

RURAL DEVELOPMENT STRATEGY OF THE NORTHERN REGION

The paper aims to analyse methodological approaches to the development of rural areas, considering the environmental and economic conditions of the North. We claim that, from a social perspective, the sectoral approach based on the agricultural production policy is ineffective. It is advisable to apply an integrated approach. It considers rural development as a process of improving the life of the population who is directly related to the use of land and other biological resources included in the system of the geographical division of labour and related social relations. This study not only analyses production indicators but also assesses the potential and efficient use of rural areas and households. They include homesteads, public infrastructure, municipal infrastructure in rural (and partially urban) settlements and settlement systems, and natural landscapes with certain social and economic functions. The example of the Komi Republic demonstrates underutilisation of the rural natural resources and labour potential, an extremely small investment in rural infrastructure, and low living standards of the rural population. To improve the situation in the Republic, it is necessary to develop agriculture and assess its strategic trends, considering the objective need to increase the self-sufficiency of the population with crop and livestock products. Other directions for development are the diversification of the rural economy and its landscape adaptation; the strengthening of the relations between agriculture, forestry and developing manufacturing industry; the establishment of new relations in the agricultural sector following the “city—village” line. Moreover, it is essential to preserve the Northern ethnic culture and traditional economic activities and introduce environmental services into the economic specialisation of municipalities. The mechanisms for implementing these directions include innovative modernisation of rural spatial and economic systems, as well as tools for regulatory, organisational, and financial support of rural production and life that considers its Northern specifics. We identified a set of directions and mechanisms of strategic planning. Comparison of rural development with the officially adopted agricultural strategies and programmes revealed that they differ significantly, especially in social and territorial aspects. It is necessary to eliminate this significant gap in the spatial development planning for improving the living standard of the rural population.

Keywords: rural development, problems of the rural economy, trends and risks in the North, priorities and mechanisms, development strategy, strategic planning, rural areas, Komi Republic

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Introduction

In 2018, in the Russian Far North and similar localities there were 9883 thousand villages, including 2061 thousand people of the rural population (21 %), and 2767 thousand people (28 %) living in mainly rural areas. Almost the entire population classified as minorities of the North (approximately 230 thousand people, or 2.3 % of the total population) is rural. The specific beginnings of life of minorities are the subject of a comprehensive study of ethnographers, sociologists, economists and other researchers, as well as an essential component of national policy. However, it seems that scientific and spatial development practices do not consider other rural northerners, also rooted in the Northern territories. Meanwhile, the organisation of their life and economic activities can play a primary role in solving the problems of sustainable functioning of the Northern, including the Arctic, areas. There are several significant reasons for this:

- the taiga, tundra and North sea zones can be considered from the perspective of the world and national problems of agricultural development, food security and ecology;
- bioresource economy in the regional system of social reproduction is more reliable and stable than mineral resource economy;
- agriculture and forestry, hunting-fishing and reindeer husbandry are the economic basis for the formation and preservation of natural and historical centres of Northern and Arctic ethnic culture.

From these perspectives, it is possible to assess the outflow of population from the Russian Northern regions. While a 20 % reduction in the total Northern population over the period 1990–2018, which is

considered inevitable, has both positive and negative consequences, we see a significant reduction of the population in rural areas (–38 %) as a negative phenomenon.

We focussed on the issue of rural development in order to find ways to improve the standard and quality of life of northern communities. In this regard, the example of the Komi Republic is interesting: rural life in its taiga part has features typical of many thoroughly inhabited regions of the North-West, the Urals, Siberia and the Far East, while the region's extreme Northern part (forest tundra and tundra) is similar to the Western Arctic zone of the Russian Federation. In the Komi Republic, as well as in the aforementioned regions of the Russian Federation, the village is experiencing a prolonged crisis, manifesting in the deterioration of the demographic situation, poverty, unemployment, and the reduction of social infrastructure. In the period of market reforms, the standard of living of the rural population has significantly decreased, and its conditions remain unattractive. Rural areas lag behind towns in terms of the quality of life. Rural development is hindered by the weakness of the local government, the lack of financial security of local municipalities, and the low prestige of rural life.

We hypothesise that the revival of rural life is a social process, which cannot be managed only by federal and regional ministries of agriculture. To obtain new results, we consider rural development as a separate block of integrated programme planning with corresponding design of population settlement systems in the North.

Rural development in European policy

The concept of rural development appeared in the scientific literature relatively recently. The most complete review of models and concepts of rural development in relation to Western Europe was conducted by F. Mantino [1]. His analysis revealed that in advanced countries, rural development policy is based on three models: sectoral (development of agriculture itself), territorial (establishment of relationships within the local economy) and redistributive (assistance to rural development as a way to reduce the gap between regions and economic sectors).

