrategic region within the Russian Federation, we can clearly see the implications of uncontrolled rural compression.

<sup>4</sup> At the same time, in the southern, central, and chernozem regions, the development of rural territories is still largely determined by agriculture due to more favorable natural and climatic conditions for its functioning.

<sup>5</sup> The ENR includes the Vologda, Murmansk and Arkhangelsk oblasts, the Republics of Karelia and Komi, and Nenets Autonomous Okrug. The strategic importance of the ENR for Russia is due to the fact that, according to the Strategy for spatial development of the Russian Federation until 2025, it is a geostrategic territory (a significant part of it belongs to the Arctic zone of the Russian Federation); a buffer zone through which cooperation with European countries is carried out; here, the Northern Sea Route – one of the main international sea arteries – originates [27]. In addition, the subjects of the ENR have significant natural resource and production potential.

Figure 2. Population dynamics in the European North of Russia



Compiled with the use of EMISS data.

First, we should note deterioration of the demographic situation, accompanied by poverty and unemployment, low living standards and quality of life of the villagers, which led to the simplification of the settlement network and enlargement of its nodes.

Thus, in 1990–2019, there was a significant polarization of the settlement system in the ENR: against the background of general depopulation, the share and number of rural population decreased by 35.4% or 504.0 thousand people, accordingly (Fig. 2) due to the natural decline and migration outflow to Russia's large cities and megacities, administrative centers of constituent entities of the ENR, the Central, Northwestern and Volga federal districts [28]. In addition, the decline in the share of rural population is partly explained by changes in the administrative-territorial structure of the entities (changes in the status of settlements, etc.).

At the same time, the downward trends in the proportion and number of rural population are typical of all constituent entities of the ENR, with the exception of the Republic of Karelia, where in 1990–2019, according to Rosstat, the share of rural

population increased by 0.9 p.p. (due to higher rates of urban population decline).

Depopulation caused a change in the settlement framework. Despite the fact that according to the All-Russian Population Censuses for 2002–2010, the number of rural settlements in the regions was decreasing slightly, the share of actually “dying” villages (depopulated and with a population of less than 10 people) by 2010 varied within 18.6–66.9% (with the exception of Nenets Autonomous Okrug, in which among 41 settlements there was one settlement without any residents and two with a population of up to 10 people; Tab. 2). In fact, the settlement network in the North has significantly shrunk.

Further, the negative trends have continued. For instance, in the Vologda Oblast by 2020, the number of rural settlements decreased from 8,006 to 7,851 due to the fact that depopulated settlements had been removed from the register.

Meanwhile, at the level of constituent entities, the depopulation of rural space manifested itself with varying degrees of intensity, depending on the periphery of rural areas and the potential of nearby cities. Thus, in the Vologda Oblast, the largest

Table 2. Dynamics of the number of depopulated rural settlements and their share in the total number of rural settlements in the European North of Russia

Territory	Number of rural settlements, units			Number of rural settlements, depopulated and with a population of less than 10 people, units			Proportion of rural settlements, depopulated and with a population of less than 10 people in their total number, %		
	2002	2010	2010 to 2002 (+/-)	2002	2010	2010 to 2002 (+/-)	2002	2010	2010 to 2002 (+/-)
Vologda Oblast	8041	8006	-35	4671	5359	+688	58.1	66.9	+8.8
Arkhangelsk Oblast	3914	3970	56	1877	2277	+400	47.4	57.4	+10
Republic of Karelia	775	776	1	268	312	+44	34.6	40.2	+5.6
Republic of Komi	729	720	-9	103	134	+31	14.1	18.6	+4.5
Murmansk Oblast	135	112	-23	41	34	-7	30.4	30.4	0
Nenets Autonomous Okrug	43	41	-2	3	3	0	6.98	7.3	+0.32

Ranked in descending order of the number of rural settlements in 2010.  
Compiled according to the data of the All-Russian population censuses for 2002 and 2010.

share of settlements without any population (in 2010 – from 26 to 50% of the total number of rural settlements; *Fig. 3*) is typical of rural areas of the near periphery: Vologodsky, Ust-Kubinsky, Gryazovetsky, Velikoustyugsky and other districts<sup>6</sup>. In our opinion, this is due to the impact of a strong centripetal vector of migration due to the proximity of large cities (Vologda, Cherepovets) and agglomerations.

