On Demographic Processes and Prospects for Development of Rural Areas of the Novgorod Region

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Abstract. In rural areas in the North-West of Russia, including those in the Novgorod region, there is a negative trend of reduction of permanent residents, especially of working age. Using the example of the Novorakhinsky rural settlement of the Krestetsky municipal district, a study was carried out of the dynamics of the number of residential buildings and their residents, including school-age children, over the past 123 years. A sharp decrease in these indicators was found in almost all rural settlements, some of them were depopulated and eliminated, which is confirmed by statistical data. A significant decrease in the population in villages led to the closure of kindergartens, schools, institutions of health care, trade and culture. The authors attempted to identify some of the reasons for these demographic changes. Rural population was alienated from forest resources, problems arose with the provision of firewood. At the legislative level it is proposed to allocate local forests near rural settlements to villagers and preferentially provide them with timber and other forest products. It is necessary to use the historical experience of the 19th-20th centuries and developments of modern scientists. To interest the local bodies of self-government, it is necessary to include into the assessment of their work and remuneration the following indicators: the dynamics of the number of permanent rural residents, construction and repair of residential housing, improvement of the territories of rural settlements, including high-quality water supply, heating, marketing of agricultural and forest products, and other vitally important conditions.

1. Introduction
It is known that in Russia the demographic situation in the countryside, including that in the Novgorod region, tends to steadily decrease in terms of the number of population, especially of young and adult people of working age.

Using the example of a part of the Novorakhinsky rural settlement of the Krestetsky municipal district, we made an attempt to trace the dynamics of the number of residential buildings, permanent residents of rural settlements, including children of school age, from the end of the 19th century to the present (table 1). The number of houses decreased almost by 2 times, the number of permanent residents – by 5 times. In 1896, the average number of residents for one house was 5 persons, in 2019 – 2 persons. The number of children attending school decreased by 5.7 times [1]. On the whole, in the Krestetsky municipal district the rural population decreased by 34 % from 2000 to 2019, in the Novgorod region – by 22 % during the same period.
Table 1. Indicators of demographic changes in the Novorakhinsky rural settlement from 1896 (numerator) to 2019 (denominator).

| № | Name of rural settlement (village) | Number of residential houses | Number of residents | Number of schoolchildren |
|---|-----------------------------------|------------------------------|---------------------|--------------------------|
| 1 | Somenka                           | 74 / 95                      | 361 / 195           | 25 / 15                  |
| 2 | Zarechye                          | – / 14                       | – / 23              | – / –                    |
| 3 | Kashino                           | – / 5                        | – / 10              | – / –                    |
| 4 | Rakushino                         | 38 / 12                      | 185 / 25            | 12 / 3                   |
| 5 | Zeleny Bor                        | 33 / 4                       | 211 / 6             | 17 / –                   |
| 6 | Kamenka                           | 16 / 3                       | 98 / 8              | 8 / 2                    |
| 7 | Kukuevo                           | 17 / 5                       | 85 / 8              | 6 / –                    |
| 8 | Ozerki                            | 21 / 3                       | 115 / 6             | 8 / –                    |
| 9 | Rogvino                           | 36 / 3                       | 204 / 6             | 22 / –                   |
| 10| Zavysochye                        | 14 / 2                       | 80 / 2              | 5 / –                    |
| 11| Krutoy Bereg                      | 9 / –                        | 51 / –              | 4 / –                    |
| 12| Krivyukhab                        | 10 / –                       | 40 / –              | 3 / –                    |
| 13| Dubrovye Vorota (Makarovo)        | 5 / –                        | 11 / –              | 1 / –                    |
| 14| Dubrovye (Andryushkino)           | 7 / –                        | 18 / –              | 4 / –                    |
|   | Total                             | 280 / 146                    | 1459 / 289          | 115 / 20                 |

During the years of Soviet power, the policy of unification of farms and the consolidation of other rural settlements was carried out. This resulted in the fact that residents of farms and small villages were forced to settle in larger collective farm economies, however, the number of population in these farm economies decreased. At the same time, a number of villages with 40–50 residents ceased their existence (Krutoy Bereg, Krivyukhab, Dubrovye Vorota (Andryushkino, Makarovo). In the majority of others only 2–8 inhabitants remained, all other people moved to district centers and towns.