The evolution of rural development policy is related to the coordination of all types of economic activities, considering the specificity of their spatial organisation and public interests regarding the rational use of natural resources and the preservation of the environment. In national and regional programmes of European countries, in addition to their commodity function, agriculture and other natural resource industries are seen as a tool for sustainable rural development. The latter are considered to be in the public domain. Therefore, the competitiveness of agriculture and forestry is usually ensured by state support in terms of restructuring and using innovations, diversifying the rural economy, improving the environment and quality of life.

As a result, European countries, according to F. Mantino and other authors¹, have relatively stable rural development, since it is supported by political decisions and programme management. The budgets of 28 countries of the European Union in 2014–2020 show that the total amount of financial support for agriculture and rural areas was 408.4 billion euros, including 313.1 billion euros for agriculture and 95.3 billion euros for rural development (23.3 %)². The system of rural support pays special attention to education, transport and information and communication infrastructure, social services, and the preservation of the beauty of rural landscapes.

The European experience is useful for Russia due to its social and ecological orientation towards rural areas and the creation of an institutional environment for the functioning of rural settlements belonging to the same system. The experience of managing sustainable rural development in Finland is very valuable for the regions of the European North of Russia. The priorities of Finnish rural policy are as follows: professional training and retraining of personnel for villages, maximum diversification of agricultural economy, special solutions for sparsely populated peripheral areas, unconditional preservation of the culture and traditional economy of the Sami, commitment to the principles of green economy. Finland's rural policy involves the interaction of all stakeholders to reach agreed

¹ Europe 2020. A strategy for smart, sustainable and inclusive growth. European commission. Brussels, 2010. Retrieved from: <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF> (Date of access: 20.12.2019); Rural development opportunities for supporting employment and associated social inclusion Employment and Social Inclusion. EU Rural Review. The Magazine from the European Network for Rural Development. 2010. No. 6. P. 6–13; Rural White Paper Action Plan. Retrieved from: <http://www.dardni.gov.uk/rural-white-paper-action-plan.pdf> (Date of access: 20.12.2019); Rural White Paper Action Plan and Progress Report. Retrieved from: <http://www.dardni.gov.uk/rural-white-paper-action-plan-annual-progress-report-2013.pdf> (Date of access: 20.12.2019).

² Fact Sheets on the European Union — 2019. Available at. Retrieved from: <http://www.europarl.europa.eu/factsheets/en> Date of access: 20.12.2019).

solutions to socially significant problems. The fundamental mechanisms for achieving this strategic goal are collectivism and social interaction [2].

Rural development policy in Russia and its Northern territories

For a long period, the Soviet Union (and later the Russian Federation) mainly focussed on the creation of food funds for current consumption and strategic stocks of certain types of food. Food security conditions determined the forms and methods of organising agriculture, considering the natural conditions of different regions, their agricultural specialisation, the availability of roads and transport tariffs. The territorial section of the grain balance significantly influenced the overall economic zoning of the country. Simultaneously, the issue of exchange equivalence of goods between town and country was never addressed, subsidies in the agricultural sector of the economy were seen as help to the poor, and the degradation of rural life was a state secret. However, even more socio-economic injustice towards the rural population was manifested in the course of revolutionary market reforms and state regulation of the agricultural industry solely based on private land ownership and a “free” food market. Subsidies to rural producers in accordance with the meat and milk production were issued very late, only after hastily created farms and other agricultural enterprises went bankrupt.

The subsequent work of the federal and regional governments in supporting agricultural production has significantly reduced Russia’s dependence on foreign food markets. However, rural development itself has not improved. This is especially noticeable in the Northern regions, where there are no conditions for mass production of grain crops, and livestock agribusiness, poultry farms, and greenhouses for growing vegetables created under government programmes have become part of cities and suburbs. The agricultural land has been reduced many times.

The Arctic traditional economy is still not adapted to market economy conditions because of the almost complete lack of cooperation regarding the processing of products of reindeer husbandry and fisheries, development of factories; ethnic features of reindeer husbandry, fishing and hunting were under threat. Hopes for the inclusion of a certain part of the working-age indigenous peoples in the industrial marine fishery and tourism have been dashed. This aspect of the traditional economy is almost not in contact with the general direction of the state’s Arctic policy focussed mainly on border delineation, the establishment of administrative-territorial units of the Arctic zone of the Russian Federation, programmes for investments in mining, and military security. Simultaneously, special attention should be paid to the regulation of economic and social activities (including traditional farming) in extreme climate conditions. The key issues in should be the preservation of indigenous territorial communities (societies) and the sustainability of natural and economic systems.