It is worth noting that in the inter-census period of 1989–2010, the share of the population living in small rural settlements of the Oblast<sup>7</sup> decreased from 37.7 to 32.2% (by 5.5 p.p.), in medium-sized ones – from 35.2 to 33.7% (by 1.5 p.p.). In turn, the share of the population living in large settlements increased from 9.7 to 17.0% (by 7.p.p.). Such a change in settlement patterns, when due to small and medium-sized settlements there is an increase

<sup>6</sup> According to the typology of rural areas of the Vologda Oblast, presented in [29].

<sup>7</sup> Classification of rural settlements: major – with a population of more than 3 thousand people, large – 1–3 thousand people, medium-sized – 200 people –1 thousand people, small – less than 200 people, in accordance with the Body of Rules 42.13330.2016 Urban Planning. Planning and development of urban and rural settlements. Updated version of SNIIP 2.07.01-89 (approved by the Order of the Ministry of Construction, Housing and Utilities of the Russian Federation no. 1034/pr, dated December 30, 2016).

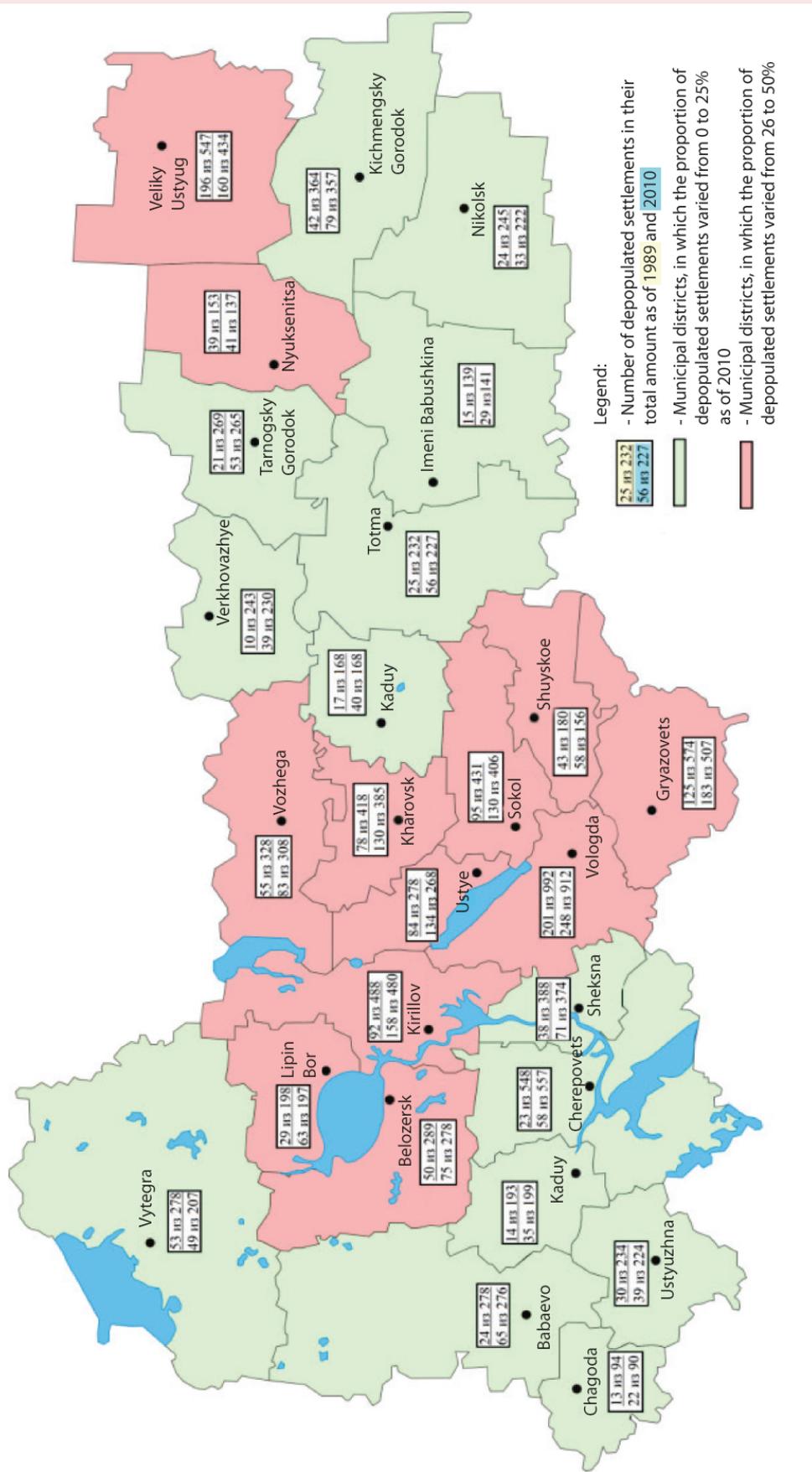
in the number of large settlements and depopulated settlements, is typical of Russia, and it will be preserved in the medium term<sup>8</sup>.