At the end of the 19th century, there was a Rakushino parish school, and it was planned to create three more schools: Shutilovskaya of the second type, Kstechskaya of the second type and Somenskaya of the third type, which would teach all boys and 50% of girls. In the first half of the 20th century there were elementary schools in many villages, while there were 7–9 year schools in the villages of Rakushino and Somenka. At present, all these schools ceased to exist, and all children of school age are daily transported by school bus to the secondary school in the village of Novoe Rakhino. In the first half of the 20th century, near the former central estate of the Ozerki state farm (the village of Somenka), two villages were built again (Zarechye and Kashino), but the number of residents in them is also constantly decreasing. In 2017, a large livestock center (a dairy farm for 400 heads) was built on the site of the former village of Dubrovye Vorota near the village of Rakushino, and the previously existing small farms in many villages were liquidated. Several years earlier, between the villages of Rakushino and Kashino a Yasnye Zori modern poultry factory of the Belgrankorm-Veliky Novgorod agricultural holding was built. At these manufactures, the lack of local working force is compensated by workers transported from the district and regional centers.

The negative social and economic development of rural areas manifested in the demographic situation deterioration has been noted in the Sustainable Development of Rural Areas in 2014–2017 and for the period up to 2020 Federal Target Program. Thus, in Russia, from 1989 to 2010, the number of rural settlements and villages decreased by 9200. The number of depopulated rural settlements increased from 9400 to 19400. In 2010, settlements with 10 and less residents amounted to 23,7%. Reduction and fragmentation of the rural settlement structure leads to depopulation and desolation of rural areas, the loss of productive agricultural lands, which threatens both food and geopolitical security of Russia.
2. Discussion

According to the Program, main reasons of such an unfavorable demographic situation in the countryside are the lack of financing for social and engineering infrastructure, as well as an ultimately low level of living comfort in the rural area. However, from our point of view, the reason and effect relationships are violated in this case, which leads to the setting of false goals. After all, the ongoing optimization of rural infrastructure, leading to the enlargement (reduction) of institutions of medicine, education, culture, public transport, trade, etc., is quite logically justified by their low economic efficiency due to population decline, and the main reason for this decline is considered deterioration of infrastructure. The result is movement in a vicious circle with a steady deterioration of the demographic situation in the countryside. The lack of financing for the development of rural infrastructure noted in the Program also does not allow us to see the main problem, which is relevant not only for the village, but for the whole country. To increase funding, it is necessary to fill budgets, including the very meager municipal ones. And for this it is necessary to create conditions for the development of the real sector of the economy. The production of goods and service will increase the revenue side of budgets of all levels and create new jobs, thus providing employment and income for the population. This will help break the vicious circle and eliminate the main reason for the unfavorable demographic situation in the countryside – the lack of stable and decently paid job. To solve this problem, urgent measures must be taken, since in some cases the outflow of the able-bodied population from the countryside has led to the fact that demography is becoming the main limiting factor in the development of agriculture. The lack of qualified personnel at all levels in the countryside is becoming more acute, and this problem will only aggravate, given the trend of demographic processes. The lack of qualified personnel at all levels in the countryside is becoming more acute, and this problem will only aggravate, given the trend of demographic processes.

Agrarian production is like a locomotive of the real sector of the economy in the countryside which can be launched, provided that certain conditions (available loans, tax holidays, simpler access to natural resources) are created and the state financial support (grants, subsidies) is given to agricultural enterprises. Established and stable operating enterprises in the course of their production activities will themselves actively participate in the development and support of rural infrastructure (water supply, electricity, gas supply, road network, etc.). Moreover, this will be done more efficiently and rationally, taking into account local, real and most pressing needs than within the framework of cumbersome federal programs. For example, within the framework of the large infrastructure Universal Communication Services Project, implemented by the state since 2006, and aimed at eliminating the digital divide, a payphone has been installed in every rural settlement. However, already in 2013, the Minister of Digital Development, Communications and Mass Media of the Russian Federation Nikolay Nikiforov said that the service is too expensive and not worth the money spent: “Each caller, each using the machine, costs 35,000 rubles to the budget. It's easier to give him an iPhone with this money”. In the conditions of a sufficiently developed and affordable mobile telephone connection, about 130 billion rubles of budgetary funds have already been spent on this program, that is, approximately as much as the state spent annually on such an energy-intensive and risky industry as agriculture. Therefore, some authors recommend that the priority goals of federal target programs should be chosen not by officials, but by rural administrations with the participation of the population [2].

A significant factor holding back the development of Russia, and especially the development of rural areas, is the imbalance in interbudgetary relations. In the context of a constant redistribution of powers between different levels of government to equalize budgetary provision, the modern budgetary system of Russia provides for the use of different types of interbudgetary transfers – grants, subsidies, subventions and other transfers [3]. Some authors consider it advisable to continue using such a system of budgetary federalism [4].