To overcome these shortcomings, it is necessary to focus on the regional organisation of agriculture and food markets and consider different northern regions in the system of large and regional economic areas [3]. However, from the social perspective, a one-sided industrial and sectoral rural policy is not sufficient to improve the lives of villagers and maintain the environment. It is for this reason (considering the Western experience of regulating rural development) that Russia have taken practical steps to form a different type of policy, namely, the rural development policy.

First, it was scientifically substantiated, and key concepts were defined, including rural areas, rural territories, and sustainable development. The correct interpretation of terms and concepts for science is always of great importance, especially in this case, when the policy is aimed at considering rural areas as a special object of state and municipal management. Among numerous works on rural development, we would like to draw attention to the domestic research conducted in the 1970s under the leadership of academician T. I. Zaslavskaya. Based on the traditions of Russian sociology and socio-economic geography, researchers focussed on the socio-territorial structure of rural life and the integrated socio-economic development of rural settlements. It was emphasised that rural areas “cover the entire set of small agricultural and agro-industrial settlements, regardless of their level of development and the structure of the production sphere. The boundaries of rural areas are fixed by the administrative division of the country, are quite clear and are more stable than the boundaries of the village” [4, p. 15]. Some agricultural economists also began to consider rural development as a territorial concept including natural and economic systems of local and regional dimensions [5–8].

Other recent scientific developments formed the basis of the Concept of sustainable development of rural territories of the Russian Federation until 2020, approved by the decree of the RF Government dated November 30, 2010 No. 2136 p. Its purpose is to use natural resource, demographic, cultural,

environmental potential of the countryside to the extent sufficient to increase the level and quality of life of the rural population and residents of urban villages, whose way of life is very similar to rural. The results of this programme have yet to be summed up, but the key problem of the poor state of rural communities (reduction in the number of residents, unbalanced gender and age structure, poor health, loss of attachment to native places, unemployment and poverty, the negative dynamics of rural landscapes) remains unresolved. This problem was also considered in the framework of the unfulfilled Concept comprehensively, that is, along with many functions of villages and settlements (ecological, recreational, ethno-cultural, and spiritual). Moreover, in 2013, these conceptual guidelines were moved to the Federal Target programme “Sustainable development of rural areas in 2014–2017 and the period till 2020”. In 2015 they were transformed in the “Strategy of sustainable development of rural areas of the Russian Federal for the period till 2030”, with further development of the State programme “Integrated rural development” for 2020–2025 (2019). Failure to implement what was planned in previous years calls into question the achievement of the goals of rural development currently formulated for the long term.

Hopes for positive socio-economic dynamics are, to some extent, related to the scientific recommendations (what and how to do in the forecasting process). These recommendations are partially considered in the documents outlined in the Federal law No. 172 “On strategic planning in the Russian Federation” (2014), for example, in defining the goals and their implementation, as well as in recognising the equality of production and territorial (spatial) aspects of socio-economic development of the country and its regions.

New elements of strategic planning

The novelty lies in the fact that the development of strategies for socio-economic development has become increasingly based on the scientific foundations of prognostics, that is, on methods for integrating various knowledge and projecting it on organisational and managerial activities, on forming an image of the future specific social systems. Forecasting technology is built as a sequence of analytical and predictive operations in order to identify problems, ways and means of solving them. Special attention is paid to methods for analysing environmental challenges and threats, internal transformation of socio-economic systems, and mechanisms of innovation [9–17].

Rural development forecasting covers both agriculture and rural areas. Its results are presented as a single Strategy document. However, the Strategy must be specified in the programmes. We claim that, to purposefully solve the problems of rural development, two programmes should be created: a programme on agricultural production, taking into account its territorial features, and a programme on rural territories, considering their economic specialisation and geographical location.

This dualism corresponds to the theory of problem-programme management, the European experience of rural development (where budget financing of rural areas follows both sectoral and territorial lines), as well as to the understanding of the special role of rural areas in the formation of territorial communities and their harmonious relations. Sectoral programmes focus on food production, storage and marketing, while territorial programmes focus on functional zoning of the territory, reproduction of its human and natural resource potential, and biological and social ecology. Each type of programme has its own system of measures.