In general, the reasons for this transformation of the settlement framework are multifaceted, but they all stem from the lack of conditions and incentives for living and working in rural areas, especially in small villages.

Keeping residents from leaving the village was a difficult task back in the Soviet period; this task was addressed mainly by administrative methods. Doctor of Sciences (Sociology) V.I. Ilyin points out that “the introduction of the passport system and permissive registration in 1932 meant strict control of migration from the regions, especially for rural residents who had to request permission to obtain a passport from the administration of collective farms and state farms that were experiencing a permanent shortage of workers” [20]. Since 1974, when passports began to be issued to collective farmers freely, the pace of urbanization and, accordingly, desertification of the village has increased significantly. In turn, the collapse of the USSR

<sup>8</sup> *On the State of Rural Areas in the Russian Federation in 2017: Annual Report According to the Monitoring Results*. Moscow: FGBNU “Rosinformagrotekh”, 2019. 332 p.

Figure 3. Proportion of depopulated rural settlements in municipal districts of the Vologda Oblast



and the market reforms of the 1990s contributed to the further strengthening of the position of cities as centers of political, social, and educational life, the formation of wider opportunities in cities for choosing work, self-education, leisure, etc. The often irrevocable migration of young people to cities caused an increase in the proportion of people of retirement and pre-retirement age among permanent residents of the northern village, this fact contributed to a decrease in total rural labor potential. Thus, as of January 1, 2020, there were 41.7% of rural women and 21.0% of rural men older than working age in the Vologda Oblast; for comparison, as of January 1, 2001, their proportions were 33.9 and 16.4%, respectively.

In general, the concentration of economic activity and conditions and resources for development in the city has contributed to the fact that a socio-economic and infrastructural gap between the city and the countryside has acquired new dimensions. However, in the regions within the ENR, the situation turned out to be much worse than the national average, and the

differences along the “village–city” line became particularly acute.

For example, if on average in Russia in 2019, 63,7% of the housing in the village was not equipped with all kinds of amenities, then this indicator in Karelia was 95.3%, in Komi – 94,1%, in the Vologda and Arkhangelsk oblasts – 86,3 and 93.4%, respectively (the only two exceptions were the Murmansk Oblast and Nenets Autonomous Okrug, where the number of rural settlements is much less than in other regions within the ENR; *Tab. 3*).

At the same time, in the post-reform period, among other things due to the optimization of education systems, healthcare, etc., the construction of socio-cultural facilities in rural areas virtually halted, and the facilities erected during the Soviet period were not repaired and were gradually closed. For example, the number of public libraries in the Vologda Oblast in 2005–2019 decreased by 34% (from 666 to 441 units), cultural and leisure type institutions – by 42% (from 741 to 433 units), and places in them – by 51% (from 106,227 to 52,075 units).

Table 3. Proportion of the area of the housing equipped with all types of amenities, in a total area of housing stock, %

Territory	Type of settlement	2015	2016	2017	2018	2019	2019 to 2015 (+/-), p.p.
Russian Federation	City and UTS	78.4	78.7	79.1	79.1	80.1	+1.7
	Village	30.8	31.5	32.6	34.2	36.3	+5.5
Republic of Karelia	City and UTS	67.1	66.6	66	67	67	-0.1
	Village	4.1	4.2	4.7	4.7	4.7	+0.6
Republic of Komi	City and UTS	70.5	71.3	71.6	72.2	76.5	+6
	Village	6.1	6.3	6.1	5.9	5.9	-0.2
Nenets Autonomous Okrug	City and UTS	69	69.3	68.9	76.8	76.6	+7.6
	Village	3	2.9	3.7	3.7	4	+1
Arkhangelsk Oblast	City and UTS	74.8	74.6	74.7	75.5	75.1	+0.3
	Village	6.6	6.6	6.4	6.6	6.6	0
Vologda Oblast	City and UTS	47.8	47.5	47.7	47.5	78.5	+30.7
	Village	12.8	13.2	13.3	13.4	13.7	+0.9
Murmansk Oblast	City and UTS	90.7	90.7	91.8	91.9	92.4	+1.7
	Village	80.1	82.9	82.1	79.8	78.9	-1.2

Note: UTS stands for “urban-type settlement”.  
Compiled according to Rosstat data.