In most developed countries, such intergovernmental transfers are used only in experiments aimed at determining the level that ensures the most effective implementation of powers. In Russia, such a system of interbudgetary relations has become the basis of manual state administration, which is devoid of clear rules. In such conditions, long-term forecasting of processes and planning of actions become
impossible, which negatively affects the sustainable development of any system. In our opinion, the
development of rural areas, which is built mainly through federal targeted programs and interbudgetary
transfers, is very ineffective for two reasons. First, these tools are very cumbersome and often not
flexible enough both in content and in organizational and financial mechanisms. [5]. Second, this
approach minimizes the involvement and motivation of the local population. In addition, in the
conditions of pronounced budgetary centralization, the regional and municipal leadership develops
dependency.

To overcome the interbudgetary imbalances that have developed in Russia, it is necessary to
redistribute part of tax revenues from the federal to the regional and municipal levels. In our opinion,
the basis for regional development, including rural areas, can be the German model of financial
equalization, which is an integral part of German federalism. The essence of this model lies in the
"automatic" regulation of the distribution of taxes between the budgets of different levels, as well as
between the budgets of the subjects. At the same time, Germany is the world leader in terms of the share
of regional budget expenditures in the consolidated budget of federations – more than 60% (in Russia
about 40%) [6]. Many authors rightly believe that the reflection of the activities of federal target
programs at the regional level does not provide the complexity of the social and engineering arrangement
of rural settlements, which is necessary for a qualitative change in living conditions in the countryside
and overcoming its lag behind the city in terms of the level and quality of life. In addition, the clarity in
terms of criteria for sustainable development of rural areas, and the life quality in the countryside is
needed. For example, the indicator of “annual growth of actual incomes of rural population engaged in
a given municipality or rural settlement” as a percentage in comparison with the previous year or by a
certain percentage is higher than in town [2]. While monitoring the development of rural districts,
foreign researchers identify the following key social and economic indicators: rural migration processes;
the level of education or qualification of employees in the field of agriculture; agricultural profitability;
agricultural structure according the branches; sizes of agricultural organizations; diversification
directions of agricultural production; quality of agricultural products; geographical location of agro-
industrial production in rural areas [7, 8, 9, 10, 11, 12, 13, 14, 15].

Russia joined the WTO on the condition that direct financial state support of Russian villagers within
the framework of the "yellow" basket will be reduced. Federal Law no. 385-FZ of December 8, 2020
On the Federal Budget for 2021 and for the Planning Period of 2022 and 2023 provides for a significant
reduction in government spending to support agriculture and rural development. In 2021, federal budget
expenditures on agriculture as a whole (through the Ministry of Agriculture) will decrease by 8.3%
compared to this year's level, and expenditures on the Comprehensive Development of Rural Areas State
Program will decrease by 14%. This will inevitably accelerate the negative demographic processes in
the countryside and lead to the abandonment of additional areas of farmland. According to Greenpeace,
about 76 million hectares of agricultural land have been abandoned in Russia over the past 35 years. But
this land can contribute much to rural development provided that the land is used for forestry, which is
less demanding on climate, soil fertility, and labor force. According to estimates, in the medium term,
this will allow growing up to 300 million cubic meters of wood per year - more than is now being cut
and stolen in all Russian forests, and creating up to one hundred thousand new jobs. Instead, even
naturally grown forests on such lands are senselessly destroyed: in order not to pay fines for non-use of
lands for their intended purpose, owners prefer to burn dry grass along with young trees. This not only
destroys forest resources that are important for rural development, but also leads to catastrophic
landscape fires. The Government Decree of September 21, 2020 no. 1509 gave hope for the development
of private rural forestry in Russia, but the Ministry of Natural Resources and Environment prepared
amendments to it, in fact, meaning a ban on forestry on agricultural land.

World experience shows that in modern conditions, forestry is becoming even more important as one
of the potential driving forces for the future development of rural areas. The experience of the CIS
countries shows that almost any creative activity on abandoned agricultural lands, which can give people
additional jobs and sources of livelihood, is useful in such a situation, but the strengthening of
supervisory, prohibitive and repressive measures that suppress such activities is harmful.
Consumer cooperation stores that previously existed in the countryside, simultaneously with the trade in everyday goods, bought surplus agricultural products from personal subsidiary plots of the local population, as well as non-timber forest products (willow bark, medicinal raw materials, mushrooms, berries), thus, employment and the welfare of the local population, its consolidation in the countryside increased.