It is important to note one more innovation: strategic planning documents themselves (their content, structure, and interconnection of individual aspects and indicators) have been subjected to scientific analysis. In the context of our article, we will draw attention to the negative points identified as a result of this analysis:

- ideas and policies regarding rural development are virtually ignored in the Strategy of Spatial Development of the Russian Federation for the period until 2025 (endorsed by decree of the Government of the Russian Federation of 13.02.2019, No. 207-p);

- there is no localisation (location-based) of general strategic decisions, which would oblige municipalities at the district and regional levels to independently develop strategic plans and programmes for rural development;

- the development and application of mechanisms of implementation of these state documents is inconsistent, funding for the planned goals is extremely insufficient, expert and public monitoring of strategies and programmes is poorly organised [18, 19].

Our judgement about two types of rural development programmes (industrial-sectoral and socio-territorial) is also based on the analysis of a specific document, namely, the state programme of the Republic of Komi “Agricultural development and regulation of markets for agricultural products, raw materials and food, development of fisheries” (2019). It has six sub-programmes: the development of rural economic sectors, support for small-scale farming and agricultural cooperation, development of agricultural land reclamation, veterinary welfare, integrated development of rural territories, and ensuring the implementation of the programme.

Integrated development of rural areas, which has been recently gaining importance for society, seems lost among other sub-programmes and activities. In the generalised section of the programme, it has only one control indicator, namely, the share of citizens in rural areas with comfortable living conditions in the total number of citizens living in rural areas (up to 35 % by 2025). The sub-programme itself identifies the following directions: construction (acquisition) of housing accommodations (residential homes) for people living in rural areas, the number of implemented projects for the improvement of rural areas, the commissioning of gas distribution networks, local water supply, the number of settlements located in rural areas, that have implemented projects for integrated development of sites for compact housing development.

While the above is necessary and important, it is extremely insufficient in terms of activities and costs. Funding for the entire six-year programme amounts to 5.2 billion roubles, while funding for rural areas is only 0.9 billion roubles (17.3 %). Such money would not be enough for the disposal of household solid waste exported to rural areas. Meanwhile, the development of rural areas is associated with the restructuring of rural settlements, which implies the strengthening of support settlements, the relocation of residents of unpromising villages, the change in the configuration of land use, a new spatial organisation of infrastructure and social services [20, 21]. The solution to these problems should be based on its own programme.

Rural problems of the Komi Republic

The main directions and stages of implementation of the strategy for rural development of the Komi Republic are summarised as follows:

1) spontaneous settling of the Northern territories on the basis of communal organisation of rural life along with family (individual) farming and local commodity markets;

2) planned collectivisation based on the socialisation of agricultural land and other production assets, the replacement of local commodity markets by public procurement (prodrazverstka), household farms as the main source of food;

3) development and implementation of political programmes for creating state farms as large territorial and economic associations, transfer of collective farmers to the category of employees with the payment of wages and the reduction of personal subsidiary farms;

4) artificial introduction of the “free market”, the abolition of any regulators and rejection of systematic farming and social development of rural areas;

5) development and partial implementation of programmes for the restoration of suburban animal husbandry, forage and greenhouse vegetable production through the creation of agricultural holdings and farms.

There are some elements of rationality that should be considered in modern strategic planning of Northern rural territories: the relative stability of the cluster system of rural settlements, the benefits of a combination of agriculture and forestry, simultaneous mechanisation of various industries, an important role of household law of collective life and rational nature management, the significance of rural areas in the “city–village” system. However, in general, irrationalism prevailed in the development of rural territories of the Komi Republic, almost causing a threat of the taiga periphery’s transition to “pasture” and a natural household.

The current state of the industrial and sectoral sector of rural development is described by the Statistics Service (Komistat) data for 2018. In the Komi Republic, 594 economic entities are engaged in agriculture and forestry, hunting, fishing and fish farming. The share of agricultural organisations is 69 % in the total volume of gross agricultural output, 58 % in terms of the number of cattle, 94 % in terms of the number of pigs, 70 % in terms of the number of deer. They produce 69 % of milk, 96 % of eggs, 92 % of livestock and poultry for slaughter, 16 % of vegetables, and 7 % of potatoes. Among the largest agricultural organisations, we note the “Prigorodny” greenhouse complex (Syktyvkar),

the “Zelenetskaya” (Syktyvdinsky district) and “Intinskaya” poultry farms, the dairy breeding farms “Ukhta-97”, “Izvailskiy-97” (Ukhta), and “Yuzhnoe” (Priluzsky district).