It is also worth noting that employment problems (for some localities, this actually means a lack of jobs and a high unemployment rate), combined with low wages, rather difficult working conditions in the main sectors of the rural economy – agriculture and forestry – in comparison with work in urban offices make the northern village less attractive for life and work<sup>9</sup>, especially for young people. So, if in 2019 the level of officially registered unemployment among rural population aged 15 and older averaged 6.2% in Russia, then in the regions within the ENR it ranged from 5.1% in the Murmansk Oblast to 11.3% in Nenets Autonomous Okrug (*Tab. 4*). On the other hand, the difference between the city and the village in the level of registered unemployment by 2019 in the regions of the ENR reached 2.26 times (Arkhangelsk Oblast).

But, as the researchers note [31], even employment does not guarantee a comfortable

existence in rural areas, because rural areas are dominated by the so-called economic poverty<sup>10</sup>, which manifests itself to the greatest extent in the agricultural sector. For example, in 2019, the average monthly wage for the type of activity “crop and animal husbandry, hunting and provision of relevant services in these areas” in the Vologda Oblast did not exceed 72% of the average for the Oblast economy, in the Arkhangelsk Oblast – 65%, in the Murmansk Oblast – 63%.

The main causes of unemployment and economic poverty, in our opinion, include destruction of the rural economy and, as a result, lack of jobs in the absence of opportunities for alternative (non-agricultural) employment. Like socio-demographic issues, economic problems of the northern village have significantly aggravated under the influence of space compression and increasing urbanization.

Table 4. Unemployment rate in the population aged 15 and older by type of settlement, %

Territory	Type of settlement	2010	2015	2016	2017	2018	2019	2019 to 2010 (+/-), p.p.
Russian Federation	City	6.4	4.8	4.8	4.3	4.0	3.9	-2.5
	Village	10.8	7.9	8.0	8.0	7.3	6.2	-4.6
Republic of Karelia	City	8.2	8.7	8.7	8.3	7.9	6.7	-1.5
	Village	14.8	9.3	11.4	10.1	12.6	10.8	-4
Republic of Komi	City	9.1	6.3	7.8	7.4	6.3	6.1	-3
	Village	14.6	9.8	12.2	9.7	11.5	9.7	-4.9
Nenets Autonomous Okrug	City	5.6	6.6	7.1	6.8	6.4	6.9	+1.3
	Village	9.0	11.3	12.8	11.8	13.3	11.1	+2.1
Arkhangelsk Oblast	City	-	6.1	5.6	5.1	4.8	5.0	-
	Village	10.7	9.4	13.1	11.2	12.9	11.3	+0.6
Vologda Oblast	City	6.5	6.2	5.7	4.6	3.7	4.2	-2.3
	Village	11.2	8.5	9.0	7.0	8.9	5.2	-6
Murmansk Oblast	City	8.9	7.7	7.6	6.9	6.6	5.5	-3.4
	Village	8.5	9.1	9.5	8.7	9.2	5.1	-3.4

Compiled according to Rosstat data.

<sup>9</sup> According to the sociological survey “Human potential of rural territories”, the results of which are presented in [30], the main reason why rural residents of the Vologda Oblast change their place of residence is precisely the lack of work: 72.1% of residents under the age of 30 and 52.5% of residents aged 30 and older indicated this. The lack of educational institutions, medical care and leisure, and other difficulties were assessed by respondents as less significant.

<sup>10</sup> In general, not only the vulnerable population groups (pensioners, people with disabilities, etc., as in social poverty), but also the economically active population (economic poverty) can end up below the poverty line.

The shift of agricultural production from north to south on a national scale since the 1990s has caused a reduction in acreage and livestock, destruction of agricultural infrastructure, etc. in constituent entities of the ENR [23; 32; 33]. The Arctic traditional economy including reindeer husbandry, fishing, hunting and animal husbandry turned out to be under threat due to an almost complete lack of cooperation regarding the processing of products and the absence of equipped facilities [2]. As a result, this led to a decrease in agricultural production (by more than 40% by 2019; *Tab. 5*), shut down of a number of

once large enterprises, reduction in the number of jobs and even destruction of the rural way of life.