This was facilitated by the allocation of the so-called collective and state farm forests for the local population and agricultural organizations. There the inter-farm forestry was run, which was created on a cooperative basis for the primary provision for rural residents and agricultural enterprises with forest resources on preferential terms, not only with standing timber, but with woodworking products (lumber and sets of residential buildings) as well. The elimination of these forests and of specialized rural forest economy with integrated forest management and self-financing negatively affected villagers. The construction of new residential buildings has practically ceased and even the provision of firewood has become unreasonably difficult, despite the intensive overgrowing of former agricultural lands with forest. Modern researchers note: “At present, there is a significant alienation of the rural population from forests” [16]. At the same time, it should be noted that the actual forest area in the Krestetsky district is constantly increasing and amounts to more than 70 % which exceeds the forest area optimal for the Novgorod region by 2 times (35%). In our opinion, to prevent further deterioration of demographic situation in rural areas, it is necessary to take a number of urgent priority measures as effective growth points which help use available forest resources naturally renewed.

At the legislative level, it is necessary to restore the right of rural residents to stable access to the forest use, first of all, to the preferential use of commercial timber near their settlements and to the provision of free wood (gray alder and aspen wood). In the first turn, it is necessary to use the available timber on plots of former agricultural lands covered with forest, no budget spending and capital investment are required for this. For this purpose it is necessary to allocate forests of local importance, which are often currently leased, in a kilometer zone around rural settlements where there are more than 20 inhabitants. Local residents will protect and use forest resources, cutting wood over selectively, according to the set diameter of sale, without delimiting cutting area, at a 50 % discount for commercial timber and accounting for actual harvesting. At the same time, the received funds must be credited to the budgets of rural settlements and used for their improvement. Rural forests have always constituted the resource base for the rural development. Local residents will be able to sell commercial timber to wood-processing enterprises. Cheap and affordable raw materials on the market will stimulate the local small and medium-sized businesses related to processing and using forest resources.

In addition, the restoration of the historical system of integrated management of agriculture and forestry should become the basis for the sustainable development of rural areas in the Nechernozemye zone of Russia. To do this, it is necessary to provide for the right of peasant farms, agricultural holdings and other agricultural enterprises, as a matter of priority (without tenders and auctions), to issue free use or long-term lease of forest plots located within the boundaries of their land use, and state and municipal agricultural enterprises should have right to provide such plots for a permanent use without terms defined. This will make it possible to level the seasonal employment of the rural population, increase production, process forest and agricultural raw materials, launch traditional crafts and tourism. All this will increase due to a multiplier effect and will lead to a significant increase in permanent jobs and employment of the local population, stop the outflow of the able-bodied population, and the extinction of the Russian countryside. The development and implementation of local history projects related to the “small homeland” can be valuable for local residents, and especially for the younger generation. It is an important task to involve them in the study, restoration, protection and popularization of historical events, the memory about extraordinary persons and cultural heritage (monuments and memorial sites). This is one of the most important directions of the work of not only local self-government bodies but also public organizations and business. The need to improve the historical, cultural and educational level of rural residents was also highlighted earlier. So, back in the second half of the 19th century, the famous scientist, Professor of the St. Petersburg Agricultural Institute A. N. Engelgardt emphasized that: “... we most of all need intelligent men, villages of intelligent people, … our future depends on this” [17].
In 2018, we prepared and published a local history almanac-guide, and work continues on the improvement of historical monuments and memorial sites on the territory of the Valdai and Krestetsky districts. The combination of interesting historical and natural sites, as well as a variety of forest and lake landscapes can serve for the organization of agro-ecological, educational and recreational tourism [18]. Therefore, providing an agricultural producer with simplified access to forest resources can be viewed as a hidden state subsidy, which will allow the state to significantly support the domestic producer of agricultural products, without violating the WTO restrictions. At the same time, this will help significantly reduce the burden on budgets of all levels and redirect funds, planned for the direct support for agriculture and forestry, for social needs [19].

3. Conclusion
Considering these circumstances, we believe that it is most advisable to develop a set of relevant effective measures, and, among them, particular indicators of assessment of activities of local self-government bodies which affect the salary size, including the indicators on improvement the demographic parameters on an increase in general rural population and, above all, able-bodied population. At the same time, the implementation of works on construction and repair of residential buildings, infrastructure facilities, including water supply, roads, trade, medical, educational, cultural and recreational institutions should be considered. Conditions for stable access to main natural, first of all, forest resources should be created, since these resources underlie rural living activities as important points of growth. Otherwise it will be difficult to stop negative rural demographic processes and solve problems of the integrated development of rural areas.

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