Reindeer farms are located near the towns of Vorkuta, Inta and Usinsk. There are 269 peasant farms in the Republic. Their share in gross agricultural production is only 5 %. 210 thousand families are engaged in personal subsidiary farming. They produce 26 % of gross agricultural output, 87 % of potatoes, and 87 % of vegetables. The high proportion of personal farms is not accidental, since large state farms that were thoroughly engaged in open-field farming were fragmented, transformed, and, in fact, eliminated.

The decline of agriculture (Table 1 and Table 2) cannot be explained only by economic reasons, such as the benefits of replacing local food with imported food from other regions of the country and from abroad. However, the decline can be linked to the general crisis that occurred as a result of the revolutionary reforms of the political and economic system of Russia. With the change of political leadership in 2000 and the announcement of an evolutionary development course, there was hope for the restoration of positive dynamics of rural development. However, that did not happen.

The all-Russian Agricultural Censuses of 2006 and 2016 showed that, in that decade, Komi farms of all categories have further reduced the total land area by 32 %, including farmland by 2.2 times. In the population’s subsidiary farms, the area of farmland decreased by 1.9 times. In the decade between censuses, the number of agricultural organisations decreased by 2.8 times, and the number of individual entrepreneurs decreased by 7.8 times. The number of people employed in agriculture decreased by 1.6 times.

Table 1

Cultivated land of farmers engaged in agricultural production, 1990–2018

Type of land	Agricultural land by years, thousand hectares						
	1990	1995	2000	2005	2010	2015	2018
Cultivated land	338,5	286,5	256,6	184,7	111,9	85,2	77,4
Arable land	94,1	88,5	80,7	58,6	39,2	38,4	35,7
Hayland	180,2	149,9	133,0	97,2	54,2	36,6	33,1
Pasture land	64,2	48,1	42,9	28,9	18,5	10,2	8,6

Table 2

Crop and livestock production in all categories of farms in the Komi Republic, 1990–2018

Type of product	Production by years, thousand tonnes						
	1990	1995	2000	2005	2010	2015	2018
Potatoes	127,5	235,9	218,9	116,9	88,7	77,9	54,4
Vegetables	20,8	32,3	34,2	24,5	20,8	21,4	20,1
Meat (carcase weight)	38,1	22,3	14,5	15,0	17,9	22,2	24,6
including beef and veal	13,9	10,8	6,6	4,3	3,1	2,4	2,0
Pork	12,4	6,6	2,5	1,7	2,4	4,1	6,9
Poultry	9,2	2,9	3,9	8,1	11,6	14,7	14,9
Venison*	1,5	1,2	1,0	0,51)	0,5	0,7	0,5
Milk	207,0	142,4	105,9	78,6	61,6	56,5	54,8
Eggs, million pieces	365,4	194,5	172,8	176,2	167,8	120,0	125,7

* The decline in venison production is due to the registration in 2002 of the production enterprise “Izhma reindeer herder and Ko” in Nenets Autonomous Okrug.

In agricultural organisations, the number of cattle has decreased by a third. Especially significant reduction of animals was observed in the private farms, where cattle decreased by 2.6 times, pigs by 4.3 times, sheep and goats by 2.3 times, and horses by 1.8 times. Due to the lack of machine operators and appropriate equipment, 14 % of cultivated land was not used in small agricultural organisations, 9 % in peasant farms, and 37 % in private subsidiary and other individual farms. The lack of consultation in rural areas hinders access for small businesses and rural residents, especially in remote areas. Its organisation could significantly increase the coverage of small and medium-sized organisations and the rural population with information and consulting services, spread innovations, and increase the level of coordination and integration of agriculture with science and education [22].

Small-scale businesses predominant in rural economies have difficulties in accessing markets for products and financial resources. According to the 2016 Agricultural Census, just over half of farms and individual entrepreneurs receive budget support. Only 19 % of small agricultural enterprises and 9 % of peasant farms have access to loans. No attempt is being made to eliminate at least some of the disparity in prices for agricultural and industrial products.

Small-scale agriculture is associated with the solution of problems of strengthening food security and removing threats to human health from suppliers of substandard (chemically harmful) products. The production of environmentally friendly products is an extreme necessity and can be organised on agricultural lands of the taiga territories [23].

The socio-territorial sector of agriculture is also characterised by negative dynamics (Table 3).

Table 3

Socio-territorial indicators of the rural development of the Komi Republic, 1990–2018

Indicator	Value of the indicator by years, thousand people						
	1990	1995	2000	2005	2010	2015	2018
Population	1249	1157	1058	996	901	864	841
Rural population	304	281	260	245	228	193	184
Population in peripheral (remote from cities) rural settlements*	266	220	173	152	126	135	130
Population employed in agriculture, forestry, fisheries and hunting	50,2	45,6	36,5	29,7	19,6
Population employed in agricultural organisations and services	29,5	24,7	19,8	8,6	6,0	4,3	3,3

* This indicator takes into account not only the dynamics of natural movement and migration of the population, but also the proximity or remoteness of individual rural settlements from cities due to changes in road and water transport [24].