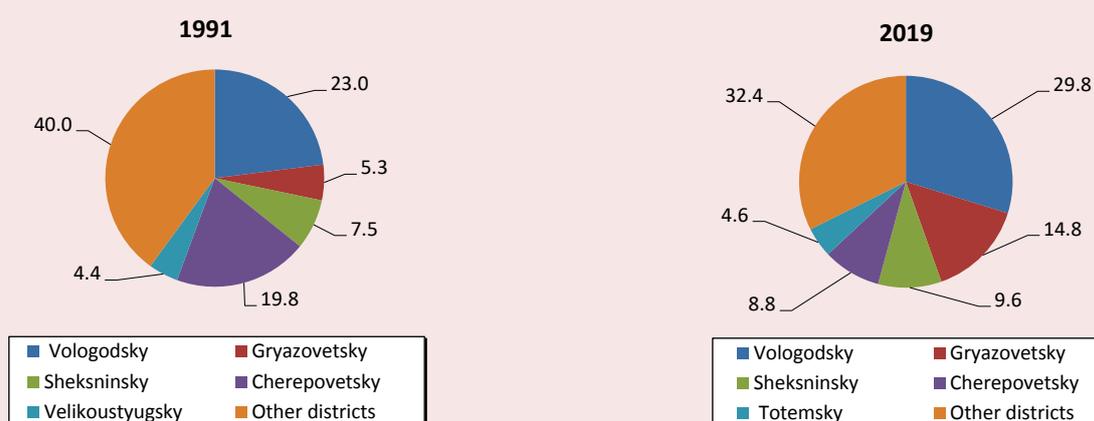
At the same time, spatial compression of agriculture within the regions of the ENR along the “core–periphery” line had a significant impact on the destruction of the rural economy. Using the Vologda Oblast as an example, we can trace that in 1991–2019 the share of municipal districts of the near periphery increased significantly (mainly due to the intensive factor) (the share of Vologodsky District increased by 6.8 p.p., Gryazovetsky – by 9.5 p.p., Sheksninsky – by 2.1 p.p.; *Fig. 4*).

Table 5. Index of the physical volume of agricultural production in constituent entities of the European North in all types of farms, % by 1990

Territory	1990	2000	2010	2019	2019 to 1990 (+/-), p.p.
Republic of Komi	100	65.1	54.6	56.7	-43.3
Vologda Oblast	100	74.7	51.0	52.8	-47.2
Republic of Karelia	100	48.8	38.9	25.2	-74.8
Arkhangelsk Oblast (with Nenets Autonomous Okrug)	100	56.6	32.6	24.5	-75.5
Murmansk Oblast	100	40.1	34.0	11.7	-88.3

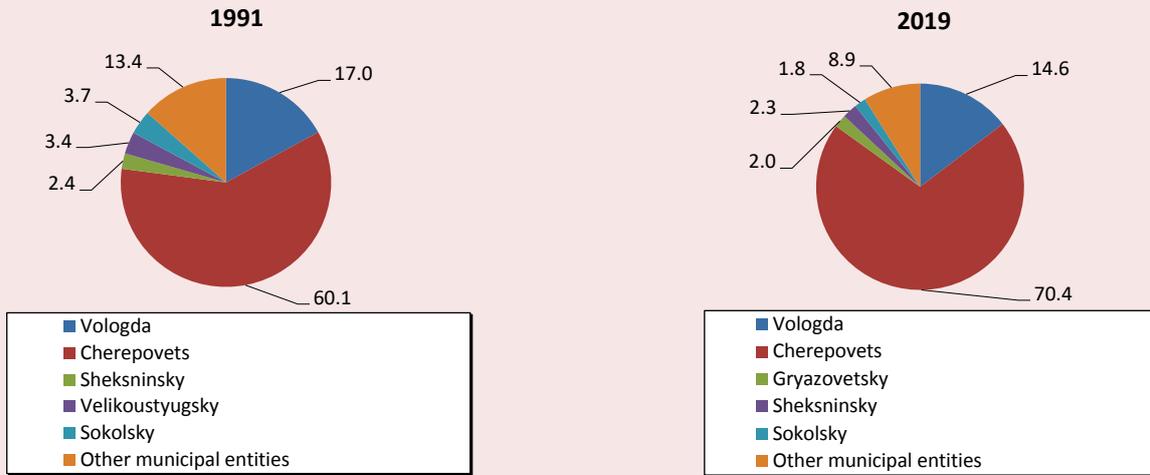
Ranked in descending order of the index of physical output in 2019.  
Compiled according to EMISS data.

Figure 4. Distribution of municipal districts of the Vologda Oblast in the volume of agricultural production, %



Compiled according to the data of the Territorial Office of the Federal State Statistics Service for the Vologda Oblast.

Figure 5. Distribution of Vologda Oblast municipalities in the volume of industrial production, %



Compiled according to the data of the Territorial Office of the Federal State Statistics Service for the Vologda Oblast.

Similar trends can be traced in the field of industrial production. However, here the contraction was accompanied by the withdrawal of the manufacturing industry from rural areas<sup>11</sup>. As a result, the share of all districts of the Oblast in industrial production for 1991–2019 decreased by 7.9 p.p. (from 22.9 to 15%; Fig. 5).