In 1990–2018, the population in the Komi Republic decreased by 408 thousand (33 %) due to outflow and natural loss; the rural population decreased by 120 thousand people (40 %). The mortality rate of the rural population is 1.5 times higher than that of the urban population. The number of localities without population increased by 4.5 times. The results of the 2016 Agricultural Census showed that among private farms, the share of abandoned plots of land (empty houses) was 20 % in rural settlements and 28 % among gardeners and summer residents.

In rural areas, the population is ageing. The share of population below working age decreased from 29 % in 1989 to 22 % in 2018; the share of working age population decreased, respectively, from 57 % to 50 %, and the share of those over working age increased from 14 % to 28 %. Further deterioration of the demographic situation in rural areas will lead to a reduction in the working age population and will become an insurmountable obstacle to the development of the rural economy.

The rural areas of Komi are characterised by underdeveloped transport, engineering and social infrastructure. During market transformation, road construction almost stopped in rural areas. Currently, most roads are unpaved, and their condition remains unsatisfactory. Farm paved roads account for only 37 %. The population of most villages has two- and three-hour access to their district centres; 84 % of rural population lives in non-gas areas, and 10 % of localities receive electricity from autonomous diesel power plants.

During the years of market reforms, the construction of residential buildings in rural areas decreased by 2.2 times, pre-school institutions by 2.4 times, secondary schools by 2.1 times, cultural and leisure institutions by 1.5 times. The housing stock in rural areas of the Republic has a 14 % share of dilapidated housing (compared to 2 % in towns). Most residents of rural localities have no basic amenities.

Local governments of rural settlements do not have their own financial base for performing social functions, upgrading rural infrastructure and stimulating the rural economy. Budget deficits are covered by subventions, grants, and subsidies. Currently, in municipalities with a completely rural population, the share of external income ranges from 70 % to 80 %.

Another difficult situation is the expansion of rural territories by citizens. Cottage and dacha settlements in many places, especially around Syktyvkar, are already more crowded than villages. The

latter are also developed for dachas and family estates. However, while a classic Northern village was once a community, summer residents do not yet have social unity. Their resources are not consolidated enough to seriously address the issues of transport development, energy management, informatisation, and nature protection.

In developed settlement systems, geographical mobility of people has become an essential feature of their life. Rural areas with a relatively favourable economic and geographical position are transformed into an appendage to the urban labour market, while economically remote areas often switch to subsistence farming [25].

These problems have been known for a long time, they are visible, but they are not solved properly, not only because of the lack of necessary financial resources, but also because of the uncertainty in the organisation of their solution.

Creation of a strategic plan for rural development of the Komi Republic

The desire to eliminate the aforementioned shortcomings of the Republic's agriculture only partially determines the problem field of strategic planning. The fact is that not everything can and should be corrected; moreover, new directions for improving rural areas do not change the desire of the population to do as it was before, that is, to return to the level of 1990. From the past life, only the general natural and economic prerequisites for the development of the industrial and sectoral sector of agriculture remain in force. Everything else has changed radically.

We analysed various strategies, programmes and plans of the main enterprises, municipal districts and regions, the Ministry of Agriculture and Food of the Komi Republic and identified average production levels, considering investment restrictions. The estimated dynamics also takes into account the decline in the Republic's population, the maximum possible increase in production due to the technical re-equipment of food production enterprises, personal consumption of food relative to dietary intake based on the growth of local production while maintaining imports from other regions and from abroad. This is a rough estimate of agricultural indicators. It turned out that, even under the new conditions, the expected results of production and consumption of local products for the next decade (2020–2030) are quite acceptable from the point of view of providing the population with food.

The figures shown in Tables 4 and 5 do not imply a "radical reconstruction" of agricultural production; it is possible to achieve them under minimal conditions:

- growth of investment in fixed assets at the level of 3–4 % of the average annual (in 2014–2018, this indicator was only 1 %);
- affordable interest rate for lending to agricultural enterprises by turnover (taking into account the Northern seasonality of farming) and for technical re-equipment of existing enterprises;
- training and retention of qualified personnel in rural areas;
- increasing wages in agriculture, so that their ratio to the average for the Republic's economy is 80 % (it was 59 % in 2018);
- strengthening of agronomic services, especially in terms of variety testing;
- stimulation of production and consumption of high-quality (environmentally friendly) products;
- technical and advisory assistance to farmers and private farms;
- elimination of the monopoly of procurement, intermediary and processing structures by choosing to a cooperative basis for the entire cycle of production, processing and sale of products.