At the same time, the types of activities that are being abandoned in rural periphery areas were not sufficiently replaced by other, alternative ones, as evidenced by the studies [20; 23; 32]. This fact is also confirmed by the data of surveys of heads of municipalities of the Vologda Oblast conducted by VolRC RAS. Thus, according to the results of the 2020 survey, it was revealed that 51% of the heads of rural settlements believe that the level of diversification of the settlement economy is “poor” and “very poor” (Tab. 6; in urban settlements, only 28.6% of the heads indicated a similar level). According to its relevance for

<sup>11</sup> For example, during the Soviet period, the Vologda Optical and Mechanical Plant had six branches in the districts of the Oblast, thereby consolidating the territories and ensuring their involvement in the process of creating a public product; at present they are shut down.

the heads of rural settlements, the problem of insufficient diversification of the economy of territories is comparable to demographic issues.

Thus, by now, the northern rural periphery has become a secondary part of economic space, and its demographic, social, economic and infrastructural issues are significantly aggravated under the influence of space compression. In the sparsely populated rural areas of the North, the so-called social funnel has already formed: the decline in population is due to the destruction of the socio-economic potential of the territories (shut down of agricultural and industrial production, extremely low level of infrastructure facilities, etc.). This is a key factor in the further depopulation and economic desertification of the village, i.e. the compression of the previously developed part of the space.

However, we cannot say that state and regional authorities pay no attention to rural issues. Since the 2000s, specialized programs for socio-economic development of rural areas have been implemented in Russia, the Concept for sustainable development of rural territories of the Russian Federation for the period up to 2020 and the Strategy for sustainable development of the Russian Federation for the

Table 6. Assessment of the state of rural settlements by the end of 2019, % of respondents

Assessment parameter	Condition	
	good	poor and very poor
Demographic situation	5.3	68.4
Diversification of the economy	2.0	51.0
Employment	6.9	50.0
Economic development	3.7	46.3
Development of road transport infrastructure	0.0	44.6
Provision of the population with transport services	7.0	40.4
Provision of the population with communication services (Internet, cellular communication)	14.0	35.1
Accessibility and quality of healthcare services	12.1	25.9
Financial welfare of the population	5.3	22.8
Housing and utilities services	8.6	22.4
Provision of the population with housing	10.3	17.2
Ensuring public safety	14.3	10.7
Ecology	53.6	7.1
Accessibility and quality of education services	45.6	5.3
Recreation and culture	29.8	1.8
Note: 120–210 heads from 208–372 municipal entities of the region participate in surveys annually, which provides a sampling error of 4–5%.		
Compiled according to the results of the survey of heads of municipalities of the Vologda Oblast, 2020.		

period up to 2030 have been adopted. In addition, such “non-core” state programs for the village as “Development of physical culture and sports” and “Development of healthcare”, national projects “Culture”, “Education”, “Digital Economy”, etc. are aimed at addressing rural development issues.

Meanwhile, since 2019, the state program “Integrated development of rural territories” has become the main instrument of state regulation of rural development; due to its fullness, the program can be considered a practical step toward combining a sectoral and territorial approach to rural development in Russia and introducing an endogenous development model. The program is directly focused on creating conditions for comfortable living and the development of human resources in rural areas (but, unfortunately, employment promotion is provided only in agriculture).

At the level of RF constituent entities, the program-target management method is also actively used – rural development issues are

considered in regional programs for development of rural territories and agriculture, education and health systems, municipal infrastructure and road networks, and other programs. In addition, regional authorities are actively using other opportunities for development of rural areas:

1) the use of a project-based approach (it is possible to attract finances from grants issued by state and non-state funds, federal and regional authorities, as well as financial resources from business and the population for the implementation of socially significant rural projects; for example, within the framework of the state program “Integrated development of rural areas”);

2) participation in state programs and national projects of the Russian Federation and its constituent entities (subsidies for co-financing regional programs, for example, “Zemsky teacher” and “Zemsky doctor”, aimed at helping citizens find employment in rural areas; “People’s budget”, aimed at addressing socially significant issues, etc.);

3) holding town-planning councils, where initiatives of rural residents and local government bodies on rural improvement are discussed and supported (such a format of town councils has been introduced in the Vologda Oblast).

Addressing the issues of local importance in Russia is entrusted to local government bodies. But “this institution of power is not able to find solutions to the majority of rural problems” [23]. The main reason is the low endowment of municipalities with their own revenues. For example, all rural settlements of the Vologda Oblast are subsidized.

Despite a large number of tools for rural development, it is not yet possible to reverse the situation in the northern rural territories; attempts to bring the northern village out of the protracted crisis do not lead to the desired effect. In our opinion, the insufficient effectiveness of the state policy on rural development in Russia is due to the following reasons:

1. Flaws in the system of state management of territories development: it focused on the development of urbanized zones, concentration of productive forces in the capital, large cities and

agglomerations, and the absence of strategic positioning of the northern village in the national and regional space. We can prove this, for example, if we look into the Strategy for spatial development of the Russian Federation for the period up to 2025 approved by the Resolution of the Government of the Russian Federation no. 207-r, dated February 13, 2019. Thus, the ideas and political attitudes regarding rural development in the Strategy were actually ignored [2].

2. Incomparable size of state support for rural development in the regions.

For example, in 2020, the difference between the volume of subsidies for the integrated development of rural areas in regions reached 392 times between the Republic of Sakha (Yakutia) and Khanty-Mansi Autonomous Okrug (the difference per rural resident was 148 times; *Tab. 7*). At the same time, it should be noted that southern and central constituent entities of the Russian Federation as a whole made more efforts in preparing applications for participation in grants and activities under the program “Integrated development of rural areas” than northern entities<sup>12</sup>.

Table 7. Distribution of subsidies to promote integrated rural development in 2020 in the context of RF regions

Territory	Provision of funds (according to the concluded agreements)					
	Total		including at the expense of funds from			
	mil. rubles	rubles per rural resident	federal budget		Budgets of RF constituent entities	
			%	mil. rubles	%	mil. rubles
Russian Federation	28 872.3	779.2	78.6	22 688.2	21.4	6 184.1
Republic of Sakha (Yakutia)	1 488.2	4508.4	92.3	1 373.6	7.7	114.6
Republic of Bashkortostan	1 610.1	1066.6	69.2	1 114.9	30.8	495.2
...	...	...	...	...	...	...
Amur Oblast	15.9	62.8	85.0	13.5	15.0	2.4
Sakhalin Oblast	7.7	89.8	43.0	3.3	57.0	4.4
Khanty-Mansi Autonomous Okrug	3.8	30.4	30.0	1.1	70.0	2.7

Ranked in descending order of the amounts of federal budget funds provided for 2020 within the framework of the state program “Integrated development of rural territories”.

Source: Ministry of Agriculture of the Russian Federation. Available at: <https://mcx.gov.ru/activity/state-support/funding/>

<sup>12</sup> According to the data posted on the website of the Ministry of Agriculture of the Russian Federation. Available at: <https://mcx.gov.ru/activity/state-support/urgent/>

3. Long-term preservation of an exogenous-and-sectoral approach in the implementation of rural policy in Russia [15; 34], as evidenced by the fact that according to official documents a key function of the village is production of food and raw materials for the development of the urban economy. This approach, in our opinion, initially puts northern rural territories in a vulnerable position in comparison with the territories of Chernozem region.

4. Low efficiency of the institute of local self-government, through which a subsidiary approach to management is implemented in Russia. The main reasons include the lack of financial support from the state with a shortage of own funds, lack of a wide range of administrative resources, dependence on regional authorities, and the lack of qualified personnel. At the same time, the forms of “direct implementation of local self-government by the population and its participation in the implementation of local self-government”<sup>13</sup> in Russia have not become widespread, because they do not provide an opportunity to significantly influence the implemented policy aimed at rural development.

5. Insufficient development of cooperative and partnership relations both in rural areas and in the country as a whole; this fact contributes to the preservation of mutual barriers both at the national level and at the level of individual firms, hinders the expansion and strengthening of production and technological ties between the village and the city, etc. Despite the fact that Russia has a quite extensive network of production and consumer cooperatives, about 30% of them do not actually carry out their activities (in regions this value can reach 75% [35]). The main problems of cooperation development

in Russia include those related to the sale of cooperative products, flaws in the legal framework, lack of qualified personnel, under-capitalization of the cooperative base, weak desire for cooperation on the part of agricultural workers<sup>14</sup>, etc.

Thus, despite the availability of a large number of tools and potential opportunities for the development of rural areas in Russia, the condition of the northern village remains extremely vulnerable. Rural territories of the North, characterized by relatively unfavorable natural and climatic conditions and acute socio-economic issues, need special support from the state. According to one of the fundamental theoretical postulates of economics, the state of the economy and the social sphere reflects the quality of public administration [36].