Table 4

Forecast of production and consumption of agricultural products in the Komi Republic until 2030, thousand tonnes*

Products	Production			Consumption		
	2020	2025	2030	2020	2025	2030
Potatoes, including technical and personal (in parenthesis) consumption	55	58	63	85 (65)	87 (66)	88 (65)
Vegetables and cucurbitaceous	22	24	30	80	87	100
Meat and meat food products	25	28	34	68	63	58
Milk and dairy products	55	65	70	212	232	235
Eggs (million units)	126	150	170	235	220	204

* Authors' estimate.

Levels of production and consumption of agricultural products in the Komi Republic until 2030, %*

Products	Production relative to consumption			Personal consumption relative to dietary intake		
	2020	2025	2030	2020	2025	2030
Potatoes	63	67	72	94	97	100
Vegetables and cucurbitaceous	27	28	30	70	81	99
Meat and meat food products	37	44	59	110	109	101
Milk and dairy products	26	28	30	77	90	96
Eggs (million pieces)	54	74	83	107	107	105

* According to data from Table 4 and data on dietary intake (kg/year/person), the values are: potatoes—90, vegetables and cucurbitaceous—140, meat and meat food products—76, milk and dairy products—340, eggs (PCs.)—270 (as recommended by the Ministry of Health of the Russian Federation). The population forecast was made by A.V. Smirnov: 810 thousand people in 2020, 763 thousand people in 2025, and 720 thousand people in 2030 [26, p. 153].

The problem of establishing a multifunctional economy in rural areas is still relevant. In the next decade, all types of agricultural structures should participate in the creation of integrated farms, including the processing of agricultural raw materials. However, the main suppliers of livestock products will remain agricultural organisations integrated with the processing industry. Our calculations show that by 2030 the share of such organisations in the production of gross agricultural output will increase to 70–75 %. The production of potatoes and vegetables will continue to be concentrated in households.

One unorthodox measure is the creation of forage production divisions at large and medium-sized livestock agribusiness that would include distant hayfields. This will allow, at least to a small extent, to preserve the agricultural land of peripheral regions. The lost agricultural land could be partially developed for planting forests, including fast-growing hardwoods, which are necessary for the pulp and paper industry. Forest planting is also advisable in fields that are now Sosnowski hogweed, which is dangerous to human health.

The problem of integration also concerns reindeer husbandry. The modernisation of this industry is associated with the construction of slaughterhouses and refrigerators, velvet antlers processing, enzyme-endocrine raw materials and deer blood. It is necessary to equip reindeer farms with means of communication and transport and create a network of trading posts along reindeer grazing areas, which will house power plants, warehouses for storing and preparing products for transportation, shops, paramedic-obstetric and veterinary stations [27]. For the future, it is essential to consider general trends in the evolution of the traditional economy of the indigenous minorities of the North [28].

It is somewhat more difficult to create a socio-territorial programme. Most of the activities of this rural development sector are related to the specifics of population settlement and economic remoteness of many settlements and villages. In the early 2000s, the Institute of Socioeconomic and Energy Problems of the North of the Komi Science Centre of the Ural Branch of RAS under the leadership of T. E. Dmitrieva conducted a study of Komi settlements and found that 200 villages and settlements can be called problematic. 8 thousand people inhabited them. Based on scientific data, in 2007 a programme has been adopted to close unpromising settlements and relocate people. At the first stages, the programme involved ten localities that still exist today. In 2011, another programme was drawn up named “Relocation of residents from localities recognised as closed”; there were already 250 unpromising localities, and their number continues to increase. The relocation of people is extremely rare and only for the sake of their salvation in emergency cases. In the off-season and winter, food and medicine are delivered to some villages once a week by helicopter. In some cases, emergency workers deliver provisions on snowmobiles. This maintenance scheme is more expensive than relocation.

Some of the unpromising villages and settlements could be saved in the common “centre-periphery” system if this system had a reliable network infrastructure. In Northern conditions, this is possible if there are established river routes, floating (pontoon) bridges, winter roads, small aircraft, telephone, postal and telegraph services, cellular, television networks and the internet, stationary and mobile trade, medical and veterinary care, child-friendly education (can be accessed by bus), district adult education courses (computer, technical, sanitary, medical, veterinary, etc.); cluster mini-MTS

(machine and tractor stations) for providing technical services to personal subsidiary farms and farm households. All these, of course, will strengthen the internal connection of local economic systems, but they will not eliminate the very problem of settling people and eliminating unpromising villages and settlements.