### Conclusion

Summing up the results of the study, we can conclude that rural areas of the North of Russia have many demographic, socio-economic and infrastructural problems. The northern village is perceived by most of society as a hopeless territory that is “cut off” from the rest of the country, and the potential of which is irretrievably lost. The reasons for the current situation are seen not only in the shock transition to a market economy in the 1990s and the strengthening of urbanization trends and spatial compression, but also in the insufficient effectiveness of governmental policy on rural development in the post-reform period.

In general, we see the prospects for development of Russia’s rural areas in the transition to a model of endogenous development with elements of neo-endogenous development, based on the effective use of internal drivers of development, competitive

<sup>13</sup> According to Federal Law 131-FZ, dated October 6, 2003 (as amended on July 1, 2021) “On the general principles of the organization of local self-government in the Russian Federation”.

<sup>14</sup> *Monitoring of the Implementation of the State Program (2008–2009)*. Moscow: Kolos, 2010. 424 p.; Yanbykh R.G. *Modern problems and prospects for the development of agricultural consumer cooperatives in Russia*. Available at: [http://www.viapi.ru/publications/full/detail.php?IBLOCK\\_ID=45&SECTION\\_ID=1483&ELEMENT\\_ID=30737](http://www.viapi.ru/publications/full/detail.php?IBLOCK_ID=45&SECTION_ID=1483&ELEMENT_ID=30737)

advantages and mutually beneficial cooperation with urbanized territories. At the same time, in the context of the transition, additional focus on comprehensive development of the northern village and its integration into the national space should be formalized in strategic documents on Russia's territorial and spatial development, taking into account the interests of rural residents and the entire Russian society.

However, Russia's rural areas are heterogeneous and each has its own specifics; thus, it makes no sense to single out uniform ways to address rural issues in northern and southern regions, to talk about the general mechanisms of their development. In modern conditions, governmental policy in the field of rural development in the North of Russia, in our opinion, should have the following priorities:

1. Development of the rural economy in order to create conditions for increasing human potential of the village and raising the employment rate and income of rural residents.

Undoubtedly, a huge potential for economic development in the northern periphery of Russia can be found in the intensification and modernization of agriculture, forestry and fisheries, which is due to the available reserves of natural resources. Abandonment of these types of activities is impossible for the northern village and, in principle, groundless, just like in Russia's Chernozem region.

Meanwhile, economic development potential is directly related to economic diversification, which is not limited to rural, ecological and extreme tourism and folk crafts. However, one should understand that the development of new types of activities and the removal of industrial, social and other structures from cities will primarily be determined by the level of development of rural infrastructure and the preferences and advantages provided to business in the form of lower wages and rents, subsidies and tax benefits, etc.

2. Modernization of engineering and social infrastructure as a crucial factor in providing comfortable conditions for living, working, and doing business in rural areas. T.G. Nefedova points out that "the development of infrastructure must necessarily accompany and may even precede the development of the economy"<sup>15</sup>.

Despite the significant importance of social infrastructure, it is the infrastructure of transport, information and communication that connects the space of villages and cities into a single whole, creates an opportunity for the movement of goods, people, and economic resources. If this infrastructure is absent or its condition is unsatisfactory, the countryside becomes isolated from the rest of the space.

In our opinion, if just these two priorities are implemented, this can lead to the establishment of conditions for development of rural areas and even reduce the pace of space compression; thus, the two major issues of the northern village – disintegration of the economy and infrastructure – will be resolved.

3. Comprehensive development of human capital in rural areas as the main goal of all economic and social transformations.

In the near future, it will be futile to expect that the trend of migration outflow will be replaced by an influx of population to the northern village. A further reduction in the number of rural settlements is also inevitable. But, despite this, the remaining population still needs affordable medical care and guaranteed social services, favorable conditions for improving the level of culture, leisure activities, opportunities for implementation of labor potential, development of civil society, and provision with safe living conditions in general.

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<sup>15</sup> A rural Russia: Spatial shrinkage and social polarization. *Polit.ru*. Available at: <https://polit.ru/article/2010/08/05/countryside/> (accessed: July 15, 2021).

In part, these tasks can be implemented through the use of the potential of small towns and medium-sized cities, which are the nearest centers for providing state and municipal services to people, and social services to rural areas.

Thus, we see the future for the northern village in overcoming existing social, economic, and infrastructural isolation.

The significance of the study lies in the fact that it identifies the problems of rural development in

the context of compression of the northern region along the “village–city” line and substantiates priority directions for rural periphery development. The results obtained can be used by researchers in conducting studies on similar topics, by federal and regional authorities, local government bodies in developing strategic documents for spatial development of territories and improving the mechanisms of socio-economic development of rural periphery in the North.

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