In the composition of rural settlements, as a rule, there are one central and several surrounding settlements. It is desirable to consider the issue of settling, first, within the boundaries of this type of settlement, economically strengthening and environmentally improving their central link. Rural development activities should focus on these aspects. This applies to new housing construction, the formation of a social housing fund, the supply of electricity, water and gas, household upgrading (considering the advantages of autonomous heat power), and the creation of social and cultural complexes. It is necessary to create TPSGs (territorial public self-governments) as an institution of rural development. Their field of activity is the maintenance of the place of residence, upbringing of children, the development of amateur creativity, the functional distribution of land in the settlement, landscape arrangement.

Of the twenty centres of regions and districts of the Republic, ten are villages, that is, they are directly included in the strategies and programmes of rural development. The other half of the centres are urban, but they are also involved in solving the problems of stable socio-economic development of rural areas. For all centres that organise rural life, the most important issues are the coordination of economic and social goals for the development of rural and urban areas, agriculture and forestry, establishment of circular migration between rural localities and towns, financial assistance to TPSGs, and the development of an integrated network system of education, health, culture and consumer services.

At the beginning of the article, we mentioned F. Mantino stating that the redistributive model of rural development is a way to reduce the gap between rural areas; for that purpose, it is necessary to identify areas that are under threat of depopulation. In the Komi Republic, these include Izhemsky, Koygorodsky, Priluzsky, Troitsko-Pechorsky, Udorsky, Ust-Kulomsky districts with a high localisation of the Komi population. This group also includes the Ust-Tsilemsky district of the old believers' way of life. These are depressed regions, and agricultural enterprises located here need payments to compensate for the impact of difficult climatic conditions and unfavourable economic and geographical location. This is a special type of payment associated with stimulating the diversification of the production structure of enterprises, with the organisation of organic farming and support for traditional types of bioresource economy in the North. Such payments are an addition to the general financial investments of industrial-sectoral and social-territorial purposes.

Conclusion

In planning rural development, we recommend distinguishing two blocks, industrial-sectoral and socio-territorial, due to their functional differences and the illegal substitution of "rural areas" with "agro-industry". As a result of this substitution, state programmes for rural development are implemented through reporting on the production of livestock and agricultural products; essentially, rural life itself remains outside the framework of active management.

Another reason for the separate consideration of production and social aspects of rural development is its multifunctionality and diversity. The task of providing food is mainly solved by enterprises located in towns, suburbs and adjacent territories. Simultaneously, while the task of improving the geographical environment is "cross-cutting" for urban and rural populations, it is solved mainly in rural areas, including forests. The rural landscape is increasingly becoming part of the national culture.

In the Russian North, rural development has taken a back seat due to the priorities of the fuel and energy and mineral resource industries. The issue of equality of the agricultural industry with them and the revival of Northern agriculture on relatively large areas can only be raised in the future if there are threats to food security in many countries and Russia is involved in the formation of world agricultural production funds. We suggest that a reserve shock should include not only strategic food resources, but also the sources of their production, namely, agricultural land, agricultural machinery, and seed stock.

The analysis of the current situation in rural development of the Komi Republic has shown that, in the context of market economy, it is almost impossible to return to its original positions of the Soviet period. Therefore, it is desirable to localise rural issues in such a way as to preserve and significantly

improve the existing agricultural land, more widely involve the resources of animal husbandry, reindeer husbandry, hunting, fishing and fish farming in economic turnover, and ensure that the local population has access to rational forest management.

Social and environmental issues should be considered along with production issues, based on the optimisation of regional and local population settlement systems. The reduction in the number of villages and settlements is inevitable. In order not to lose the population leaving unpromising localities but preserve it in the Komi Republic, it is necessary to organise the resettlement of people in the existing settlements, rapidly develop their social and household infrastructure and create enterprises for processing bioresources. Strengthening local public relations also involves mobilising the efforts of villages (rural centres) and towns to create network structures for medicine, education, and culture.

In 2020, the Komi Science Centre of the Ural Branch of RAS is finalising a research project “Potential strategic alternatives of development of the Komi Republic”. It will examine the possibilities of restructuring economic activities based on advanced technologies and the Northern climate conditions, including in the field of bioresource economy. The recommendations proposed in this article in terms of rural areas, in our opinion, correspond to the intentions of researchers to find new foundations for sustainable socio-economic development of the Republic.

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